



Government of Rajasthan

**Local Self Government
Department**

**RAJASTHAN URBAN INFRASTRUCTURE
DEVELOPMENT PROJECT (RUIDP)**

**INTEGRATED
SCHEDULE OF RATES
2022**

(w.e.f. 01/05/2022)

**Project Management Unit (PMU)
Rajasthan Urban Infrastructure Development Project,
AVS Building, Jawahar Circle, Malviya Nagar, Jaipur-17**

Rs. 1200/-



**GOVERNMENT OF RAJASTHAN
RAJASTHAN URBAN INFRASTRUCTURE
DEVELOPMENT PROJECT
(RUIDP)**

**INTEGRATED
SCHEDULE OF RATES
2022**

(w.e.f. 01/05/2022)

**Issued By
Project Director
RUIDP
JAIPUR (Raj)**

Price: Rs. 1200/-

**GOVERNMENT OF RAJASTHAN
RAJASTHAN URBAN INFRASTRUCTURE DEVELOPMENT PROJECT
(RUIDP)**

**INTEGRATED
SCHEDULE OF RATES
2022**

All rights Reserved

Project Director, RUIDP, JAIPUR (Raj)

Consultant

Ojasvi Software Pvt Ltd, New Delhi

KUMAR PAL GAUTAM

I.A.S.

Project Director



**Rajasthan Urban Infrastructure
Development Project (ADB Project)**

AVS Building, Jawahar Circle, JLN Ma.g,

Malviya Nagar, Jaipur-302017

Tel. No. +91-141-2721966, Fax No. +91-141-2721919

e-mail : mail.ruidp@rajasthan.gov.in

website : www.ruidp.rajasthan.gov.in

FOREWORD

RUIDP is a SPV for infrastructure development work in State of Rajasthan financed by Asian Development Bank (ADB). Integrated Schedule of Rates published by RUIDP from time to time is a comprehensive and useful technical document for estimation of infrastructure civil works. In addition to Rajasthan Urban Infrastructure Development Project (RUIDP), this Schedule of Rates has been used by many Departments, Institutions, Public Sector Undertakings, Architects and Builders. The first schedule of rate was published by RUIDP in year January-2008. Subsequently, it was published in the year 2011, 2013 and 2017.

Last edition of SOR was published in the year 2017. Revision of this SOR has become pertinent due to changes in the prices of labour, materials and machineries. Apart from it, the entire engineering community is witnessing great changes in terms of new ideas, items, concepts & technologies. All these have necessitated revision in the prevailing SOR. These components are being incorporated in the SOR-2022.

Urban sector needs typical nature of infrastructure works, which requires extensive Schedule of Rates catering all the requirements. Engineers of RUIDP through their learnings, experiences and feedback from other departments have made efforts of accommodating various items of civil/ mechanical/ electrical & other components.

I am sure that RUIDP Schedule of Rates 2022 will be beneficial to all the engineers, line department & other stake holders in general.

This SOR is approved by the RUIDP and is made effective from 1st May -2022.

(Kumar Pal Gautam, IAS)
Project Director, RUIDP

Dr. Hemant Kumar Sharma
Chief Engineer cum
Addl. Project Director

**Rajasthan Urban Infrastructure
Development Project (ADB Project)**
AVS Building, Jawahar Circle, JLN Marg,
Malviya Nagar, Jaipur-302017
Tel. No. 2548404, Fax No. 2721919
website : www.ruidp.rajasthan.gov.in

PREFACE

Rajasthan Urban Infrastructure Development Project (RUIDP) has prepared Integrated Schedule of Rates 2022, for the estimation of works under its umbrella with the intention to accommodate various items related to multi-sector urban infrastructure works. It was also intended that the estimation based on this SOR will provide the updated cost estimates for the benefit of analysis and guidance to different stakeholders in their assessments.

The release of new SOR is primarily required due to change in basic rates of Labour, Machinery and material; cement, steel; petroleum products; transportation and other materials. There has been learnings during the work execution of various sectoral works, so few items have been added/ modified based on the requirement of such works accordingly.

The present basic rates of material/ equipments/ labour etc. have been procured from the various sources i.e. from different vendors, available schedule of rates of different departments i.e. PWD, MORTH, Archeological, CPWD, Trenchless society of India & codes of Bureau of India standard and Delhi Schedule of Rates (DSR) etc. The team of engineers having sectoral experiences was constituted to explore the market rates by approaching the vendors personally or through phone/e-mail, receiving quotations, price lists etc. to the maximum possible extent.

The support of various manufacturers/vendors/suppliers has made us comfortable to reach at reasonable rates of the materials. Though best efforts have been made to procure the present basic rates of every item; however, few vendors were reluctant to provide any written document for the support of rates, therefore, rates of some items could not be received directly from the market. Rates of Such items have been derived on the basis of earlier BSR rates & experience with suitable adjustments.

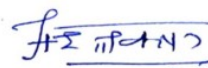
Regular meetings were held with RUIDP engineers and consultants working with RUIDP for detailed discussions and to freeze the basic rates of labour, machinery and materials and nomenclatures of SOR items. The nomenclatures of many items have been improved by making it more generic and comprehensive. Items of SOR-2017 which have become obsolete over a period of time or are not in use any more have been deleted. Various new items based on new material/technology have also been added in this revised SOR 2022.

The composite rate of items has been derived considering likely 10% overheads and further 10 % contractor profit over composite cost of labour, machinery and material. Further, GST @ 18% has been considered on the overall composite cost/activity cost. The basic rates have been collected from various sources upto December-2021, therefore RUIDP SoR-2022 is reflecting the prevailing market rates of materials as on or just before 31.12.2021. However, the future trend in costs should be accounted for by all concerned for preparation of their updated estimates. Accordingly, engineer's estimate or price justification may be worked on present market basis.

I am gratified for the input of Shri Arun Vyas, Chief Engineer, Smt. Arti Bagotia, Financial Advisor and subject expert consultants working with RUIDP for their valuable suggestions and refinement of SOR. This attempt had been successful only due to the extensive efforts of Engineers of RUIDP working in different sectors by ensuring incorporation of related sectoral items & their proper nomenclatures in the SOR namely; Superintending Engineers - Er. Kapil Gupta, Er. Praveen Ankodia, & Er. K. C. Agarwal. Executive Engineers - Er. S.S. Khiria, Er. K. M. Mandawaria, Er. Vijay Choudhary, supported by the team of engineers namely Er. Shruti Singh, Er. Mahesh Garg, Er. Pramod Pathak, Er. Tushar Sharma, Er. Rohit Jangid, Er. Mukesh Saini and Er. Poonam Saini. The task has been completed for its substantial revision in true spirit with the extensive work and support from expert and engineers from PMDSC/ PMCBC consultancy.

This Integrated Schedule of Rates -2022 has been prepared to cater the need of Urban Infrastructure Development to accommodate the various sectors for estimation, evaluation etc. All possible efforts have been exercised and cautions have been taken to make the SoR-2022 extensive use. If any discrepancy or deviation is observed, may kindly be intimated to the undersigned for the consideration.

This Integrated Schedule of Rates 2022 has been prepared successfully under valuable guidance of **Shri Kumar Pal Gautam, Project Director** RUIDP, Jaipur. This work would not have been possible without the earnest efforts of persons who have contributed directly or indirectly to complete this work, are also thankfully acknowledged.


(Dr. Hemant Kumar Sharma)
Chief Engineer cum
Addl. Project Director

CONTENTS

S. No	NAME OF CHAPTER/ SUBHEAD	PAGE NO.
	COMMON WORKS	
1	CARRIAGE OF MATERIALS	1
2	SITE CLEARANCE	3
3	DISMANTLING	6
4	EARTH WORK	10
5	SURVEY, TESTING, INVESTIGATION AND SITE OFFICE	17
6	MORTARS	23
	ROAD WORKS	
7	ROAD WORKS (Sub-base/ Bases)	24
8	ROAD WORKS (Bituminous Bases)	26
9	CEMENT CONCRETE PAVEMENTS	33
10	TRAFFIC SIGNS, MARKINGS & OTHER ROAD APPURTENANCES	37
11	PIPE CULVERTS	43
12	MAINTENANCE OF ROADS	45
	BRIDGE WORKS	
13	FOUNDATIONS	49
14	SUB-STRUCTURE & SUPER-STRUCTURE	61
15	RIVER TRAINING & PROTECTION WORKS	72
16	REPAIR & REHABILITATION	74
17	SEWER LINE WORKS	75
18	STP (Sewage Treatment Plant)	121

S. No	NAME OF CHAPTER/ SUBHEAD	PAGE NO.
19	WATER SUPPLY	144
20	TUBE WELL	200
	BUILDING WORKS	
21	CONCRETE WORK	202
22	FORM WORK	205
23	REINFORCED CEMENT CONCRETE	207
24	BRICK WORK	211
25	STONE WORK (Masonry)	215
26	STONE WORK (Slabs)	217
27	MARBLE WORK	222
28	WOOD AND PVC WORK	227
29	STEEL WORK	257
30	FLOORING	262
31	ROOFING	269
32	FINISHING	284
33	REPAIRS TO BUILDINGS	291
34	WATER SUPPLY (Building)	300
35	DRAINAGE (Building)	314
36	SANITARY INSTALLATIONS	320
37	ALUMINIUM WORK	333
38	WATER PROOFING	337
39	HORTICULTURE	343
40	HERITEGE WORK	353

S. No	NAME OF CHAPTER/ SUBHEAD	
	INSTRUMENTATION	
41	TRAFFIC SIGNALS	362
42	INSTRUMENTATION	370
43	MOTOR STARTERS	378
44	DISMANTLING OF EXISTING STRUCTURE/ MISC. ITEM	381
45	SHIFTING OF OVER-HEAD LINES (Dismantling & Re Erecting the Same)	383
46	PLC & SCADA	388
47	SMART SOLUTIONS	402
48	LIFTS	414
	ELECTRICAL	
E-01	PVC INSULATED WIRING IN PVC CONDUIT	419
E-02	PVC INSULATED WIRING IN STEEL CONDUIT	422
E-03	PVC INSULATED WIRING IN PVC CASING CAPPING	425
E-04	DRAWING OF WIRES & SUBMAINS	429
E-05	G.I./M.S./WOODEN BOXES & LAMINATES	433
E-06	Distribution Board & it's Accessories	437
E-07	ELECTRICAL ACCESSORIES	445
E-08	LT PANEL & ACCESSORIES	454
E-09	AIR-CIRCUIT BREAKER & MCCB	463
E-10	SWITCH FUSE UNITS, CHANGE OVER SWITCH & BUS BAR CHAMBER	469
E-11	LT CABLES	474
E-12	LT CABLE TERMINATION & ACCESSORIES	492
E-13	H T CABLES & TERMINATION KITS	503
E-14	EARTHING & LIGHTNING ARRESTER	506
E-15	FANS	512
E-16	STORAGE WATER HEATER	516

S. No	NAME OF CHAPTER/ SUBHEAD	
E-17	INDOOR LIGHTING	522
E-18	OUTDOOR LIGHTING	527
E-19	OVER-HEAD LINES	536
E-20	LOCAL AREA NETWORK	544
E-21	ELECTRICAL MOTOR PUMPSETS	551
E-22	AIR COOLING & AIRCONDITIONING	563
E-23	TRANSFORMERS & DG SETS	575
E-24	FIRE PROTECTION WORKS	598
E-25	HIRE CHARGES FOR PA SYSTEM & TEMPORARY LIGHTING	617
E-26	REPAIRING OF FANS, COOLERS, PUMPS, MOTORS, FRIDGES AND AIRCONDITIONERS	626
E-27	MISCELLANEOUS ITEMS	635
	Annexure	640
	BASIC RATES	
A	MACHINARY	643
B	LABOUR	648
C	MATERIALS	650
D	HORTICULTURE SUPPLY ITEMS	749

1.0 CARRIAGE OF MATERIALS

CARRIAGE OF MATERIALS (By Mechanical Means)											
Code	Materials	Unit	Rate for lead					Rate beyond initial lead			Remarks
			1 Km	2 Km	3 Km	4 Km	5 Km	Beyond 5 Km upto 10 Km. per Km.	Beyond 10 Km. upto 20 Km. per Km.	Beyond 20 Km. per Km.	
1	2	3	4	5	6	7	8	9	10	11	12
1.1	Carriage of Materials by mechanical transport including loading, unloading and stacking ::										The rates will be applicable to net quantities after deduction of prescribed percentage for voids mentioned in the specification under subhead "Carriage of Materials"
1.1.1	Earth	Cum	152.02	176.17	200.11	223.29	245.95	20.70	17.79	15.30	
1.1.2	Sand, bazri, ballast, kankar	Cum	121.61	140.93	160.09	178.63	196.76	16.56	14.23	12.24	
1.1.3	Stone, boulders, gravelly material	Cum	143.07	165.80	188.34	210.15	231.48	19.48	16.74	14.40	
1.1.4	Bricks	1000 Nos	324.30	375.82	426.90	476.34	524.69	44.15	37.94	32.63	
1.1.5	Brick Tiles	1000 Nos	194.58	225.49	256.14	285.81	314.81	26.49	22.77	19.58	

CARRIAGE OF MATERIALS (By Manual Means)

Code No.	Materials	Unit	Primary Lead	Beyond initial lead	Remarks
			Cost of carriage including loading, unloading & stacking for first 50 m.	Every additional lead of 50 m or part thereof beyond 1st 50 m upto 9 such additional leads	
1	2	3	4		6
1.2	Carriage of materials by manual labour including loading, unloading and stacking for lead less than 0.5 Km :				The rate is applicable to net quantities after deduction of prescribed percentage for voids mentioned in the specifications under sub-head "Carriage of Materials"
1.2.1	Earth	Cum	170.14	37.04	
1.2.2	Sand, bazri, ballast, kankar	Cum	136.11	29.64	
1.2.3	Stone, boulders, gravelly material	Cum	200.16	43.58	
1.2.4	Bricks	1000 Nos	317.59	69.15	
1.2.5	Brick Tiles	1000 Nos	198.49	43.22	

Code No	Description	Unit	Rate Rs.
1.3	Loading and unloading of stone boulder / stone aggregates / sand / canker / moorum by mechanical means.	cum	75.40
1.4	Loading and Unloading of Boulders by Manual Means	cum	99.30
1.5	Loading and Unloading of Cement or Steel by Manual Means and stacking.	tonne	130.00

2.0 SITE CLEARANCE

Code No	Description	Unit	Rate Rs.
2.1	Cutting of trees, including cutting of trunks, branches and removal of stumps, roots, stacking of serviceable material with all lifts and up to a lead of 1000 mtrs and earth filling in the depression/pit to required compaction as per MoRT&H specification clause 201. (Measurment of girth to be done at height of 1 m above ground level)		
2.1.1	Girth from 300 mm to 600 mm	each	419.50
2.1.2	Girth from 600 mm to 900 mm	each	684.00
2.1.3	Girth from 900 mm to 1800 mm	each	1,429.00
2.1.4	Girth from 1800 mm to 2700 mm	each	2,795.00
2.1.5	Girth above 2700 mm	each	5,460.00
2.2	Clearing Grass and Removal of Rubbish (Maximum 150mm) by manual means and disposal at a lead of 50 metres as per MoRT&H specification clause 201.	hectare	32,500.00
2.3	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to a lead of 50 metres from road boundary including removal and disposal of top organic soil not exceeding 150 mm in thickness as directed by Engineer.		
2.3.1	In area of light jungle	hectare	56,000.00
2.3.2	In area of thorny jungle	hectare	74,300.00
2.4	Dismantling of existing structures like culverts, bridges, retaining walls, CC road and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead of 50 metres as directed by Engineer.		
2.4.1	Lime Concrete, cement concrete grade M-10 (1:5:10) and below	cum	365.00
2.4.2	Cement Concrete Grade M-15 and above and PCC blocks	cum	620.00
2.4.3	Prestressed /Reinforced cement concrete with separating, cleaning, straightening and cutting of bars	cum	1,543.00
2.4.4	Dismantling Brick / Tile work		
2.4.4.1	In lime mortar	cum	256.00
2.4.4.2	In cement mortar	cum	365.50
2.4.4.3	In mud mortar	cum	221.50
2.4.4.4	Dry brick pitching or brick soling	cum	221.00
2.4.5	Dismantling Stone Masonry		

Code No	Description	Unit	Rate Rs.
2.4.5.1	Rubble stone masonry in lime mortar	cum	302.50
2.4.5.2	Rubble stone masonry in cement mortar.	cum	357.50
2.4.5.3	Rubble Stone Masonry in mud mortar.	cum	271.00
2.4.5.4	Dry rubble masonry	cum	240.00
2.4.5.5	Stone pitching/ dry stone spells.	cum	224.00
2.4.5.6	Boulders laid in wire crates including opening of crates and stacking dismantled materials.	cum	769.00
2.4.6	Wood work wrought framed and fixed in frames of trusses upto a height of 5 m above plinth level	cum	927.00
2.4.7	Steel work in all type sections up to a height of 5 metre above plinth level (Riveted work where rivet are required to be cut shall be measured and paid separately)		
2.4.7.1	Including dismembering	tonne	2,660.00
2.4.7.2	Excluding dismembering	tonne	1,946.00
2.4.7.3	Extra for cutting rivets in built up steel sections.	each rivet	20.30
2.5	Dismantling dressed stone work ashlar face stone work, marble work or precast concrete work manually/ by mechanical means including stacking of serviceable and disposal of unserviceable material within 50 metres lead as per direction of Engineer in charge:		
2.5.1	In lime mortar.	Cum	446.00
2.5.2	In cement mortar.	Cum	535.00
2.6	Scraping of bricks dismantled from brick masonry including stacking.		
2.6.1	In lime/Cement mortar	each	2.30
2.6.2	In mud mortar	each	0.80
2.7	Removing mortar from Stones and cleaning of stones and concrete articles including stacking (net qty of stacks of cleaned material to be measured).		
2.7.1	In Cement and Lime mortar	cum	913.00
2.7.2	In Mud Mortar	cum	193.50
2.8	Scarping plaster in lime or cement mortar from brick/ stone masonry	sqm	27.00
2.9	Removing all type of hume pipes and stacking within a lead of 1000 metres including earthwork and dismantling of masonry works.		
2.9.1	Up to 600 mm dia	metre	337.50
2.9.2	Above 600 mm to 900 mm dia	metre	456.50
2.9.3	Above 900 mm	metre	782.00

Code No	Description	Unit	Rate Rs.
2.10	Dismantling of flexible pavements and disposal of dismantled materials up to a lead of 50 metres as directed by Engineer.		
2.10.1	Bituminous courses	cum	411.00
2.10.2	Granular courses	cum	286.50
2.11	Dismantling guard rails by manual means and disposal of dismantled material with all lifts and up to a lead of 1000 metres, stacking serviceable materials and unserviceable materials separately as per MoRT&H specification clause 202.	metre	113.50
2.12	Dismantling kerb stone by manual means and disposal of dismantled material with all lifts and up to a lead of 1000 metre as per MoRT&H specification clause 202.	metre	16.50
2.13	Dismantling kerb stone channel by manual means and disposal of dismantled material with all lifts and up to a lead of 1000 metre as per MoRT&H specification clause 202.	metre	24.70
2.14	Dismantling of kilometre stone including cutting of earth, foundation and disposal of dismantled material with all lifts and lead upto 1000 m and back filling of pit as per MoRT&H specification clause 202.		
2.14.1	5th KM stone	each	609.00
2.14.2	Ordinary KM Stone	each	357.00
2.14.3	200m Stone	each	71.40
2.15	Dismantling of barbed wire fencing/ wire mesh fencing including posts, foundation concrete, back filling of pit by manual means including disposal of dismantled material with all lifts and up to a lead of 1000 metres, stacking serviceable material and unserviceable material separately as per MoRT&H specification clause 202.	metre	89.50
2.16	Removal of telephone / Electric poles including excavation and dismantling of foundation concrete and lines under the supervision of concerned department, disposal with all lifts and up to a lead of 1000 metres and stacking the serviceable and unserviceable material separately as per MoRT&H specification clause 202.	each	294.00

3.0 DISMANTLING

Code No	Description	Unit	Rate Rs.
3.1	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.		
3.1.1	In cement mortar	cum	419.00
3.2	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead.		
3.2.1	For thickness of tiles 10 mm to 25 mm	sqm	42.30
3.2.2	For thickness of tiles above 25 mm and upto 40 mm	sqm	67.20
3.3	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead :		
3.3.1	Of area 3 sq. metres and below	each	221.50
3.3.2	Of area beyond 3 sq. metres	each	303.00
3.4	Taking out doors, windows and clerestory window shutters (steel or wood) including stacking within 50 metres lead:		
3.4.1	Of area 3 sq. metres and below	each	91.10
3.4.2	Of area beyond 3 sq. metres	each	120.50
3.5	Demolishing dry brick pitching in floors, drains etc. including stacking serviceable material and disposal of unserviceable material within 50 metres lead :	cum	698.00
3.6	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	150.50
3.7	Demolishing brick tile covering in terracing including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	62.30
3.8	Demolishing mud phaska in terracing and disposal of material within 50 metres lead.	cum	582.00
3.9	Dismantling roofing including ridges, hips valleys and gutters etc., and stacking the material within 50 metres lead of:		
3.9.1	G.S. Sheet	sqm	103.00
3.9.2	Asbestos sheet	sqm	47.30
3.10	Dismantling stone slab roofing over wooden karries or R.C.C. battens (dismantling karries and battens to be paid for separately) including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	cum	1,506.00

Code No	Description	Unit	Rate Rs.
3.11	Dismantling jack arch roofing and floors including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	139.50
3.12	Dismantling tiled roofing with battens boarding etc. complete including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	121.00
3.13	Demolishing thatch roofing including mats, bamboo, jaffari etc. complete including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	33.50
3.14	Dismantling wooden ballies in posts and struts including stacking within 50 metres lead.	metre	11.60
3.15	Dismantling and stacking within 50 metres lead, fencing posts or struts including all earth work and dismantling of concrete etc. in base of :		
3.15.1	T' or 'L' iron or pipe	each	122.50
3.15.2	R.C.C.	each	123.50
3.16	Cutting ballies or wooden posts of fencing at the point of projection above the concrete or ground and stacking the same within 50 metres lead.	each	5.95
3.17	Dismantling barbed wire or flexible wire rope in fencing including making rolls and stacking within 50 metres lead.	kg	21.70
3.18	Dismantling wooden trellis work excluding frames but including stacking the serviceable material within 50 metres lead.	sqm	36.40
3.19	Dismantling expanded metal or I.R.C. fabrics with necessary battens and beading including stacking the serviceable material within 50 metres lead.	sqm	43.80
3.20	Dismantling wooden boardings in lining of walls and partitions, excluding supporting members but including stacking within 50 metres lead :		
3.20.1	Upto 10 mm thick	sqm	35.50
3.20.2	Thickness above 10 mm upto 25 mm	sqm	45.40
3.20.3	Thickness above 25 mm upto 40 mm	sqm	51.20
3.21	Dismantling precast concrete or stone slabs in walls, partition walls etc. including stacking within 50 metres lead:		
3.21.1	Thickness upto 40 mm	sqm	166.00
3.21.2	Thickness above 40 mm upto 75 mm	sqm	249.00
3.22	Dismantling cement asbestos, Celotax or other hard board ceiling or partition walls including stacking of serviceable materials and disposal of unserviceable materials within 50 metres lead.	sqm	34.90
3.23	Dismantling C.I. or asbestos rain water pipe with fittings and clamps including stacking the material within 50 metres lead :		

Code No	Description	Unit	Rate Rs.
3.23.1	75 to 80 mm dia pipe.	metre	41.90
3.23.2	100 mm dia pipe	metre	43.00
3.23.3	150 mm dia pipe	metre	44.10
3.24	Dismantling G.I. pipes (external work) including excavation and refilling trenches after taking out the pipes manually/ by mechanical means including stacking of pipes within 50 metres lead as per direction of Engineer-in-charge :		
3.24.1	15 mm to 40 mm nominal bore	metre	81.90
3.24.2	Above 40 mm nominal bore	metre	87.00
3.25	Dismantling C.I. pipes including excavation and refilling trenches after taking out the pipes manually/ by mechanical means, breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes, lead at site within 50 metre lead as per direction of Engineer-in-charge:		
3.25.1	Upto 150 mm diameter	metre	230.00
3.25.2	Above 150 mm dia upto 300 mm dia.	metre	308.00
3.25.3	Above 300 mm diameter	metre	405.50
3.26	Dismantling asbestos cement pressure pipes including excavation and refilling trenches after taking out the pipes manually/ by mechanical means and stacking the pipes within 50 metres lead as per direction of Engineer-in-charge:		
3.26.1	Upto 150 mm diameter	metre	183.50
3.26.2	Above 150 mm diameter	metre	220.50
3.27	Taking out C.I. cover with frame from R.C.C. top slab of manholes of various sizes including demolishing of R.C.C. work manually/ by mechanical means and stacking of useful materials near the site and disposal of unserviceable materials into municipal dumps within 50 metres lead as per direction of Engineer-in-charge.	each	388.50
3.28	Taking out C.I. cover with frame from R.C.C. top slab of inspection chambers of various sizes including demolishing of R.C.C. work manually/ by mechanical means and stacking of useful materials near the site and disposal of unserviceable materials into municipal dumps within 50 metres lead as per direction of Engineer-in-charge.	each	224.50
3.29	Dismantling of R.C.C. spun vent shaft including excavating the cement concrete pit completely, taking out the shaft, refilling the excavated gap, stacking the useful materials near the site and disposal of unserviceable materials within 50 metres lead.	each	2,580.00
3.30	Dismantling of road gully chamber of various sizes including C.I. grating with frame including stacking of useful materials near the site and disposal of unserviceable materials into municipal dumps within 50 metres lead including refilling the excavated gap.	each	534.00

Code No	Description	Unit	Rate Rs.
3.31	Dismantling of flushing cistern of any size including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead.	each	537.00
3.32	Dismantling of C.I. sluice valve including stacking of useful materials within a lead of 50 metres		
3.32.1	Upto 150 mm diameter	each	195.50
3.32.2	Above 150 mm diameter	each	740.00
3.33	Dismantling of spindle fire hydrant including stacking of useful materials within 50 metres lead.	each	457.50
3.34	Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within 50 metres lead.	sqm	30.70
3.35	Dismantling aluminium/ Gypsum partitions, doors, windows, fixed glazing and false ceiling including disposal of unserviceable surplus material and stacking of serviceable material within 50 meters lead as directed by Engineer-in-charge.	sqm	34.90

4.0 EARTH WORK

Code No	Description	Unit	Rate Rs.
4.1	Dressing of earth work in surface excavation including cutting and filling upto 30cm depth including disposal of excavated earth upto 50m and lift upto 1.5 m.	sqm	37.80
4.2	Earth work in excavation for roadway, including trimming bottom and side slopes in accordance with requirement of line, grades and cross sections, including disposal of surplus material with all lift and lead upto 1000 metre as per MoRT&H specification clause 301.		
4.2.1	In all type of soil	cum	214.50
4.2.2	In ordinary rock	cum	324.50
4.2.3	In Hard Rocks		
4.2.3.1	Using blasting (including blasting material) (considering serviceable material)	cum	576.00
4.2.3.2	Blasting prohibited (considering serviceable material)	cum	920.00
4.3	Earth work in excavation in soil unsuitable for road construction such as marshy soil including pumping out water, removal of the same and disposal with all lift and lead upto 1 km as per MoRT&H specification clause 301.	cum	201.00
4.4	Construction of embankment with approved material obtained from borrow pit with all lifts and leads, transporting to site, spreading, grading to required slope and compacting by vibratory roller 8-10 tonne to meet requirement of table 300-2 including cost of compensation for earth taken from private land complete as per MoRT&H specification clause 305. (Lead taken upto 5 km)	cum	184.50
4.5	Construction of embankment with approved materials deposited at site available from roadway cutting and excavation from drain and foundation of other structures, graded and compacting by vibratory roller 8-10 tonne to meet requirement of table 300-2 as per MoRT&H specification clause 305.	cum	77.50
4.6	Construction of subgrade and earthen shoulders with approved material obtained from borrow area with all lifts & leads, transporting to site, spreading, grading to required slope and compacted in layers not exceeding 200mm thickness at OMC, with vibratory roller of 80-100 KN static weight or more to attain a density 97% maximum dry density to meet requirement of table No. 300-2 as per MoRT&H specification clause 305. (Lead taken upto 5 km)	cum	210.00
4.7	Construction of Embankment with Fly ash/Pond ash available from coal or lignite burning Thermal Plants as waste material conforming to table 1 of IRC: SP: 58 - 2001, spread and compacted in layer of 200mm thickness each at OMC, all as specified in IRC: SP: 58-2001 and as per approved plans.	cum	82.30
4.8	Compacting original ground		

Code No	Description	Unit	Rate Rs.
4.8.1	Loosening upto a level of 500 mm below the subgrade level watered, graded and compacted in layers by vibratory roller 8-10 tonne to meet requirement of table 300-2 for subgrade construction as per MoRT&H specification clause 305.3.4.	cum	48.30
4.8.2	Loosening and recompacting original ground below embankment including Loosening levelling and recompacting original ground supporting embankment to facilitate placement of first layer of embankment, scarified to a depth of 150 mm, mixed with water at OMC and then compacted by rolling by vibratory roller 8-10 tonne so as to achieve minimum dry density as given in table 300-2 for embankment construction as per MoRT&H specification clause 305.3.4.	cum	23.80
4.9	Earth work in excavation in open area, STP, WTP, Pumping station with mechanical means including dressing of sides and ramming of bottoms, including getting out the excavated material, disposal of excavated material lead upto 1000m at suitable site as per as per drawing and as per direction of Engineer. (Measurements for payment to be done as per standard drawings).		
4.9.1	In all kind of soil		
4.9.1.1	Upto 3.0 m depth	cum	150.50
4.9.1.2	Above 3.0 m and upto 6.0 m depth	cum	175.50
4.9.1.3	Above 6.0 m and upto 9.0 m depth	cum	211.00
4.9.2	In ordinary rock		
4.9.2.1	Upto 3.0 m depth	cum	378.50
4.9.2.2	Above 3.0 m and upto 6.0 m depth	cum	445.00
4.9.2.3	Above 6.0 m and upto 9.0 m depth	cum	493.00
4.9.3	In hard rock		
4.9.3.1	Upto 3.0 m depth	cum	670.00
4.9.3.2	Above 3.0 m and upto 6.0 m depth	cum	769.00
4.9.3.3	Above 6.0 m and upto 9.0 m depth	cum	818.00
4.10	Earth work in excavation in foundation, trenches etc. including dressing of sides and ramming of bottoms, including getting out the excavated material, refilling after laying pipe/ foundation and disposal of surplus excavated material at a lead upto 50m suitable site as per direction of Engineer for following depths, below natural ground / Road top level.		
4.10.1	In all types soils/ saturated soil such as moorum, sand, sandy silt, clay, black cotton soil, kankar, etc.		
4.10.1.1	Depth upto 1.5 m	cum	210.50
4.10.1.2	Add extra for over all depth of excavation above 1.5 m and upto 3.0 m over item no 4.10.1.1	cum	14.70

Code No	Description	Unit	Rate Rs.
4.10.1.3	Add extra for over all depth of excavation above 3.0 m and upto 4.5 m over item no 4.10.1.1	cum	33.70
4.10.1.4	Add extra for over all depth of excavation above 4.5 m and upto 6.0 m over item no 4.10.1.1	cum	58.90
4.10.1.5	Add extra for over all depth of excavation above 6.0 m and upto 7.5 m over item no 4.10.1.1	cum	90.50
4.10.1.6	Add extra for over all depth of excavation above 7.5 m and upto 9.0 m over item no 4.10.1.1	cum	126.50
4.10.2	In ordinary rock.		
4.10.2.1	Depth upto 1.5 m	cum	988.00
4.10.2.2	Add extra for over all depth of excavation above 1.5 m and upto 3.0 m over item no 4.10.2.1	cum	69.20
4.10.2.3	Add extra for over all depth of excavation above 3.0 m and upto 4.5 m over item no 4.10.2.1	cum	158.00
4.10.2.4	Add extra for over all depth of excavation above 4.5 m and upto 6.0 m over item no 4.10.2.1	cum	276.50
4.10.2.5	Add extra for over all depth of excavation above 6.0 m and upto 7.5 m over item no 4.10.2.1	cum	425.00
4.10.2.6	Add extra for over all depth of excavation above 7.5 m and upto 9.0 m over item no 4.10.2.1	cum	593.00
4.10.3	In hard rock (required blasting) including Blasting materials.		
4.10.3.1	Depth upto 1.5 m	cum	1,639.00
4.10.3.2	Add extra for over all depth of excavation above 1.5 m and upto 3.0 m over item no 4.10.3.1	cum	114.50
4.10.3.3	Add extra for over all depth of excavation above 3.0 m and upto 4.5 m over item no 4.10.3.1	cum	262.00
4.10.3.4	Add extra for over all depth of excavation above 4.5 m and upto 6.0 m over item no 4.10.3.1	cum	459.00
4.10.3.5	Add extra for over all depth of excavation above 6.0 m and upto 7.5 m over item no 4.10.3.1	cum	705.00
4.10.3.6	Add extra for over all depth of excavation above 7.5 m and upto 9.0 m over item no 4.10.3.1	cum	983.00
4.10.4	In hard rock (Blasting prohibited)		
4.10.4.1	Depth upto 1.5 m	cum	2,269.00
4.10.4.2	Add extra for over all depth of excavation above 1.5 m and upto 3.0 m over item no 4.10.4.1	cum	159.00
4.10.4.3	Add extra for over all depth of excavation above 3.0 m and upto 4.5 m over item no 4.10.4.1	cum	363.00
4.10.4.4	Add extra for over all depth of excavation above 4.5 m and upto 6.0 m over item no 4.10.4.1	cum	635.00

Code No	Description	Unit	Rate Rs.
4.10.4.5	Add extra for over all depth of excavation above 6.0 m and upto 7.5 m over item no 4.10.4.1	cum	976.00
4.10.4.6	Add extra for over all depth of excavation above 7.5 m and upto 9.0 m over item no 4.10.4.1	cum	1,361.00
4.11	Add extra over item no 4.10.1, 4.10.2, 4.10.3 and 4.10.4 in RUIDP SOR for excavation in saturated soil, silt and sludge where pumping or bailing out of water is required including shoring strutting where required and dewatering, where width is upto 6 metre.		
4.11.1	Excavation depth from ground level 0.0 to 9.0 m		
4.11.1.1	Excavation from Encountered depth of water table 0.0 to 1.5 m	cum	42.10
4.11.1.2	Excavation from Encountered depth of water table 1.5 to 3.0 m	cum	84.20
4.11.1.3	Excavation from Encountered depth of water table 3.0 to 4.5 m	cum	168.50
4.11.1.4	Excavation from Encountered depth of water table 4.5 to 6.0 m	cum	252.50
4.11.1.5	Excavation from Encountered depth of water table 6.0 to 7.5 m	cum	337.00
4.11.1.6	Excavation from Encountered depth of water table 7.5 to 9.0 m	cum	674.00
4.12	Filling with locally available river sand at all levels including watering ramming consolidating and dressing complete including cost of sand.	cum	966.00
4.13	Earth filling with available surplus soil excavated from foundations and taken only from outside of building plinth in layers not exceeding 20cm in depth, consolidating each deposited layer including ramming and watering and consolidation with lead up to 50 m and lift upto 1.5 m.	cum	144.00
4.14	Providing and fixing CLOSE timbering in foundation, trenches etc at all depth including strutting, shoring and packing cavities (wherever required) complete. (Measurements to be taken of the face area timbered).	sqm	135.00
4.15	Extra for planking, strutting and packing material for cavities IN CLOSE TIMBERING if required to be left permanently in position (face area of timber permanently left to be measured)	sqm	1,078.00
4.16	Providing and fixing OPEN timbering in foundation, trenches etc at all depth including strutting, shoring and packing cavities (wherever required) complete.	sqm	68.70
4.17	Extra for planking, strutting and packing material for cavities IN OPEN TIMBERING if required to be left permanently in position (face area of timber permanently left to be measured)	sqm	458.50
4.18	Compensation for earth, taken from private land with all lead and lift (Land to be arranged by private negotiations by the Contractor) [MoRTH Specification : Clause 301 to 305]	cum	85.70
4.19	Supplying Chlorpyrifos/ Lindane emulsifiable concentrate of 20% in sealed containers including delivery as specified.	litre	221.50

Code No	Description	Unit	Rate Rs.
4.20	Diluting and injecting Chlorpyriphos/ Lindane E.C. 20% with 1% concentration for POST-CONSTRUCTIONAL anti-termite treatment (excluding the cost of chemical emulsion) :		
4.20.1	Along external wall where the apron is not provided using chemical emulsion @ 7.5 litres / sum of the vertical surface of the substructure to a depth of 300 mm including excavation channel along the wall & rodding etc. complete:	metre	20.50
4.20.2	Along the external wall below concrete or masonry apron using chemical emulsion @ 2.25 litres per linear metre including drilling and plugging holes etc.	sqm	20.50
4.20.3	Treatment of soil under existing floors using chemical emulsion @ one litre per hole, 300 mm apart including drilling 12 mm diameter holes and plugging with cement mortar 1 :2 (1 cement : 2 Coarse sand) to match the existing floor :	sqm	177.50
4.20.4	Treatment of existing masonry using chemical emulsion @ one litre per hole at 300 mm interval including drilling holes at 45 degree and plugging them with cement mortar 1:2 (1 cement : 2 coarse sand) to the full depth of the hole :	metre	22.20
4.21	Diluting and injecting chemical emulsion for POST-CONSTRUCTIONAL anti-termite treatment (excluding the cost of chemical emulsion) at points of contact of wood work by chemical emulsion Chlorpyriphos/ Lindane (in oil or kerosene based solution) @ 0.5 litres per hole by drilling 6 mm dia holes at downward angle of 45 degree at 150 mm centre to centre and sealing the same.	metre	63.90
4.22	Diluting and injection Chloropyrifos Emulsifiable concentrate 20% with 1% concentration for PRE-CONSTRUCTIONAL Anti termite treatment as per IS 6313 part III as amended from time to time and creating a continuous chemical barrier under and around the column pits, wall trenches, basement excavation, top surface of plinth filling, junction of wall and floor along the external perimeter of building expansion joints, over the top surface of consolidated earth of which approach is to be laid surrounding of pipes and conduits etc. complete as per specification (Plinth floor area only shall be measured for payment and excluding the cost of chemical emulsion).	sqm	194.50
4.23	Silt clearance of drains, channels and canals with lift 1.5 Mtr and lead up to 50 Mtr.	cum	348.50
4.24	Sludge clearance of drains, channels and canals with lift 1.5 Mtr and lead up to 50 Mtr.	cum	372.50
4.25	Providing Barricading for Trenches using 80 - 100 mm dia Wooden Ballies as vertical post, atleast 1.5m above ground level and atleast 30-45 cm below ground level at a spacing of 3 m. Two rows of PVC Tape (preferably red in colour) strip barricading horizontal strip securely tied by the vertical members. Vertical members shall be painted in red and white colour. Rate is inclusive removal and cleaning of site complete in all respect.	metre	104.50

Code No	Description	Unit	Rate Rs.
4.26	Providing and fixing Barricading at site of work for restricting the general public using 80-100 mm dia Wooden Ballies as vertical post with average spacing of 1.80 meter between two vertical posts, having height at least 1.5 m above road/ ground level and at least 30-45 cm below road/ ground level by making suitable size hole in road/ ground, providing and fixing two rows of 80-100 mm Wooden Ballies as horizontal members with jute russies. Both vertical and horizontal members shall be painted in red and white colour strips as per approved pattern as and when it becomes shabby but at least after every alternate shifting at new location. After shifting/ removal of barricading holes shall be filled up properly and site is to be cleared in all respect. (Note: measurement is to be done in linear basis)	metre	109.00
4.27	Providing and fixing Barricading at site of work for restricting the general public using 80-100 mm dia Wooden Ballies as vertical post with average spacing of 1.80 meter between two vertical posts, having height at least 1.5 m above road/ ground level and at least 30-45 cm below road/ ground level by making suitable size hole in road/ ground, providing and fixing suitably two rows of 100mm wide PVC Tape preferably of red colour. The vertical members shall be painted in red and white colour strips as per approved pattern as and when it becomes shabby but at least after every alternate shifting at new location. After shifting/ removal of barricading holes shall be filled up properly and site is to be cleared in all respect. (Note: measurement is to be done in linear basis)	sqm	133.00
4.28	Providing and fixing Barricading at site of work for restricting the general public using 40 mm dia M.S. pipe ("B" class) as vertical post with average spacing of 1.80 meter between two vertical posts, having height at least 1.5 m above road/ ground level and at least 30-45 cm below road/ ground level by making suitable size hole in road/ ground, providing and fixing suitably two rows of 100mm wide PVC Tape preferably of red colour. The M.S. pipe shall be painted in red and white colour strips as per approved pattern as and when it becomes shabby but at least after every alternate shifting at new location. After shifting/ removal of barricading the hole shall be filled up properly and site is to be cleared in all respect. (Note: measurement is to be done in linear basis)	metre	48.10
4.29	Providing and fixing Barricading at site of work for restricting the general public using 40 mm dia M.S. pipe ("B" class) as vertical post with average spacing of 1.80 meter between two vertical posts, having height at least 1.5 m above road/ ground level and at least 30-45 cm below road/ ground level by making suitable size hole in road/ ground, providing and fixing two rows of 40 mm dia M.S. pipe ("B" class) as horizontal members with nuts & bolts. Both vertical and horizontal members shall be painted in red and white colour strips as per approved pattern as when it becomes shabby but at least after every alternate shifting at new location. After shifting/ removal of barricading holes shall be filled up properly and site is to be cleared in all respect. (Note: measurement is to be done in linear basis)	metre	63.50

Code No	Description	Unit	Rate Rs.
4.30	Providing and Fixing Minimum 0.63mm thick GI corrugated sheets (minimum width of each sheet shall be 60 cm) for covering the barricading in one/ two rows one above another and painting in red and white stripes as per the specifications and directions of the Engineer In charge with proper fixing arrangements with GI limpet washers nuts and bolts complete in all respect.	sqm	134.00

5.0 SURVEY, TESTING, INVESTIGATION AND SITE OFFICE

Code No	Description	Unit	Rate Rs.
5.1	Topographic Survey		
5.1.1	Topographic Survey with a grid area of 15MX15M, includes all features such as structures (bridges, culverts etc.) utilities, existing roads, electric and telephone installations (both O/H as well as underground), huts, buildings, fencing and trees, oil, water and gas lines etc. using Total Station and develop a drawing in AUTO CAD format using the layering system and Geo referencing including supply of detailed drawings in appropriate scale in A-2 size complete in all respect.		
5.1.1.1	For preparation of plans of built-up areas Upto 10 Hectare	hectare	3,109.00
5.1.1.2	For preparation of plans of built-up areas beyond 10 hectare	hectare	2,601.00
5.1.1.3	For preparation of plans of open areas Upto 10 Hectare	hectare	2,325.00
5.1.1.4	For preparation of plans of open areas beyond 10 hectare	hectare	1,827.00
5.1.2	Topographic Survey by taking longitudinal sections at every 10m interval, cross sections at every 5m interval on either side of centerline of Road including supply of detailed drawings in appropriate scale & size in soft copy & Hard copy complete all respect as per direction of Engineer and detailed alignment plans with covering all features in a width:		
5.1.2.1	Upto 10 mtrs.	Km	6,217.00
5.1.2.2	From 10mtrs. Upto 20 mtrs.	Km	7,772.00
5.1.2.3	From 20mtrs. Upto 30 mtrs.	Km	8,882.00
5.1.2.4	From 30 mtrs. Upto 50 mtrs.	Km	10,362.00
5.1.3	Fly levelling for transfer level from GTS benchmark to project area by close traverse method for fixing of temporary bench Mark as reference.	Km	598.00
5.1.4	Fly levelling from location of temporary bench benchmark along the proposed alignment at minimum 50 m interval & where the abrupt changed of levels including supply of drawing of L-section and levels in tabular form complete all respect as per direction of Engineer. (For disposal point of treated effluent and rising main of pipeline works etc.)	Km	1,529.00
5.1.5	Establish Bench Mark / Reference pillar of size 15 cm X 15 cm X 45 cm shall be cast in RCC of grade M-15 with a nail fixed in the centre of the top surface. The reference pillar shall be embedded in concrete up to a depth of 30 cm with CC M10 (5 cm wide all around). The balance 15 cm above ground shall be painted yellow. The spacing shall be 250m.	each	587.00

Code No	Description	Unit	Rate Rs.
5.1.6	Installation of GPS pillar at every 5 km. of size 300 mm x 300 mm x 900 mm in RCC of grade M-15. The pillars shall be embedded 600 mm in ground with CC M-10 grade (50 mm wide all around). The balance 300 mm above ground shall be painted yellow and pillar no marked on it.	each	1,671.00
5.2	Pavement Investigation and Evaluation		
5.2.1	BBD Tests as per IRC: 81-1997 ("Guidelines for Strengthening of Flexible Road Pavements Using Benkelman Beam Deflection Technique") and pavement evaluation	Km	4,477.00
5.2.2	Test pit to obtain the existing pavement crust details and DCP test for physical characteristics of the sub-grade soil	each	1,615.00
5.2.3	Auger Boring (2 m depth) sampling/testing	each	3,025.00
5.2.4	Auger Boring (4 m depth) sampling/testing	each	4,538.00
5.2.5	Auger Boring (6 m depth) sampling/testing	each	6,050.00
5.2.6	California Bearing Ratio test	each	1,573.00
5.3	Material survey and Investigation		
5.3.1	Identification of Quarry site, collection of samples of Stone metal/Fine Aggregate/GSB and laboratory testing viz. Flakiness and Elongation Index, Aggregate Impact Value (AIV), Specific Gravity and Water Absorption, Stripping and Coating test, Los Angeles Abrasion Value (LAV), Gradation, Specific Gravity, silt content and Fineness Modulus, Laboratory Compaction Test (Modified Proctor Test), CBR Test from NABL approved laboratory and preparation of report complete in all respect.		
5.3.1.1	Stone metal samples from crushers/quarries	each	3,388.00
5.3.1.2	Fine Aggregates from crushers/quarries	each	1,694.00
5.3.1.3	GSB from crushers/quarries	each	3,388.00
5.3.2	Identification Borrow area, borrow pits sample testing from NABL approved laboratory (Soil Classification, Sieve Analysis, Atterberg Limits, Laboratory Compaction Test (Modified Proctor Test), 4-day soaked CBR, Free swell Index)	each	5,929.00
5.4	Traffic Survey-To carry out traffic volume count survey and turning movement count survey. This traffic data will be analyzed to find out daily traffic. Peak Hour traffic volumes, turning movements, patterns etc.		
5.4.1	Traffic Volume counts (3 days count)		
5.4.1.1	Two Lane Road	each	20,316.00
5.4.1.2	Four Lane Road	each	25,688.00
5.4.2	Traffic Volume counts (7 days count)		
5.4.2.1	Two Lane Road	each	40,620.00
5.4.2.2	Four Lane Road	each	53,155.00

Code No	Description	Unit	Rate Rs.
5.4.3	Axle Load Surveys (one day)		
5.4.3.1	Two Lane Road	each	11,955.00
5.4.3.2	Four Lane Road	each	14,641.00
5.4.4	Intersection Volume Count and Pedestrian/animal cross count (in Peak Hours)	each	6,873.00
5.4.5	OD Survey and Commodity movement characteristics (1 day)		
5.4.5.1	Two Lane Road	each	8,966.00
5.4.5.2	Four Lane Road	each	10,757.00
5.5	Water Sample Tests		
5.5.1	Water Quality Analysis– Collecting representative sample and Physical & Chemical testing of Parameter from NABL approved laboratory as per CPHEEO manual: PH, TDS, Electrical Conductivity (EC), Taste & Odour, turbidity, magnesium, Total hardness, total alkalinity, chloride, Dissolved Oxygen (DO), sulphate, nitrate, fluoride, Calcium, Iron, Pesticide, Manganese, Cooper, Aluminium, Residual Chlorine, Zinc, phenolic compound, Arsenic, Cadmium, Chromium, cyanides, lead, selenium, Mercury.	each	6,776.00
5.5.2	Collecting representative sample and Bacteriological Parameter testing of water from NABL approved laboratory as per CPHEEO manual: Total coliforms, faecal coliforms	each	1,573.00
5.6	Raw Sewage Analysis– Collecting representative sample and Physical & Chemical testing of Parameter from NABL approved laboratory as per CPHEEO manual: PH, Temperature, TSS, TDS, Inorganic dissolved solids, Alkalinity as CaCO ₃ , total hardness as CaCO ₃ , chloride as Cl, sulphate as SO ₄ , Floride as F, Phosphate as PO ₄ , Ammonical Nitrogen as N, Sodium as Na, TKN, BOD at 200 C, COD, Silica as SiO ₂ , oil and grease, sulphide as S, phenolic compound and submission of report complete in all respect.	each	6,292.00
5.7	Municipal Solid Waste Sample analysis - Collecting representative sample of Municipal Solid Waste (MSW) and analyze physical and chemical Characterization and composition of each component in %age in NABL approved laboratory as per CPHEEO manual: Various parameters for Characterization are moisture content, total solids, volatile solids of total solids, fixed solids percent of total solids, organic carbon, COD and calorific value. Composition of each component in %age viz. Paper, Rubber, Leather & Synthetics, Metals, Inert, Plastics, Organics, Textiles, Wood & Others and submission of report complete in all respect.	each	8,470.00
5.8	Ambient Air Quality Monitoring- For parameters – PM-2.5 & PM-10, SO ₂ , NO ₂ , CO from NABL approved laboratory and submission of report complete in all respect.	each	4,961.00
5.9	Ambient Noise Quality Monitoring - To Identify sources of noise, Noise due to traffic/transportation of vehicles, Noise due to heavy equipment operations, Duration and variations in noise over time etc. the equivalent noise levels shall be monitored (Lday and Lnight in Leq dBA) from NABL approved laboratory and submission of report complete in all respect.	each	1,996.00

Code No	Description	Unit	Rate Rs.
5.10	Survey for identify the Existing Underground utilities: Field survey using Geo-radar system & Total Station for GIS mapping, collecting of data and plotting the details on digital map of Existing Underground utilities for a width of 15 m including supply of detailed drawings of lanes in appropriate scale & A-2 size in soft copy & Hard copy complete all respect.		
5.10.1	(a) Water mains: Alignment using appropriate techniques and it's attributes depth of laying, diameter and material and location of pipe/ appurtenances/ meters. (b) Location of manholes and alignment of sewers. (c) Road levels at every intersections or 50 meter whichever is less. (d) Present condition of available services.		
5.10.1.1	Upto 2 Km	Km	23,164.00
5.10.1.2	Beyond 2 km and upto 5 Km	Km	19,535.00
5.10.1.3	Beyond 5 km	Km	15,907.00
5.11	Excavation for taking trial pits along pipe/sewer line -Trenches/pits size 1.0mx1.0mx1.5m - for field verification for location/details of utilities, and refilling of excavated trench/pit as per standard engineering practices:		
5.11.1	Area with Cement Concrete Roads	each	1,733.00
5.11.2	Area with Bituminous road Surface	each	1,602.00
5.11.3	Area with metal/unmetal surface	each	944.00
5.12	Add extra for extra excavation in trial pits for each and every 0.5 m depth or part thereof.	each	325.00
5.13	Surveys for evaluation of discharge, efficiency of pump and head losses in piping within the pump house for centrifugal pumps in existing operating conditions of each pump set.	each	1,017.00
5.14	Surveys/ Bench Test for evaluation of discharge, efficiency of pump and head losses in piping within the pump house for submersible pumps in existing operating conditions of each pump set.	each	1,166.00
5.15	Geotechnical Investigations:		
5.15.1	To Analyze the soil conditions by drilling bore holes at different locations to represent soil strata to conduct Standard penetration test (SPT) for determining SBC in hole as per IS-2131 including collection of disturbed and undisturbed soil samples at every 3.0 m or at change of strata analyzing the soil or grain size, atterberg limits, bulk & dry densities, shear parameters and specific gravity. In case of rock, collection of core, calculation or RQD (Rock Quality Designation) and core recovery and comprehensive strength of rock. Geo-tech investigation to be done at different locations complete in all respect as per specifications.		

Code No	Description	Unit	Rate Rs.
5.15.1.1	In hard Soil	metre	1,512.00
5.15.1.2	In ordinary/soft rock	metre	2,269.00
5.15.1.3	In Hard Rock	metre	3,025.00
5.15.2	Plate load test for determining SBC at a specified depth and draw load settlement curve as per Indian standard complete in all respect as per specifications.	each	35,090.00
5.16	Site clearance, labelling and demarcation of land boundary by providing and fixing boundary stone of size 15cmx10cmx120cm (60cm below ground) stone at every 50 m interval & corner of the land and to write the length of the land boundary on corner stones from one corner to another corner by enamel paint.	metre	14.50
5.17	Preparation of detailed plans, elevations, sections of existing buildings.	sqm	49.50
5.18	Socio-economic survey – To collect the information regarding social and economical status of beneficiaries in terms of their livelihood in a prescribed format. The Census cum Socio-economic survey to be conducted by using questionnaire with a battery of questions to address social and economical status.	each	32.00
5.19	Survey of all properties, preparation of GIS based consumer mapping of consumer water connection & consumer sewer connections and database, plotting assets on GIS map etc (Satellite image will be provided by the Department	Each property	51.50
5.20	Photography for the CAAP activities	each	34.00
5.21	SITE OFFICE		
5.21.1	Providing, arranging, managing and maintaining 500 sq.ft. well furnished office and well equipped Laboratory with 3 tables, 10 chairs, 2 steel almirah, one computer with printer & operator, sufficient number of display etc. to the satisfaction of the Project Manager including Electrical, Water expenses etc. For execution of this item the date of start shall be considered only when the Contractor has actually rented/constructed the required premises established the office & Laboratory as per requirement. This item shall remain valid only for original contact period; no additional payment shall be made for whatsoever reason even if time extension is provided or date of completion is extended. This office and laboratory including furniture and all other equipment shall be property of contractor after completion of Project.	month	22,100.00
5.21.2	Providing, arranging, managing and maintaining minimum 350 sq.ft. office with two tables, 6 chairs, one steel almirah, one computer with printer & operator, sufficient number of display etc. fully furnished office to the satisfaction of the Project Manager including Electrical, Water expenses etc. For execution of this item the date of start shall be considered only when the Contractor has actually rented/constructed the required premises established the office & Laboratory as per requirement. This item shall remain valid only for	month	15,150.00

Code No	Description	Unit	Rate Rs.
	original contact period; no additional payment shall be made for whatsoever reason even if time extension if provided or date of completion is extended. This office and laboratory including furniture and all other equipment shall be property of contractor after completion of Project as per specification and direction of the Engineer.		
5.21.3	Providing, arranging, managing, and maintaining minimum 250 sq.ft. well equipped Laboratory as per specifications with two tables, 4 chairs, one steel almirah, sufficient number of display etc. to the satisfaction of the Project Manager including Electrical, Water expenses etc. For execution of this item the date of start shall be considered only when the Contractor has actually rented/constructed the required premises established the Laboratory as per requirement. This item shall remain valid only for original contact period; no additional payment shall be made for whatsoever reason even if time extension if provided or date of completion is extended. This laboratory including furniture and all other equipment shall be property of contractor after completion of Project.	month	7,930.00
5.21.4	Supply of laboratory equipments like Analytical Balance, Autoclave, Dissolved Oxygen Sampler, Drying Oven, Hot Plates, Incubator, Microscope, Binocular, Membrane Filter Assembly, Muffle Furnace, PH Meter portable, Electrical Conductivity Meter, Refrigerator (165 ltr.), Sludge Sampler, Soxhlet extraction unit, Centrifuge, Colorimeter, Kjeldhal apparatus, Distillation Unit, Turbidity meter, Vacuum pump, Water bath (thermostat controlled), Black Bottles and Glass wares of approved make including analytical chemicals and commissioning as per technical specification and the direction of the Engineer.	set	2,52,200.00
5.22	Door-to-door survey for Sewer & Water house service connection of all properties to be connected with Sewer Network, Preparation of sketch drawing true to site showing layout arrangement for each house sewer connection with all the details i.e. location of IC, septic tank, size of outlet pipe from property, proposed pipe length etc. and obtain approval from Project manager or his representative, Preparation of as built drawing (Layout plan) in AutoCAD for each property / dwelling connected with sewer network.	No	43.00

6.0 MORTARS

Code No	Description	Unit	Rate Rs.
6.1	Cement Mortar 1:1 (1 cement : 1 fine sand)	cum	8,261.00
6.2	Cement mortar 1:2 (1 cement : 2 fine sand).	cum	6,295.00
6.3	Cement mortar 1:3 (1 cement : 3 fine sand).	cum	5,314.00
6.4	Cement mortar 1:4 (1 cement : 4 fine sand).	cum	4,446.00
6.5	Cement mortar 1:5 (1 cement : 5 fine sand).	cum	3,979.00
6.6	Cement mortar 1:6 (1 cement : 6 fine sand).	cum	3,578.00
6.7	Cement mortar 1:2 (1 cement : 2 coarse sand).	cum	6,444.00
6.8	Cement mortar 1:3 (1 cement : 3 coarse sand).	cum	5,482.00
6.9	Cement mortar 1:4 (1 cement : 4 coarse sand).	cum	4,614.00
6.10	Cement mortar 1:5 (1 cement : 5 coarse sand).	cum	4,147.00
6.11	Cement mortar 1:6 (1 cement : 6 coarse sand).	cum	3,746.00
6.12	Cement mortar 1:2 (1 cement : 2 stone dust).	cum	5,759.00
6.13	Cement mortar 1:2 (1 cement : 2 marble dust).	cum	5,230.00
6.14	Cement mortar 1:5 (1 cement : 5 marble dust).	cum	2,780.00
6.15	White cement mortar 1:2 (1 white cement : 2 marble dust).	cum	13,119.00
6.16	White cement mortar 1:3 (1 white cement : 3 marble dust).	cum	10,031.00
6.17	White cement mortar 1:5 (1 white cement : 5 marble dust).	cum	6,376.00
6.18	Mud mortar	cum	639.00

7.0 ROAD WORKS (Sub-base/ Bases)

Code No	Description	Unit	Rate Rs.
7.1	Providing, laying, spreading and compacting of granular sub-base by providing close graded Material, mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per MoRT&H specification clause - 401 including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
7.1.1	Grading - I Material	cum	1,324.00
7.1.2	Grading - II Material	cum	1,324.00
7.1.3	Grading - III Material	cum	1,310.00
7.2	Providing, laying, spreading and compacting of granular sub-base by providing close graded material (Table 400-1), spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per MoRT&H specification clause - 401 including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
7.2.1	Grading - I Material	cum	1,129.00
7.2.2	Grading - II Material	cum	1,128.00
7.2.3	Grading - III Material	cum	1,114.00
7.3	Providing, laying and spreading of granular sub-base by providing coarse graded Material (Table 400-2), spreading in uniform layers with motor grader on prepared surface, mixing BY MIX IN PLACE METHOD with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per MoRT&H specification clause - 401 including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
7.3.1	Grading - I Material	cum	1,086.00
7.3.2	Grading - II Material	cum	1,062.00
7.3.3	Grading - III Material	cum	1,065.00
7.4	Providing laying, spreading and compacting inverted choke by providing, laying, spreading and compacting screening B type/ coarse sand of specified grade in sub base course in uniform layer on a prepared surface with motor grader and compacting with power roller etc complete as per clause 404.3.2 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion complete.	cum	1,806.00
7.5	Providing laying, spreading and compacting stone aggregates of specific sizes as per Table 400-7 to Water Bound Macadam specification including spreading in uniform thickness; hand packing,		

Code No	Description	Unit	Rate Rs.
	rolling with power roller 8-10 tonnes, in stages to proper grade and camber, applying and brooming requisite type of screening (Table 400-8) binding materials to fill up the interstices of coarse aggregates, watering (with water browser) and compacting to required density, making necessary earthen bund to protect edges as per clause 404 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion complete.		
7.5.1	Hand broken - Grade-I (90-45mm)	cum	1,682.00
7.5.2	Hand broken - Grade-II (63-45mm)	cum	1,640.00
7.5.3	Crusher broken - Grade-II (63-45mm)	cum	1,838.00
7.5.4	Crusher broken - Grade-III (53-22.4mm)	cum	1,820.00
7.6	Providing, laying, spreading (with paver finisher only) and compacting wet mix macadam (WMM) base course comprising of graded stone aggregate and granular material conforming to MORT&H specifications (Table 400-II) in layers of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification clause - 406 including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	1,704.00
7.7	Scarifying existing granular road surface, including picking up scarified material and stacking of old serviceable material within a lead of 1000 meters complete as per clause 305.4.3 of MoRT&H specification including all labour, machinery, lighting, guarding and maintenance of diversion.	sqm	37.90

8.0 ROAD WORKS (Bituminous Bases)

Code No	Description	Unit	Rate Rs.
8.1	Providing and applying primer coat over prepared surface of granular base with bitumen emulsion as per IS : 8887 and approved quality @ 0.6 kg/sqm with the help of spray set fitted on bitumen Container (boiler) after cleaning the surface including removing of binding material and other foreign matter with wire brushes and small picks, sweeping with brooms or soft brushes and finally dusting with old gunny bags and compressed air to receive bituminous treatment complete as per clause 502 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	sqm	27.70
8.2	Extra for additional bitumen emulsion used in above item for every 1 kg per 10 sqm	sqm	4.40
8.3	Providing and applying tack coat on the prepared surface with bitumen emulsion as per IS: 8887 and approved quality @ 0.2 kg/sqm with the help of spray set fitted on bitumen Container (boiler) after cleaning the surface with brooms or soft brushes and finally dusting with old gunny bags and compressed air to receive bituminous treatment complete as per clause 502 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	sqm	9.90
8.4	Extra for additional bitumen emulsion used in above item for every 1 kg per 10 sqm	sqm	4.40
8.5	Providing and laying bituminous macadam in 50/75 mm compacted thickness on prepared surface with specified graded crushed stone aggregates as per Table 500-4, Grading-II for base/ binding course, loading of aggregate with F.E. loader, heating and mixing of stone aggregate and bitumen in computerised hot mix plant, transported to site by tippers to paver, laid over a previously prepared surface with paver finisher fitted with electronic sensing device to the required grade, level and alignment and rolling with power roller and vibratory compactor as per clauses 501.6 and 501.7 to achieve the desired compaction complete as per clause 504 of MoRT&H specification and including all material, labour, machinery, lighting, guarding and maintenance of diversion but excluding cost of primer/ tack coat.		
8.5.1	With Bitumen VG-grade 30 @ 3.3% (percentage by weight of total mix)	cum	5,380.00
8.5.2	With Bitumen VG-grade 30 @ 3.4% (percentage by weight of total mix)	cum	5,490.00
8.5.3	With CRMB 60 grade @ 3.3% (percentage by weight of total mix)	cum	4,965.00
8.5.4	With CRMB 60 grade @ 3.4% (percentage by weight of total mix)	cum	5,060.00
8.5.5	With Bitumen VG-grade 30 @ 3.3% (percentage by weight of total mix)	tonne	2,452.00

Code No	Description	Unit	Rate Rs.
8.5.6	With Bitumen VG-grade 30 @ 3.4% (percentage by weight of total mix)	tonne	2,505.00
8.5.7	With CRMB 60 grade @ 3.3% (percentage by weight of total mix)	tonne	2,262.00
8.5.8	With CRMB 60 grade @ 3.4% (percentage by weight of total mix)	tonne	2,307.00
8.6	Providing and laying penetration macadam over prepared surface by providing a layer of compacted crushed coarse aggregate as per Table 500-6 using chips spreader with alternate applications of bituminous binder and key aggregates and rolling with a smooth wheeled steel roller 8-10 tonne capacity to achieve the desired degree of compaction as per clause 505 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
8.6.1	50 mm compacted thickness with Bitumen VG-grade 30 @ 5 kg/sqm	sqm	328.50
8.6.2	75 mm compacted thickness with Bitumen VG-grade 30 @ 6.8 kg/sqm	sqm	442.50
8.7	Providing, laying and consolidation of crushed stone aggregate as per Table 500-7 on prepared surface as per built-up-spray grout specification, 75mm thick as base coarse in two layer composite construction of crushed stone aggregates using motor grader, chip spreader for key aggregate with application of bituminous binder VG-grade 30 with spray set (including Cost of anti stripping compound Minimum 1% in Lime/Cement as per design wherever required) @ 15 Kg/ 10 Sqm after each layer, and laying key aggregates on top of the second layer and rolling with power roller (8-10 tonne), as per clause 506 of MoRT&H Specification including all labour, machinery, lighting, guarding and maintenance of diversion but excluding cost of primer/ tack coat.	cum	3,520.00
8.8	Providing and laying 50-75 mm compacted thick design mix (approved by Engineer) Dense Bituminous Macadam on prepared surface with specified graded crushed aggregates as per Table 500-9, 500-10 with bitumen binder set (including Cost of anti stripping compound Minimum 1% in Lime/Cement as per design wherever required) for base/ binder course including loading of material with F.E. loader, heating and mixing of stone aggregate, filler and bitumen in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensor control as per clause 504.3.5 to the required level and grade, compacting by power rollers and vibratory rollers or 150 to 250 KN pneumatic tyred roller with TP = 0.7 Mpa to achieve the desired density (approximately 2.3 tonne/cum) complete as per clause 507 of MoRT&H specification but excluding primer/tack coat, including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
8.8.1	Grade-II with Bitumen VG-grade 30 @ 4.25 %, lime filler @ 2% (percent by weight of total mix)	cum	6,710.00

Code No	Description	Unit	Rate Rs.
8.8.2	Grade-II with Bitumen VG-grade 30 @ 4.50 %, lime filler @ 2% (percent by weight of total mix)	cum	7,000.00
8.8.3	Grade-II with CRMB-60 @ 4.25 %, lime filler @ 2% (percent by weight of total mix)	cum	6,140.00
8.8.4	Grade-II with CRMB-60 @ 4.50 %, lime filler @ 2% (percent by weight of total mix)	cum	6,400.00
8.8.5	Grade-II with Bitumen VG-grade 30 @ 4.25 %, lime filler @ 2% (percent by weight of total mix)	tonne	2,905.00
8.8.6	Grade-II with Bitumen VG-grade 30 @ 4.50 %, lime filler @ 2% (percent by weight of total mix)	tonne	3,030.00
8.8.7	Grade-II with CRMB-60 @ 4.25 %, lime filler @ 2% (percent by weight of total mix)	tonne	2,660.00
8.8.8	Grade-II with CRMB-60 @ 4.50 %, lime filler @ 2% (percent by weight of total mix)	tonne	2,770.00
8.9	Providing laying and consolidation Semi Dense Bituminous Concrete, as per Design Mix (approved by Engineer), on prepared surface with specified graded crushed aggregates as per table 500-15 for wearing coarse including loading of material with F.E. loader, hot mixing of stone aggregate, filler and bitumen (including Cost of anti stripping compound Minimum 1% in Lime/Cement as per design wherever required) heating and mixing in in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensor control to the required level and grade, compacting by power rollers and vibratory rollers or 150 to 250 KN pneumatic tyred roller with TP = 0.7 Mpa, to achieve the desired density (approximately 2.3 tonne/cum) complete as per clause 508 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion but excluding primer/tack coat.		
8.9.1	35-40 mm compacted thickness (Grade-1) using Bitumen VG-grade 30 @ 4.5% (percent by weight of total mix)	cum	7,190.00
8.9.2	35-40 mm compacted thickness (Grade-1) using CRMB-60 @ 4.5% (percent by weight of total mix)	cum	6,590.00
8.9.3	25-30 mm compacted thickness (Grade-2) using Bitumen VG-grade 30 @ 5% (percent by weight of total mix)	cum	7,780.00
8.9.4	25-30 mm compacted thickness (Grade-2) using CRMB-60 @ 5% (percent by weight of total mix)	cum	7,110.00
8.9.5	35-40 mm compacted thickness (Grade-1) using Bitumen VG-grade 30 @ 4.5% (percent by weight of total mix)	tonne	3,115.00
8.9.6	35-40 mm compacted thickness (Grade-1) using CRMB-60 @ 4.5% (percent by weight of total mix)	tonne	2,860.00
8.9.7	25-30 mm compacted thickness (Grade-2) using Bitumen VG-grade 30 @ 5% (percent by weight of total mix)	tonne	3,370.00

Code No	Description	Unit	Rate Rs.
8.9.8	25-30 mm compacted thickness (Grade-2) using CRMB-60 @ 5% (percent by weight of total mix)	tonne	3,080.00
8.10	Providing and laying 30-45 mm compacted thickness Bituminous Concrete as per design mix (approved by Engineer) on prepared surface with specified grade stone aggregate as per Table - 500-18 with bitumen for wearing course including loading of aggregate with F.E. loader and hot mixing of stone aggregate and bitumen (including Cost of anti stripping compound Minimum 1% in Lime/Cement as per design wherever required) in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensing device (as per clause 504-3.5) to the required level and grade and compacting by power rollers and vibratory rollers or 150 to 250 KN pneumatic tyred roller with TP = 0.7 Mpa, to achieve the desired density complete as per clause 509 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion but excluding primer/tack coat.		
8.10.1	Grade-II with Bitumen VG-grade 30 @ 6% (percent by weight of total mix)	cum	9,110.00
8.10.2	Grade-II with bitumen of grade CRMB-60 @ 6% (percent by weight of total mix)	cum	8,290.00
8.10.3	Grade-II with bitumen of grade SBS PMB-40 @ 6% (percent by weight of total mix)	cum	9,090.00
8.10.4	Grade-II with Bitumen VG-grade 30 @ 6% (percent by weight of total mix)	tonne	3,865.00
8.10.5	Grade-II with bitumen of grade CRMB-60 @ 6% (percent by weight of total mix)	tonne	3,520.00
8.10.6	Grade-II with bitumen of grade SBS PMB-40 @ 6% (percent by weight of total mix)	tonne	3,860.00
8.11	Providing and laying surface dressing as wearing course consisting of a layer of bituminous binder as per Table 500-20 (including Cost of anti stripping compound Minimum 1% in Lime/Cement as per design wherever required) laid on the prepared surface, followed by a cover of crushed stone chippings of specified size (may be pre coated also) & rolling with power roller all complete as per clause 510 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
8.11.1	With 19mm crushed stone chipping 0.15 cum and binder 12 Kg per 10 Sqm - Bitumen VG-grade 30	sqm	83.20
8.11.2	With 19mm crushed stone chipping 0.15 cum and binder 12 Kg per 10 Sqm - CRMB-60	sqm	76.30
8.11.3	With 13mm crushed stone chipping 0.10 cum and binder 10 Kg per 10 Sqm - Bitumen VG-grade 30	sqm	65.90
8.11.4	With 13mm crushed stone chipping 0.10 cum and binder 10 Kg per 10 Sqm - CRMB-60	sqm	60.10

Code No	Description	Unit	Rate Rs.
8.12	Providing and laying open graded premix carpet 20mm thick (compacted), on prepared surface in a single course as wearing course, composed of specified graded crushed stone aggregate as per Table 500-23, premixed with bituminous binder @ 14.60 kg/ 10sqm (including Cost of anti stripping compound Minimum 1% in Lime/Cement as per design wherever required), including loading of material with F.E. loader, hot mixing of stone aggregate and bitumen in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensor control to the required level and grade, compacting smooth wheeled roller 8-10 tonne capacity and finishing to required level to achieve the desired density as per clause 511 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion but excluding cost of tack coat/ seal coat.		
8.12.1	With Bitumen VG-grade 30	sqm	106.50
8.12.2	With bitumen of grade CRMB-60	sqm	98.10
8.13	Deduct for using manual paver finisher instead of paver finisher fitted with electronic sensing device for all bituminous work.		
8.13.1	By Volume	cum	79.00
8.13.2	By Weight	tonne	35.10
8.14	Providing and applying liquid seal coat type "A" comprising of a layer of bituminous binder @ 9.8 kg/ 10 Sqm (including Cost of anti stripping compound Minimum 1% in Lime/Cement as per design wherever required) followed by a cover of stone chipping @ 0.09 cum/10 sqm of specified grading and rolling with power roller 8-10 tonne complete as per clause 513 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
8.14.1	With Bitumen VG-grade 30	sqm	61.00
8.14.2	With bitumen of grade CRMB-60	sqm	55.30
8.15	Providing and applying premixed seal coat Type "B" comprising of thin application of fine aggregate 0.06 cum/ 10 sqm premix with bitumen binder @ 6.8 Kg/ 10 Sqm (including Cost of anti stripping compound Minimum 1% in Lime/Cement as per design wherever required) laying with paver finisher with electronic sensor control and rolling with power roller 8-10 tonne complete as per clause 513 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
8.15.1	With Bitumen VG-grade 30	sqm	42.50
8.15.2	With bitumen of grade CRMB-60	sqm	38.60
8.16	Providing and laying premixed seal coat using hot mix plant and paver finisher with aggregate of 6.7mm size defined as 100% passing through 11.20mm sieve and retain on 2.36mm sieve with 0.09 cum per 10 sqm premix with bitumen binder @ 4.5% and rolling		

Code No	Description	Unit	Rate Rs.
	with power roller 8-10 tonne complete as per clause 513 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
8.16.1	With Bitumen VG-grade 30	sqm	60.90
8.16.2	With bitumen of grade CRMB-60	sqm	55.30
8.17	Providing and laying 25 mm thick bitumen mastic asphalt wearing course with paving grade bitumen meeting the requirements given in table 500-29 (including Cost of anti stripping compound Minimum 1% in Lime/Cement as per design wherever required) @ 14-17% (by weight) as per job mix formula, coarse aggregate as per Table 500-32, fine aggregate as per Table 500-31 and lime stone powder as filler, prepared by using mastic cooker and laid to required level and grade after cleaning the surface, including providing antiskid surface with bitumen precoated fine-grained hard stone chipping of 13.2 mm nominal size @ 0.005cum per 10 sqm and at an approximate spacing of 10 cm center to center in both directions, pressed into surface when the temperature of surfaces not less than 100 degree Centigrade, protruding 1 mm to 4 mm over mastic surface, all complete including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 515 of MoRT&H specification.	sqm	633.00
8.18	Cost of bitumen to be added or subtracted when it varies from the job mix formula adopted in above item		
8.18.1	Bitumen VG-grade 30	tonne	50,700.00
8.18.2	CRMB 60	tonne	45,000.00
8.19	Providing and applying low viscosity bitumen emulsion @ 8.25 kg per 10 sqm for sealing cracks less than 3 mm wide or incipient fretting or disintegration in an existing bituminous surfacing including covering with 3mm stone grit as per clause 518 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	sqm	82.90
8.20	Providing and applying low viscosity bitumen emulsion RS1 for sealing cracks less than 3 mm wide or incipient fretting or disintegration in an existing bituminous surfacing.	sqm	85.10
8.21	Providing and laying 20mm thick Mix Seal Surfacing on a prepared surface in a single course composed of specified graded crushed aggregates as per table (500-19) premixed with bituminous binder (including cost of anti-stripping compound, wherever required) with lead of mixed material up to 1 Km. [MoRTH Specification: Clause 508 & 112) in a hot mix plant 40-60 TPH with Front end loader, laying with paver finisher transporting the mixed material up to lead of 20 km by tipper and rolling with power roller 8-10 tonne to achieve density approved by the department with all lead, but excluding cost of track coat.		
8.21.1	Type "A" (22 Kg. binder per 10 Sqm) bitumen VG 30	Sqm	146.50
8.21.2	Type "A" (22 Kg. binder per 10 Sqm) crumb rubber modified bitumen- CRMB 60	Sqm	134.00

Code No	Description	Unit	Rate Rs.
8.21.3	Type "B" (19 Kg. Binder per 10 Sqm) bitumen VG 30	Sqm	131.50
8.21.4	Type "B" (19 Kg. Binder per 10 Sqm) Crumb rubber modified bitumen- CRMB 60	Sqm	120.50
8.22	Milling of existing bituminous surface to specified depth of bituminous layer including disposal of removed material with all lift and lead upto 1000 m etc complete. Using machine like Writgen (W100) or equivalent	sqm	59.70

9.0 CEMENT CONCRETE PAVEMENTS

Code No	Description	Unit	Rate Rs.
9.1	Providing and laying lean cement concrete 1:4:8 in Sub- base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per table 600-1, cement content not to be less than 150 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 tonnes vibratory roller, finishing and curing complete as per clause 601, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	2,890.00
9.2	Providing and laying lean cement concrete 1:4:8 in Sub- base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per table 600-1, cement content not to be less than 150 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid manually, compacting with surface vibrator, finishing and curing complete as per clause 601, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	2,850.00
9.3	Providing and laying lean cement concrete 1:4:8 in Sub- base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per table 600-1, cement content not to be less than 150 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in concrete mixer, laid manually, compacted with surface vibrator, finishing and curing complete as per clause 601, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	2,775.00
9.4	Providing and laying un-reinforced, dowel jointed, plain cement concrete mix in pavement over a prepared sub base with 43 grade cement, coarse and fine aggregate conforming to IS: 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines		

Code No	Description	Unit	Rate Rs.
	and grades complete as per drawing and as per clause 602, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
9.4.1	PCC M-20	cum	5,910.00
9.4.2	PCC M-25	cum	6,230.00
9.4.3	PCC M-30	cum	6,310.00
9.4.4	PCC M-40	cum	6,370.00
9.5	Providing and laying un-reinforced, dowel jointed, plain cement concrete mix With Concrete Mixer & vibrator pavement over a prepared sub base with 43 grade cement , coarse and fine aggregate conforming to IS: 383, maximum size of coarse aggregate not exceeding 25 mm, mixed as per approved mix design, laid, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, admixtures (if required) as approved, curing compound, finishing to lines and grades complete as per drawing and as per clause 602, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
9.5.1	PCC M-20	cum	5,550.00
9.5.2	PCC M-25	cum	5,870.00
9.5.3	PCC M-30	cum	5,950.00
9.5.4	PCC M-40	cum	6,010.00
9.6	Providing and laying un-reinforced, plain cement concrete mix with Concrete Mixer & vibrator pavement over a prepared sub base with 43 grade cement , coarse and fine aggregate conforming to IS: 383, maximum size of coarse aggregate not exceeding 25 mm, mixed as per approved mix design, laid, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints etc including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
9.6.1	PCC M-20	cum	5,420.00
9.6.2	PCC M-25	cum	5,740.00
9.6.3	PCC M-30	cum	5,820.00
9.7	Providing and laying rolled cement concrete mix of M-10 base course with coarse and fine aggregate conforming to IS:383, the size of coarse aggregate not exceeding 25 mm with minimum aggregate cement ratio 15:1 and minimum cement content of 200 kg/cum, aggregate gradation to be as per table 600-4 after blending, mixing in batching plant at optimum moisture content, transporting to site, laying with a paver with electronic sensor, compacting with 8-10 tonnes smooth wheeled vibratory roller to achieve the designed flexural strength, finishing and curing complete as per clause 603, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	3,235.00

Code No	Description	Unit	Rate Rs.
9.8	Providing and laying Base/sub-base using cement, sand, fly ash and coarse aggregates proportioned as per table 4 of IRC: 74/1979 and with water content ratio, slump and compressive strength as defined in the said table, mix prepared in a batching and mixing plant transported to site, laid with a fixed form or slip form paver, spread, and compacted with a vibratory roller 8-10 tonnes capacity within the time limit laid down vide clause 7.6.3 of IRC: 74-1979, construction joints properly formed at the end of day's work, cured for 14 days, all as specified in IRC: 74-1979 and as per approved plans complete including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	2,635.00
9.9	Providing and laying un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, replacing cement by fly ash to the extent of 15% and sand by 10%, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	5,840.00
9.10	Providing and fixing of precast concrete interlocking tiles of desired shape of M 30 grade manufactured from fully computerized automatic stationery hydraulic vibrio pressed machine and fully computerized automatic batching plant of class A1/A2 as per BS 6717:2001. The CC interlocking paving blocks be laid on average 50mm. thick bed of coarse sand and the joint is to be filled with fine sand. Laying procedure on compacted sub-base as defined. Complete job is to be executed as per the instruction of Engineer in charge. The rates to be inclusive of all lead & Lifts etc. complete as per specifications. Tensile splitting strength, abrasion and braking load etc. as per BS 6717:2001, Grey cement.		
9.10.1	60mm thick	sqm	664.00
9.10.2	80mm thick	sqm	855.00
9.10.3	100mm thick	sqm	752.00
9.11	Providing and fixing of 60mm thick precast cement concrete interlocking paver block casted with rubber moulds in approved reflective colour and design having minimum compressive strength of 300 kg/ sq cm. The CC paving blocks be laid on average 50mm thick bed of coarse sand and the joint is to be filled with fine sand. Laying procedure on compacted sub-base as defined. Complete job is to be executed as per the instruction of Engineer in charge. The rates to be inclusive of all lead & Lifts etc. complete as per specifications.	sqm	737.00

Code No	Description	Unit	Rate Rs.
9.12	Removing & re-fixing of precast cement concrete interlocking paving blocks of all sizes over 50 mm thick course sand bedding (duly compacted) including filling of joints with sand complete in all respect.	sqm	546.00
9.13	Flooring with Cobble stone of approx. Size 125x125x75 mm (thick) laid on 25 mm average thick cement mortar 1:3 (1 cement : 3 Coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the stone, laid in approved pattern complete in all respect as per direction of Engineer-in-charge.	sqm	1,775.00
9.14	Removing & re-fixing of stone slab flooring set in pattern over 20 mm thick base of cement mortar 1:6 (1 cement : 6 course sand) and finished with cement sand mortar 1:3 complete in all respect.	sqm	515.00

10.0 TRAFFIC SIGNS, MARKINGS & OTHER ROAD APPURTENANCES

Code No	Description	Unit	Rate Rs.
10.1	Providing and fixing precast cement concrete M-20 grade (Using mechanical Concrete Mixer) kerb stone top and bottom width 115 and 165 mm respectively, 250 mm high on 150 mm thick PCC M-10 grade foundation as per design, including fixing at site as per clause 408 of MoRT&H Specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	metre	312.50
10.2	Providing and laying cast-in-situ cement concrete M-20 grade kerb stone channel top and bottom width 115 and 165 mm respectively, 250mm high laid with kerb laying machine, on 150 mm thick PCC M-10 grade foundation (laid manually) as per design, including fixing at site as per clause 408 of MoRT&H Specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
10.2.1	Using Concrete Mixer	metre	404.50
10.2.2	Using Concrete Batching and Mixing Plant	Metre	386.00
10.3	Providing and fixing in position precast Reinforced Cement Concrete M15 grade Kilometre stone of standard IRC design, including painting and printing letters etc. as per clause 804 of MoRT&H Specification including all material, labour, machinery.		
10.3.1	5th Kilometre stone	each	3,830.00
10.3.2	Ordinary Kilometre stone	each	2,283.00
10.3.3	200 metre stone	each	654.00
10.4	Providing and fixing in position Reinforced Cement Concrete Boundary pillars of standard IRC - 25 design, including finishing but excluding printing as per clause 806 of MoRT&H Specification including all material, labour, machinery.	each	627.00
10.5	Painting two coats on specified surface with synthetic enamel paint of approved brand and shade, after thorough cleaning and necessary filling to give even shade as per clause 803 of MoRT&H Specification including all material, labour.		
10.5.1	On new plastered concrete surface	sqm	97.90
10.5.2	On steel surface	sqm	84.20
10.6	Painting single coat on specified surface with synthetic enamel paint of approved brand and shade, after thorough cleaning and necessary filling to give even shade including all material, labour.		
10.6.1	On wood/ steel surface	Sqm	48.00
10.7	Painting new letters and figures of specified size, of any shade with first quality synthetic enamel paint, black or any other approved colour to give an even shade as per clause 801 of MoRT&H Specification including all material, labour.		

Code No	Description	Unit	Rate Rs.
10.7.1	Hindi (Matras, Commas and the like not to be measured and paid for. Half letters shall be counted as half).	Cm. Height per letter	1.55
10.7.2	English and Roman (Hyphens, commas and the like not to be measured and paid for)	Cm. Height per letter	0.90
10.8	Providing and laying marking of center line and stop line etc with hot thermoplastic compound 2.5 mm thick on road/ plain surface, including reflectorising glass beads @ 250 gms per sqm area with special applicator machine, as per IRC:35 including cleaning the surface of all dirt, dust and other foreign matter, demarcation at site and traffic control involved. The finished surface to be level, uniform and free from streaks and holes as per clause 803 of MoRT&H Specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	sqm	428.00
10.9	Providing and fixing of retro- reflectorised cautionary, mandatory and informatory sign as per IRC :67 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 3 metre long and size 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing including all material, labour.		
10.9.1	90 cm equilateral triangle	each	4,345.00
10.9.2	60 cm equilateral triangle	each	2,895.00
10.9.3	60 cm circular	each	3,845.00
10.9.4	80 mm x 60 mm rectangular	each	5,320.00
10.9.5	60 cm x 45 cm rectangular	each	3,750.00
10.9.6	60 cm x 60 cm square	each	4,420.00
10.9.7	90 cm high octagon	each	6,750.00
10.10	Providing and erecting direction and place identification retro-reflectorised sign as per IRC:67 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 2 mm thick framed to angle iron 40x40x5mm with area not exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 x 45 x 60 cm, 60 cm below ground level as per approved drawing including all material, labour.	sqm	9,510.00

Code No	Description	Unit	Rate Rs.
10.11	Providing and erecting direction and place identification retro-reflectorised sign as per IRC :67 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting 2 mm thick framed to angle iron 40x40x5mm with area exceeding 0.9 sqm supported on two nos mild steel angle iron post 75 mm x 75 mm x 6 mm, firmly fixed to the ground by means of properly designed foundation with M 15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing including all material, labour.	sqm	10,050.00
10.12	Supplying and installation of delineators (road way indicators, hazard markers, object markers), 80-100 cm high above ground level, painted black and white in 15 cm wide stripes, fitted with 80 x 100 mm rectangular or 75 mm dia circular reflectorised panels at the top, buried or pressed into the ground and conforming to IRC-79 and the drawings.	each	571.00
10.13	Providing and erecting overhead signs with retro reflective Type IV sign plate fixed on angle iron frame with vertical and lateral clearance given in clause 802.2 and 802.3 and installed as per clause 802.7 over a designed support system of galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans.		
10.13.1	Truss and Vertical Support	tonne	84,200.00
10.13.2	Providing and fixing High Intensity retro reflective Type IV sign plate made out of 2.00 mm thick aluminium sheet face to be fully covered with blue/green high intensity grade retro reflective sheet and logo/matters, boarder made of with similar type of white sheeting after etching treatment of aluminium sheet, the black side is to be painted with epoxy grey paint. the plate is to be fixed on 40X40X5 mm angle iron frame with help of aluminium rivets.	sqm	11,600.00
10.14	Providing and erecting direction and place identifications retro-reflectorised sign as per IRC:67 made of high intensity grade sheeting vide clause 807.3, fixed over aluminium sheeting 2 mm thick supported on mild steel angle iron post 75 x 75 x 6 mm firmly fixed to ground by means of properly designed foundation with M15 grade cement concrete 45 x 45 x 60 cm, 60 cm below ground level as per approved drawing.		
10.14.1	Identification sign board of size upto 0.90 sqm	sqm	3,665.00
10.14.2	Identification sign board of size above 0.90 sqm	sqm	6,000.00
10.15	Supply and fixing sign board upto 4.5 meter height made of the following specifications board base of A.C.P / transparent PVC acrylic sheet 3 mm thick fixed on MS hollow rectangular section size 50mmx25mm, letters made of acrylic material sheet 3 mm thick of any colour fixed with LED lights with all accessories and wiring with copper wire complete as required and as per direction in engineer in charge.	sqm	13,250.00

Code No	Description	Unit	Rate Rs.
10.16	Supplying and fixing of GI chain link fencing of required width in mesh including strengthening with 2 mm dia GI wire/ G.I. staples/ G.I.U-nails/ nuts bolts with 2.4 m angle iron posts 50 mm x 50 mm x 6 mm placed every 3 metres center to center founded in M15 grade cement concrete 30cmx30cmx60cm, 0.6 metre below ground level, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only etc complete as required and as per direction of Engineer-in-charge.		
10.16.1	Mesh size 50mm x 50mm made of GI wire 3.15mm dia	sqm	721.00
10.16.2	Mesh size 75mm x 75mm made of GI wire 3.15mm dia	sqm	691.00
10.16.3	Mesh size 100mm x 100mm made of GI wire 3.15mm dia	sqm	624.00
10.16.4	Mesh size 150mm x 150mm made of GI wire 3.15mm dia	sqm	616.00
10.17	Providing and fixing 1.2 metres high GI barbed wire fencing with 1.8 m angle iron posts 40 mm x 40 mm x 6 mm placed every 3 metres center to center founded in M15 grade cement concrete, 0.6 metre below ground level, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and provided with 9 horizontal lines and 2 diagonals interwoven with horizontal wires, fixed with GI staples, turn buckles etc complete as per clause 807 of MoRTH specification & type "A" as per IS : 278-1978 size designation 5 (line wire 2.24, point wire 2.00mm mass 97-106 g/m) including all material, labour.	metre	251.00
10.18	Providing and fixing 1.8 metres high GI barbed wire fencing with 2.4 m angle iron posts 50 mm x 50 mm x 6 mm placed every 3 metres center to center founded in M15 grade cement concrete 30cmx30cmx60cm, 0.6 metre below ground level, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and provided with 12 horizontal lines and 2 diagonals interwoven with horizontal wires, fixed with GI staples, turn buckles etc complete as per clause 807 of MoRT&H specification & type "A" as per IS : 278-1978 size designation 5 (line wire 2.24, point wire 2.00mm mass 97-106 g/m) including all material, labour.	metre	397.00
10.19	Providing 1.20 metre high fencing with angle iron posts 50 mm x 50 mm x 6 mm at 3 metre center to center with 0.40 metre embedded in M15 grade cement concrete, corner, end and every 10th post to be strutted, provided with welded steel wire fabric of 75 mm x 50 mm mesh or 75 mm x 25 mm mesh and fixed to iron posts by flat iron 50 x 5 mm and bolts etc. complete in all respects including all material, labour.	metre	696.00
10.20	Providing and fixing 50 mm dia G.I. steel pipe railing in 3 rows duly painted on medium weight steel channels (ISMC series) 100 mm x 50 mm, 1.2 metres high above ground, 2 m centre to centre, complete as per approved drawings including all material, labour.	metre	2,318.00

Code No	Description	Unit	Rate Rs.
10.21	Providing and fixing Tubular Steel Railing on Precast RCC posts, 1.2 m high above ground level Providing, fencing and erecting 50 mm dia G.I pipe railing in 3 rows on precast M20 grade RCC vertical posts 1.8 metres high (1.2 m above GL) with 3 holes 50 mm dia for pipe, fixed 2 metres centre to, complete as per approved drawing including all material, labour.	metre	1,702.00
10.22	Providing and fixing CAT's eye made of aluminium alloy size 75x100x22mm having 21 biconvex lenses embedded in circular disk of AS plastic on each side on road surface complete including all material, labour, diversion.	each	170.00
10.23	Supplying and fixing of Single Moulded twin Shank Raised Pavement Markers made of polycarbonate and ABS moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 16000 kg tested in accordance to ASTM D 4280 Type H and complying to Specifications of Category A of MORTH Circular No RW/ NH/33023/ 10-97-DC) III Dt 11.06.1997. The height, width and length shall not exceed 50 mm, 100 mm and 100 mm and with minimum reflective area of 13 Sq cm on each side and the slope to the base shall be 35+/-5 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19 +/- 2 mm and height not less than 30+/- 2 mm) from the body is to be a minimum value of 700 Kgf. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive as per manufacturer's recommendation and complete as directed by the engineer. (manufactured from 3M, Avery or equivalent)	each	427.00
10.24	Supplying and fixing glow studs of size 100 X 20 mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acrylonitrile) or ABS having electronically welded micro prismatic lens with abrasion resistant coating as approved by Engineer-in-charge. The glow stud shall support a load of 13635 kg. tested in accordance with ASTM D4280. The slope of retro-reflective surface shall be 35+/- 5 degree to base. The panels on both sides with at least 12 cm of reflective areas up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM 1: 809 as recommended in BS : 873 part 4 : 1973 as per approved sample & manufactures by the Engineer-in-charge.	each	255.50
10.25	Providing and fixing "L" type bollard 135cm height made out of 1.25mm thick M.S. sheet welded in conical section having upper dia 15cm and lower dia 20cm with another attachment of 150x150x7mm thick plate and hold fast at bottom, whole body is painted in white stove enamel and red reflective 3 band, each of 7.5cm and one reflective sheet of 15cm dia provided to it complete in all respect including all material, labour, diversion.	each	1,930.00

Code No	Description	Unit	Rate Rs.
10.26	Providing and fixing "SWISS" type bollard 134cm height made out of 1.25mm thick M.S. sheet welded in conical section having upper dia 15cm and lower dia 20cm with another attachment of mandatory 7mm thick plate and fixed with the help of 7cm long, 30cm dia chrome plated MS tube, this part is fixed on the body with another attachment of a cap 30x7cm, whole body is painted in black stove enamel and mandatory plate in azure blue with one compulsory keep left arrow with 10mm border reflective strip each of 7.5cm on body complete in all respect including all material, labour, diversion.	each	1,723.00
10.27	Providing and fixing hazard marker made out of 2mm thick M.S. angle iron 25x25x3mm and fixed on channel posts 75x75x6mm and hold fast at bottom whole body is painted in white stoving enamel and 6 nos 5 cm dia reflective sheet on white reflective background with additional border of 1.25 cm all around it complete in all respect including all material, labour, diversion.	each	592.00
10.28	Providing and fixing SWISS type hazard marker made out of 2mm thick M.S. sheet size of box is 15x15cm with hold fast at bottom whole body is painted in white stoving enamel paint with white/ high intensity grade prismatic type sheeting on all four side complete in all respect including all material, labour, and diversion.	each	784.00
10.29	Earth work in excavation of foundation of structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom, backfilling the excavation earth to the extent required and utilising the remaining earth locally for road work in all kind of soil.	cum	408.50
10.30	Providing and laying in place 300mm x 300mm x 16mm cement tactile directional and warning tiles (for a person with visual impairment) of the approved brand and make and specified colour for outdoor floors such as footpath, courtyard, multimodals location etc. laid on 20mm thick base of cement mortar 1:4 (1 cement: 4 coarse sand) in all shapes and patterns including grouting the joints with white cement with matching pigments etc. complete as per direction of engineer in charge	Sqm	1,549.00
10.31	Providing and laying in place 300mm x 300mm x 9.8mm vitrified tactile warning and directional tiles of the approved brand, make and colour inside the buildings at in all corridors and lobbies, level differences etc. as per accessibility standards and as per the installation instructions prescribed by the manufacturer including zarri making wherever required and finishing including grouting the joints with white cement with matching pigments etc. up to the satisfaction of the engineer in charge complete.	Sqm	2,199.00
10.32	Providing and fixing in place 300mm x 300mm x 3mm polyurethane stick on tactile directional tiles and warning tiles having bevelled edges and of the approved brand, make and colour and conforming to ISO 23599: 2012 inside the building on all floors in corridors, lobbies, level differences as per accessibility standards and to be installed as per the installation instructions given by the manufacturer using butyl rubber adhesive and the hardware specified by the manufacturer, as per the direction of the engineer in charge complete.	each	3,545.00

11.0 PIPE CULVERTS

Code No	Description	Unit	Rate Rs.
11.1	Plain cement concrete 1:3:6 mix with crushed stone aggregate mechanically mixed, placed in foundation and compacted by vibration including curing as per clause 1000 & 1700 of MoRT&H specification including all material, labour form work, machinery.		
11.1.1	Using stone aggregate 40 mm nominal size	cum	4,410.00
11.1.2	Using stone aggregate 20 mm nominal size	cum	4,535.00
11.2	Providing and Laying Reinforced cement concrete pipe NP4/ prestressed concrete pipe for culverts including jointing ends and fixing collar with cement mortar 1:2 complete as per clause 1000 & 2900 of MoRT&H specification including all material, labour form work, machinery.		
11.2.1	150 mm internal diameter	metre	472.50
11.2.2	200 mm internal diameter	metre	604.00
11.2.3	250 mm internal diameter	metre	866.00
11.2.4	300 mm internal diameter	metre	1,139.00
11.2.5	350 mm internal diameter	metre	1,849.00
11.2.6	400 mm internal diameter	metre	2,163.00
11.2.7	450 mm internal diameter	metre	2,685.00
11.2.8	500 mm internal diameter	metre	3,000.00
11.2.9	600 mm internal diameter	metre	3,740.00
11.2.10	700 mm internal diameter	metre	4,655.00
11.2.11	800 mm internal diameter	metre	6,000.00
11.2.12	900 mm internal diameter	metre	7,250.00
11.2.13	1000 mm internal diameter	metre	8,210.00
11.2.14	1100 mm internal diameter	metre	8,430.00
11.2.15	1200 mm internal diameter	metre	11,350.00
11.2.16	1400 mm internal diameter	metre	16,500.00
11.2.17	1600 mm internal diameter	metre	20,600.00
11.3	Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum 450 mm in case of double and triple row ducts, joints to be made		

Code No	Description	Unit	Rate Rs.
	leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings.		
11.3.1	Single Row for one utility service	metre	1,987.00
11.3.2	Double Row for two utility services	metre	3,635.00
11.3.3	Triple Row for three utility services	metre	5,310.00

12.0 MAINTENANCE OF ROADS

Code No	Description	Unit	Rate Rs.
12.1	Filling of Pot- holes and patch repairs with Built up Spray Grout in two layers with 53-22.4mm size of aggregate upto 75mm depth and removal of all failed material, trimming of completed excavation to provide firm vertical faces, cleaning of surface, painting of tack coat on the sides and base of excavation as per clause 503, back filling the pot holes with hot bituminous material as per clause 506, compacting with 8-10 tonne power roller, trimming and finishing the surface to form a smooth continuous surface complete using Bitumen VG-grade 30 as per clause 503, 506 & 3004.2 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	sqm	268.50
12.2	Filling of Pot- holes and patch repairs with open graded premix surfacing 20mm thick compacted with bitumen binder VG-grade 30 @ 14.60 kg/10 sqm and aggregate in Hot mix plant, transporting the mixed material with tipper and laying manually to the required level and grade, rolling with power roller, 8-10 tonne, removal of all failed material, trimming of completed excavation to provide firm vertical faces, cleaning of surface, painting of tack coat on the sides and base of excavation as per clause 503, back filling the pot holes with hot bituminous material as per clause 511, compacting, trimming and finishing the surface to form a smooth continuous surface complete as per clause 3004.2 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	sqm	122.00
12.3	Filling of Pot holes and patch repairs with surface dressing consisting of a layer of with bitumen binder as per Table 500-2 laid on prepared surface followed by a cover of crushed stone chipping of specified size and rolling with power roller, 8-10 tonne including removal of all failed material, trimming of completed excavation to provide firm vertical faces, cleaning of surface, painting of tack coat on the sides and base of excavation as per clause 503 and 3004.2 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
12.3.1	First coat with 0.15 cum crushed stone chipping 19mm nominal size and Bitumen VG-grade 30 @12 kg per 10 sqm	sqm	85.30
12.3.2	Second coat with 0.10 cum crushed stone chipping 13mm nominal size and Bitumen VG-grade 30 @10 kg per 10 sqm	sqm	78.40
12.4	Providing and laying Precast reinforced cement concrete Box culvert section of M-40 grade designed for 'AA' class loading as per IRC specifications including the effect of impact, EQ etc. complete on firm base of 200mm thick lean concrete of M-10 grade with aggregate of size 40mm nominal of following internal sizes. The work includes required safety measures, construction of drain for		

Code No	Description	Unit	Rate Rs.
	diversion of flowing water, cost of design of RCC Precast Box and its proof checking from IIT/MNIT Jaipur etc. complete in all respect as per specifications		
12.4.1	Size 0.60 M x 0.60 M	Metre	6,300.00
12.4.2	Size 0.75 M x 0.75 M	Metre	7,660.00
12.4.3	Size 1.00 M x 1.00 M	Metre	11,400.00
12.4.4	Size 1.00 M x 1.25 M	Metre	14,000.00
12.4.5	Size 1.25 M x 1.25 M	Metre	15,750.00
12.4.6	Size 1.25 M x 1.50 M	Metre	20,000.00
12.4.7	Size 1.50 M x 1.50 M	Metre	21,800.00
12.4.8	Size 1.75 M x 1.75 M	Metre	27,500.00
12.4.9	Size 2.00 M x 2.00 M	Metre	33,000.00
12.5	Providing and fixing of reinforced Ferro-Cement drain covers designed for 'A' class loading duly marked on cover with adequate steel reinforcement having thickness 75mm to 150mm anti corrosive bitumen painted M.S. plate , Rim and M.S. lifting hooks, Admixtures like plasticizer, bond improving compound, shrinkage, resistance compound, abrasion resistant complete as per approved design etc.		
12.5.1	Standard Size 600x800mm (75mm thick) for span 300 to 450mm	sqm	1,520.00
12.5.2	Standard Size 1000x800mm (100mm thick) for span 451 to 700mm	sqm	2,499.00
12.5.3	Standard Size 1500x600mm (125mm thick) for span 701 to 1200mm	sqm	2,840.00
12.5.4	Standard Size 2100x500mm (150mm thick) for span 1201 to 1500mm	sqm	3,315.00
12.6	Providing and fixing of reinforced Ferro-Cement drain covers designed for 'AA' class loading duly marked on cover with adequate steel reinforcement having thickness 75mm to 150mm anti corrosive bitumen painted M.S. plate , Rim and M.S. lifting hooks, Admixtures like plasticizer, bond improving compound, shrinkage, resistance compound, abrasion resistant complete as per approved design etc.		
12.6.1	Standard Size 600x800mm (75mm thick) for span 300 to 450mm	sqm	1,426.00
12.6.2	Standard Size 1000x800mm (100mm thick) for span 451 to 700mm	sqm	2,770.00
12.6.3	Standard Size 1500x600mm (125mm thick) for span 701 to 1200mm	sqm	3,150.00
12.6.4	Standard Size 2100x500mm (150mm thick) for span 1201 to 1500mm	sqm	3,725.00
12.7	Providing and fixing stone slab covering of required size over drains including filling of joints with cement sand mortar 1:3 complete as per direction of Engineer-in-charge.		
12.7.1	Average thickness 60 to 75 mm	sqm	869.00
12.7.2	Average thickness 40 to 50 mm	sqm	383.00

Code No	Description	Unit	Rate Rs.
12.8	Providing and Constructing gabion structure 0.5 to 1 meter high of required section made up of soft mechanically woven hexagonal shaped G.I. wire confirming to IS 16014:2012 having zinc plus PVC coating of overall diameter of 3.7 mm and tying lacing wire of 3.2 mm with edge wire confirming to overall diameter 4.4 mm edges being mechanically selvage including placing in position, fitting neatly with trap stone rubble (15 to 23 cm) all loose ends to be securely tied (Excluding transportation) etc. complete. (In Dry condition and for under water installation extra cost to be considered)	cum	2,755.00
12.9	Providing and construction of a gabian structure for retaining earth with segments of wire crates of size 7.0 x 3.0 x 0.6m each divided into 1.5 m compartments by cross netting, made form 4 mm galvansed steel wire @ 32kg per 10 sqm having minimum tensile strength of 300Mpa conforming to IS:280 and galvanizing coating conforming to IS:4826 woven into mesh with double twist, mesh size not exceeding 100x100mm, filled with boulders with least dimension of 200mm, all loose ends to be tied with 4mm galvanized steel wire etc. complete.	cum	2,575.00
12.10	Providing and constructing gabian structures for erosion control, river training works and protection works with wire crates of size 2.0m x 1.0m x 0.30m each divided into 1 m compartments by-cross netting, made from 4 mm galvanized steel wire @ 32 kg per 10sqm having minimum tensile strength of 300Mpa conforming to IS:280 and galvanizing coating conforming to IS 4826, woven into mesh with double twist, mesh size not exceeding 100 x 100mm, filled with boulders with least dimension of 200mm, all loose ends to be securely tied with 4mm galvanized steel wire etc. complete.	cum	3,945.00
12.11	Providing and Laying CE marked Needle punched and mechanically bonded non-woven Geotextile indigenously manufactured from high quality Polypropylene stable fibres (continuous filament will not be accepted) on the prepared subgrade for separator cum filtration cum drainage application with necessary overlaps as per drawing. Type-III (TFC-TechGeo PR25), minimum width 5.0 meter as per approved comparative statement (Complete rates)	sqm	271.00
12.12	Providing and Laying CE marked Needle punched and mechanically bonded non-woven Geotextile indigenously manufactured from high quality Polypropylene stable fibres (continuous filament will not be accepted) on the prepared subgrade for separator cum filtration cum drainage application with necessary overlaps as per drawing. Type-VI(TFITechGeo PR50), minimum width 5.0 meter as per approved comparative statement (Labour rates)	sqm	106.50
12.13	Providing and laying M-30 Grade Edge blocks of size 0.30 Mtr x 0.30 Mtr x 0.15 Mtr complete as per the shape and pattern approved by the engineer in charge.	metre	321.00
12.14	Cutting WBM surface up to 0.5 Mtr. depth including all layers of crust for laying pipe line etc. for house connection & making good to original condition.	sqm	205.50

Code No	Description	Unit	Rate Rs.
12.15	Carrying out repair to road signs including strengthening resetting or otherwise repairing signs made out of Retro Reflective sheets. Job includes patch repair to aluminium sheet, R R Sheet, posts, signs / script and repainting of posts at damaged location / positions with approved quality of enamel paint complete in all respect conforming to respective IRC/MOST specifications and as directed by Engineer-in-charge. Road sign Boards mounted on single post.	each	1,535.00
12.16	White/colour wash of trees, electric & telephone pole, guard stone etc. Upto height of 1.5 mtr. from the ground level comprising of 0.45m.white, 0.30m. red band in middle and again 0.45m. white around the periphery complete two or more coats including trimming the bushes on the stem & the root. Girth upto 900 mm, pole etc.	each	76.40
12.17	Labour charges for patching WBM surface using crushed/ hand broken aggregate including preparation of pot hole, scarifying and reshaping to the required grade and camber, as per the standard specifications, spreading of material, consolidation with mechanical drop hammer of 11.40 kg hand rammer or 8-10 tonne power roller, spreading and consolidation of binding material including cost of fuel and lubricants and hire charges of T & P.	Cum	2,048.00
12.18	Providing and fixing 200 mm nominal dia (Internal dia) PVC casing pipe conforming to IS 12818: 1992 amended up to date having pressure Rating CM approved make for HP/TW and DCB with threading etc. complete as directed by Engineer in-Charge.	metre	1,213.00
12.19	Providing and inserting nipples with approved fixing compound after drilling holes for grouting as per technical specification including subsequent cutting/ removal and sealing of the holes as necessary of nipples after completion of grouting with : Epoxy grout [MoRTH Specification: Clause: 2803]	each	159.50
12.20	Arrangement of water proof tent, carpeting, VVIP arrangements of rest room, stage erection with back drop & flower decoration etc for Laying of Foundation Stone/ inaugural function etc for MoRTH/ State projects through event management team complete by providing Foundation Stone Touch Panel.	set	8,000.00

13.0 FOUNDATIONS

Code No	Description	Unit	Rate Rs.
13.1	Brick masonry work in cement mortar with mechanical mixer with First class bricks (min. 10.5 Mpa) in foundation (at any level) complete as per drawing and technical specification and as per clause 1000 & 1300 of MoRT&H specification including all scaffolding material, labour, machinery but excluding pointing and plastering.		
13.1.1	In cement mortar 1:3 (1 cement : 3 coarse sand)	cum	5,740.00
13.1.2	In cement mortar 1:4 (1 cement : 4 coarse sand)	cum	5,530.00
13.2	Random rubble stone masonry work in cement mortar with mechanical mixer in foundation (at any level) complete as per drawing and technical specification and as per clause 1000 and 1400 of MoRT&H specification including all scaffolding material, labour, machinery but excluding pointing and plastering.		
13.2.1	In cement mortar 1:3 (1 cement : 3 coarse sand)	cum	4,865.00
13.2.2	In cement mortar 1:4 (1 cement : 4 coarse sand)	cum	4,600.00
13.3	Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregate 40 mm nominal size mechanically mixed, placed in foundation and compacted by vibrator including curing complete as per clause 2100 of MoRT&H specification including all scaffolding, material, labour, machinery.	cum	4,390.00
13.4	Providing, laying and compacting plain/ reinforced cement concrete of specified grade in foundation/ levelling course/ pile cap using concrete mixer and vibrater complete including cost of form work, as per drawing and technical specifications and as per clause 1100, 1500,1700,2100 of MoRT&H specification including all scaffolding material, labour, machinery.		
13.4.1	PCC Grade M -15	cum	5,070.00
13.4.2	PCC Grade M -20	cum	5,560.00
13.4.3	PCC Grade M -25	cum	5,940.00
13.4.4	PCC Grade M -30	cum	5,970.00
13.4.5	RCC Grade M -20	cum	5,600.00
13.4.6	RCC Grade M -25	cum	5,990.00
13.4.7	RCC Grade M -30	cum	6,000.00
13.4.8	RCC Grade M -35	cum	6,080.00
13.5	Providing, laying and compacting design mix plain/ reinforced cement concrete of specified grade in foundation/ levelling course/ pile cap using batching plant, transit mixer and concrete pump and vibrater including cost of form work, complete as per drawing and		

Code No	Description	Unit	Rate Rs.
	technical specifications as per clause 1100, 1500,1700,2100 of MoRT&H specification including all material, labour, machinery, and maintenance of diversion.		
13.5.1	PCC Grade M -20	cum	4,925.00
13.5.2	PCC Grade M -25	cum	5,330.00
13.5.3	PCC Grade M -30	cum	5,350.00
13.5.4	PCC Grade M -35	cum	5,520.00
13.5.5	RCC Grade M -20	cum	4,970.00
13.5.6	RCC Grade M -25	cum	5,370.00
13.5.7	RCC Grade M -30	cum	5,390.00
13.5.8	RCC Grade M -35	cum	5,470.00
13.5.9	RCC Grade M -40	cum	5,530.00
13.6	Providing and constructing temporary island 16 m diameter for construction of well foundation for 8m dia. Well including all material, labour, machinery as per clause 1200 of MoRTH specification.		
13.6.1	Assuming depth of water 1.0 m and height of island to be 1.25m.	each	66,200.00
13.6.2	Assuming depth of water 4.0 m and height of island 4.5 m.	each	4,08,500.00
13.6.3	Providing and constructing one span service road to reach island location from one pier location to another pier location	metre	2,770.00
13.7	Providing and laying cutting edge of mild steel weighing 40 kg per metre for well foundation complete as per drawing and technical specification complete as per clause 1200 and 1900 of MoRT&H specification including all material, labour, machinery.	tonne	78,400.00
13.8	Providing and laying structural plain/ reinforced cement concrete (design mix) of specified grade in well foundation using concrete mixer and vibrator including cost of form work complete as per drawing and technical specifications and as per clause 1200, 1500 and 1700 of MoRT&H specification. including all material, labour, machinery.		
13.8.1	Well Curb		
13.8.1.1	RCC Grade M -20	cum	6,470.00
13.8.1.2	RCC Grade M -25	cum	6,930.00
13.8.1.3	RCC Grade M -30	cum	6,960.00
13.8.1.4	RCC Grade M -35	cum	7,080.00
13.8.2	Well Steining		
13.8.2.1	RCC Grade M -20	cum	5,930.00
13.8.2.2	RCC Grade M -25	cum	6,350.00
13.8.2.3	RCC Grade M -30	cum	6,380.00
13.8.2.4	RCC Grade M -35	cum	6,490.00

Code No	Description	Unit	Rate Rs.
13.8.3	Bottom Plug (including forming sump, protective bund, chiselling etc.)		
13.8.3.1	PCC Grade M -20	cum	6,040.00
13.8.3.2	PCC Grade M -25	cum	6,270.00
13.8.3.3	PCC Grade M -30	cum	6,310.00
13.8.3.4	PCC Grade M -35	cum	6,410.00
13.8.4	Intermediate Plug (including extra protective works and dewatering etc)		
13.8.4.1	PCC Grade M -20	cum	5,780.00
13.8.4.2	PCC Grade M -25	cum	5,990.00
13.8.4.3	PCC Grade M -30	cum	6,040.00
13.8.4.4	PCC Grade M -35	cum	6,130.00
13.8.5	Top Plug (including extra protective works and dewatering etc)		
13.8.5.1	PCC Grade M -20	cum	5,340.00
13.8.5.2	PCC Grade M -25	cum	5,730.00
13.8.5.3	PCC Grade M -30	cum	5,770.00
13.8.5.4	PCC Grade M -35	cum	5,900.00
13.8.6	Well Cap		
13.8.6.1	RCC Grade M -20	cum	5,400.00
13.8.6.2	RCC Grade M -25	cum	5,820.00
13.8.6.3	RCC Grade M -30	cum	5,840.00
13.8.6.4	RCC Grade M -35	cum	5,940.00
13.9	Providing and laying structural plain/ reinforced cement concrete (design mix) of specified grade in well foundation using batching plant, transit mixer and concrete pump, vibrator including cost of form work complete as per drawing and technical specifications and as per clause 1200, 1500 and 1700 of MoRT&H specification. including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
13.9.1	Well Curb		
13.9.1.1	RCC Grade M -20	cum	5,740.00
13.9.1.2	RCC Grade M -25	cum	6,220.00
13.9.1.3	RCC Grade M -30	cum	6,250.00
13.9.1.4	RCC Grade M -35	cum	6,380.00
13.9.1.5	RCC Grade M -40	cum	6,440.00
13.9.2	Well Steining		
13.9.2.1	RCC Grade M -20	cum	5,260.00

Code No	Description	Unit	Rate Rs.
13.9.2.2	RCC Grade M -25	cum	5,700.00
13.9.2.3	RCC Grade M -30	cum	5,720.00
13.9.2.4	RCC Grade M -35	cum	5,850.00
13.9.2.5	RCC Grade M -40	cum	5,910.00
13.9.3	Bottom Plug (including forming sump, protective bund, chiselling etc.)		
13.9.3.1	PCC Grade M -20	cum	5,150.00
13.9.3.2	PCC Grade M -25	cum	5,370.00
13.9.3.3	PCC Grade M -30	cum	5,420.00
13.9.3.4	PCC Grade M -35	cum	5,550.00
13.9.4	Intermediate Plug (including extra protective works and dewatering etc)		
13.9.4.1	PCC Grade M -20	cum	4,925.00
13.9.4.2	PCC Grade M -25	cum	5,140.00
13.9.4.3	PCC Grade M -30	cum	5,180.00
13.9.5	Top Plug		
13.9.5.1	PCC Grade M -20	cum	4,760.00
13.9.5.2	PCC Grade M -25	cum	5,130.00
13.9.5.3	PCC Grade M -30	cum	5,170.00
13.9.6	Well Cap		
13.9.6.1	RCC Grade M -20	cum	4,925.00
13.9.6.2	RCC Grade M -25	cum	5,370.00
13.9.6.3	RCC Grade M -30	cum	5,390.00
13.9.6.4	RCC Grade M -35	cum	5,470.00
13.9.6.5	RCC Grade M -40	cum	5,570.00
13.10	Sinking of 6 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.10.1	In sandy soil		
13.10.1.1	Depth below cutting edge upto 3m	Metre	5,570.00
13.10.1.2	Depth beyond 3 m and upto 10 m	Metre	7,790.00
13.10.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		

Code No	Description	Unit	Rate Rs.
13.10.2	In Clayey soil		
13.10.2.1	Depth below cutting edge upto 3m	Metre	7,790.00
13.10.2.2	Depth beyond 3 m and upto 10 m	Metre	16,350.00
13.10.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost		
13.10.3	In Soft Rock at all depth	Metre	25,800.00
13.10.4	In Hard Rock at all depth	Metre	26,800.00
13.11	Sinking of 7 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.11.1	In sandy soil		
13.11.1.1	Depth below cutting edge upto 3m	Metre	8,200.00
13.11.1.2	Depth beyond 3 m and upto 10 m	Metre	10,850.00
13.11.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
13.11.2	In Clayey soil		
13.11.2.1	Depth below cutting edge upto 3m	Metre	10,850.00
13.11.2.2	Depth beyond 3 m and upto 10 m	Metre	15,750.00
13.11.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost		
13.11.3	In Soft Rock at all depth	Metre	20,200.00
13.11.4	In Hard Rock at all depth	Metre	33,300.00
13.12	Sinking of 8 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.12.1	In sandy soil		
13.12.1.1	Depth below cutting edge upto 3m	Metre	10,000.00
13.12.1.2	Depth beyond 3 m and upto 10 m	Metre	12,250.00

Code No	Description	Unit	Rate Rs.
13.12.1.3	Depth beyond 10 m and upto 20 m 1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
13.12.2	In Clayey soil		
13.12.2.1	Depth below cutting edge upto 3m	Metre	13,250.00
13.12.2.2	Depth beyond 3 m and upto 10 m	Metre	16,600.00
13.12.2.3	Depth beyond 10 m and upto 20 m 1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre. 2) If dewatering is required add 5% of cost		
13.12.3	In Soft Rock at all depth	Metre	22,800.00
13.12.4	In Hard Rock at all depth	Metre	34,400.00
13.13	Sinking of 9 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.13.1	In sandy soil		
13.13.1.1	Depth below cutting edge upto 3m	Metre	10,200.00
13.13.1.2	Depth beyond 3 m and upto 10 m	Metre	13,450.00
13.13.1.3	Depth beyond 10 m and upto 20 m 1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
13.13.2	In Clayey soil		
13.13.2.1	Depth below cutting edge upto 3m	Metre	14,050.00
13.13.2.2	Depth beyond 3 m and upto 10 m	Metre	17,900.00
13.13.2.3	Depth beyond 10 m and upto 20 m 1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre. 2) If dewatering is required add 5% of cost		
13.13.3	In Soft Rock at all depth	Metre	27,000.00
13.13.4	In Hard Rock at all depth	Metre	39,900.00
13.14	Sinking of 10 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		

Code No	Description	Unit	Rate Rs.
13.14.1	In sandy soil		
13.14.1.1	Depth below cutting edge upto 3m	Metre	12,050.00
13.14.1.2	Depth beyond 3 m and upto 10 m	Metre	14,250.00
13.14.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
13.14.2	In Clayey soil		
13.14.2.1	Depth below cutting edge upto 3m	Metre	15,900.00
13.14.2.2	Depth beyond 3 m and upto 10 m	Metre	17,950.00
13.14.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost		
13.14.3	In Soft Rock at all depth	Metre	29,700.00
13.14.4	In Hard Rock at all depth	Metre	45,800.00
13.15	Sinking of 11 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.15.1	In sandy soil		
13.15.1.1	Depth below cutting edge upto 3m	Metre	27,100.00
13.15.1.2	Depth beyond 3 m and upto 10 m	Metre	34,700.00
13.15.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
13.15.2	In Clayey soil		
13.15.2.1	Depth below cutting edge upto 3m	Metre	26,300.00
13.15.2.2	Depth beyond 3 m and upto 10 m	Metre	37,200.00
13.15.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost		
13.15.3	In Soft Rock at all depth	Metre	66,400.00
13.15.4	In Hard Rock at all depth	Metre	1,01,200.00
13.16	Sinking of 12 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than		

Code No	Description	Unit	Rate Rs.
	pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.16.1	In sandy soil		
13.16.1.1	Depth below cutting edge upto 3m	Metre	57,000.00
13.16.1.2	Depth beyond 3 m and upto 10 m	Metre	65,100.00
13.16.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
13.16.2	In Clayey soil		
13.16.2.1	Depth below cutting edge upto 3m	Metre	63,900.00
13.16.2.2	Depth beyond 3 m and upto 10 m	Metre	91,800.00
13.16.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost		
13.16.3	In Soft Rock at all depth	Metre	1,54,200.00
13.16.4	In Hard Rock at all depth	Metre	2,23,600.00
13.17	Sinking of Twin D Type (over all length 12m, over all width 6m) well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.17.1	In sandy soil		
13.17.1.1	Depth below cutting edge upto 3m	Metre	12,850.00
13.17.1.2	Depth beyond 3 m and upto 10 m	Metre	13,900.00
13.17.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
13.17.2	In Clayey soil		
13.17.2.1	Depth below cutting edge upto 3m	Metre	15,250.00
13.17.2.2	Depth beyond 3 m and upto 10 m	Metre	19,850.00
13.17.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost		
13.17.3	In Soft Rock at all depth	Metre	32,300.00

Code No	Description	Unit	Rate Rs.
13.17.4	In Hard Rock at all depth	Metre	46,300.00
13.18	Pneumatic sinking of wells with equipment of approved design, drawing and specifications worked by competent and trained personnel and comprising of compression and decompression chambers, reducers, two air locks separately for men and plant & materials, arrangement for supply of fresh air to working chambers, check valves, exhaust valves, shafts made from steel plates of riveted construction not less than 6 mm thick to withstand an air pressure of 0.50 MPa, controlled blasting of hard rock wherever required, staircases and 1 m wide landing plate forms with railing, arrangement for compression and decompression, electric lighting of 50 V maximum, proper rooms for rest and medical examinations and compliance with safety precautions as per IS:4138, all as per clause 1200, 1207.6 of MoRT&H Specifications including all material, labour and machinery.	cum	46,200.00
13.19	Providing structural steel liner upto 10mm thickness for curbs, steining for wells and piles including fabricating and setting out as per detailed drawing as per clause 1200 & 1900 of MoRT&H specification including all material, labour and machinery.	tonne	68,000.00
13.20	Sand filling with compaction in wells complete as per level on drawing and technical specification as per clause 1209 of MoRT&H specification including all material, labour, machinery.	cum	1,596.00
13.21	Bored cast-in-situ R.C.C. pile with design mix concrete using batching plant, transit mixer and concrete pump, excluding reinforcement complete as per drawing and technical specifications and removal of excavated earth with all lifts and lead upto 1000 m. as per clause 1100, 1600 & 1700 of MoRT&H Specification including all material, labour and machinery.		
13.21.1	400 mm dia pile		
13.21.1.1	RCC Grade M -20 (Design mix)	Metre	2,630.00
13.21.1.2	RCC Grade M -25 (Design mix)	Metre	2,680.00
13.21.1.3	RCC Grade M -30 (Design mix)	Metre	2,685.00
13.21.1.4	RCC Grade M -35 (Design mix)	Metre	2,710.00
13.21.2	450 mm dia pile		
13.21.2.1	RCC Grade M -20 (Design mix)	metre	2,795.00
13.21.2.2	RCC Grade M -25 (Design mix)	metre	2,860.00
13.21.2.3	RCC Grade M -30 (Design mix)	metre	2,875.00
13.21.2.4	RCC Grade M -35 (Design mix)	metre	2,900.00
13.21.3	600 mm dia pile		
13.21.3.1	RCC Grade M -20 (Design mix)	metre	3,895.00
13.21.3.2	RCC Grade M -25 (Design mix)	metre	4,010.00
13.21.3.3	RCC Grade M -30 (Design mix)	metre	4,015.00

Code No	Description	Unit	Rate Rs.
13.21.3.4	RCC Grade M -35 (Design mix)	metre	4,060.00
13.21.4	750 mm dia pile		
13.21.4.1	RCC Grade M -20 (Design mix)	metre	5,160.00
13.21.4.2	RCC Grade M -25 (Design mix)	metre	5,340.00
13.21.4.3	RCC Grade M -30 (Design mix)	metre	5,350.00
13.21.4.4	RCC Grade M -35 (Design mix)	metre	5,430.00
13.21.5	1000 mm dia pile		
13.21.5.1	RCC Grade M -20 (Design mix)	Metre	8,430.00
13.21.5.2	RCC Grade M -25 (Design mix)	Metre	8,750.00
13.21.5.3	RCC Grade M -30 (Design mix)	Metre	8,760.00
13.21.5.4	RCC Grade M -35 (Design mix)	Metre	8,900.00
13.21.6	1200 mm dia pile		
13.21.6.1	RCC Grade M -20 (Design mix)	Metre	10,700.00
13.21.6.2	RCC Grade M -25 (Design mix)	Metre	11,150.00
13.21.6.3	RCC Grade M -30 (Design mix)	Metre	11,200.00
13.21.6.4	RCC Grade M -35 (Design mix)	Metre	11,400.00
13.22	Bored cast-in-situ R.C.C. pile with cutting / Drilling for anchoring of pile into rocks wherever firm rocky strata is available, shall be done upto desired depth (minimum 1.50 m) as per drawings, specifications and as directed by Engineer. Bore hole shall be cleaned properly before concreting. No, distinction shall be made for penetration through hard rock or rock socketing with design mix concrete (M-35) using batching plant, transit mixer and concrete pump excluding reinforcement complete as per drawing and technical specifications and removal of excavated earth with all lifts and lead upto 1000 m. as per clause 1100, 1600 & 1700 of MoRT&H Specification including all material, labour and machinery.		
13.22.1	450mm dia pile	metre	6,870.00
13.22.2	600 mm dia pile	metre	7,560.00
13.22.3	750 mm dia pile	metre	8,440.00
13.22.4	1000 mm dia pile	metre	13,500.00
13.22.5	1200 mm dia pile	metre	16,400.00
13.23	Driven cast-in-place true vertical R.C.C. piles excluding reinforcement complete as per drawing and technical specification as per clause 1100, 1600 & 1700 of MoRT&H Specification including all material, labour and machinery.		
13.23.1	450 mm dia pile		
13.23.1.1	RCC Grade M -20 (Design mix)	metre	2,157.00
13.23.1.2	RCC Grade M -25 (Design mix)	Metre	2,221.00

Code No	Description	Unit	Rate Rs.
13.23.1.3	RCC Grade M -30 (Design mix)	Metre	2,224.00
13.23.1.4	RCC Grade M -35 (Design mix)	Metre	2,251.00
13.23.2	500 mm dia pile		
13.23.2.1	RCC Grade M -20 (Design mix)	Metre	2,615.00
13.23.2.2	RCC Grade M -25 (Design mix)	Metre	2,695.00
13.23.2.3	RCC Grade M -30 (Design mix)	Metre	2,700.00
13.23.2.4	RCC Grade M -35 (Design mix)	Metre	2,730.00
13.23.3	750 mm dia pile		
13.23.3.1	RCC Grade M -20 (Design mix)	Metre	4,235.00
13.23.3.2	RCC Grade M -25 (Design mix)	Metre	4,415.00
13.23.3.3	RCC Grade M -30 (Design mix)	Metre	4,425.00
13.23.3.4	RCC Grade M -35 (Design mix)	Metre	4,500.00
13.23.4	1000 mm dia pile		
13.23.4.1	RCC Grade M -20 (Design mix)	Metre	6,640.00
13.23.4.2	RCC Grade M -25 (Design mix)	Metre	6,960.00
13.23.4.3	RCC Grade M -30 (Design mix)	Metre	6,980.00
13.23.4.4	RCC Grade M -35 (Design mix)	Metre	7,110.00
13.23.5	1200 mm dia pile		
13.23.5.1	RCC Grade M -20 (Design mix)	Metre	9,740.00
13.23.5.2	RCC Grade M -25 (Design mix)	Metre	10,200.00
13.23.5.3	RCC Grade M -30 (Design mix)	Metre	10,200.00
13.23.5.4	RCC Grade M -35 (Design mix)	Metre	10,400.00
13.24	Providing and laying TMT bar reinforcement at any level in foundation/ pile/ pile cap complete as per drawing and clause 1600 of MoRT&H Specification including all material, labour and machinery.	tonne	64,200.00
13.25	Reinforcement with TMT bar in sub structure	tonne	64,200.00
13.26	Reinforcement with TMT bar in super structure	tonne	66,200.00
13.27	Pile load testing on single vertical piles in accordance with IS 2911 (Part IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per direction of Engineer and as per clause 1100 of MoRT&H specification including all labour, material, machinery.		
13.27.1	Initial and routine vertical load test	tonne	371.00
13.27.2	Lateral load test	tonne	7,440.00

Code No	Description	Unit	Rate Rs.
13.28	Non-destructive Integrated testing of cast-in-situ pile using pile deriving analyzer or equivalent as detailed in specification and as approved by Engineer.	each	1,947.00
13.29	Providing and arranging dynamic load test for checking the load bearing capacity of pile as detailed in specification and as approved by Engineer as per ASTM D4945 including of analysis and report submission including all labour, material, machinery. This include preparation of hammer, crane, build-up of pile head, plywood, steel plates etc.	each	1,10,300.00
13.30	Providing, arranging and conducting sonic logging test on RC bored piles using cross holes sonic logging analyzer and submission of report.	each	10,400.00
13.31	Providing and conducting testing of finished PSC girder with simulation system as directed by Engineer excluding cost of girder, including reaction frame all testing equipment and their accessories complete.	per test	1,29,800.00
13.32	Making holes in all types of rock for anchorage etc. for any depth below foundation level 30/40 mm dia. including fixing charges for providing of inserts like anchor bars along the grouting, anchoring etc. true in line & plumb as per approved detailed working drawing including cost of cement grout etc. complete in all respect.(Cement grout 1:1 as per clause no. 2800 & 2806 of MoRTH Specification)(excluding cost of steel) and as per the directed of the Engineer.	Metre	163.00
13.33	Drilling borehole and conducting standard penetration test from ground level and upto the depth given below or upto refusal whichever occurs earlier as per IS:2131-1981 and IS 2132-1986.The work also includes the determination of Safe Bearing capacity as per IS:6403-1981 and IS:8009-1976 from disturbed and undisturbed samples. The following properties should be also reported as per related IS codes .The whole work should be done as per direction given by Engineer-in-charge and upto satisfaction of Engineer in Charge. (i) Grain Size Anaylsis (ii) Atterberg's Limit (iii) Bulk Density (iv) Moisture Content (v) Specific Gravity (vi) Shear Parameters including Cohesion and Angle of Internal Friction.		
13.33.1	Upto 6m depth	each	8,924.00
13.33.2	upto 10m depth	each	10,708.00

14.0 SUB-STRUCTURE & SUPER-STRUCTURE

Code No	Description	Unit	Rate Rs.
14.1	Brick masonry work with First class FPS bricks (min. 10.5 Mpa) in cement mortar with mechanical mixer in substructure/ super structure at all levels complete as per clause 1300 and 2200 of MoRT&H specification including all material, labour, scaffolding etc but excluding pointing and plastering.		
14.1.1	In cement mortar 1:3 (1 cement : 3 coarse sand)	cum	5,510.00
14.1.2	In cement mortar 1:4 (1 cement : 4 coarse sand)	cum	5,280.00
14.2	Random rubble masonry work in cement mortar with mechanical mixer in substructure/ super structure at all levels complete as per clause 1400 and 2200 of MoRT&H specification including all material, labour, scaffolding etc but excluding pointing and plastering.		
14.2.1	In cement mortar 1:3 (1 cement : 3 coarse sand)	cum	4,785.00
14.2.2	In cement mortar 1:4 (1 cement : 4 coarse sand)	cum	4,475.00
14.3	Coursed rubble masonry (First sort) work in cement mortar 1:3 (1 cement : 3 coarse sand) with mechanical mixer in substructure/ super structure at all levels complete as per clause 1400 and 2200 of MoRT&H specification including all material, labour, scaffolding etc but excluding pointing and plastering.	cum	5,170.00
14.4	Pointing of any design with cement mortar (1:3) on Brick work in substructure/ super structure at any height complete as per clause 1312 of MoRT&H specification including all material, labour, scaffolding etc.	sqm	95.00
14.5	Plastering with cement mortar (1:3) on Brick/stone work in substructure/ super structure at any height complete as per clause 1312 of MoRT&H specification including all material, labour, scaffolding etc.		
14.5.1	12 mm plaster on brick work	sqm	157.50
14.5.2	20 mm plaster on stone work	sqm	247.00
14.6	Providing and laying structural plain/ reinforced cement concrete (design mix) of specified grade in substructure at all levels using concrete mixer and vibrater, including cost of form work, as per drawing and technical specifications complete as per clause 1500, 1700 and 2200 of MoRT&H specification including all material, labour, scaffolding etc.		
14.6.1	PCC Grade M -20	cum	6,090.00
14.6.2	PCC Grade M -25	cum	6,530.00
14.6.3	PCC Grade M -30	cum	6,570.00
14.6.4	RCC Grade M -20	cum	6,140.00

Code No	Description	Unit	Rate Rs.
14.6.5	RCC Grade M -25	cum	6,530.00
14.6.6	RCC Grade M -30	cum	6,560.00
14.6.7	RCC Grade M -35	cum	6,630.00
14.7	Providing and laying structural plain/ reinforced cement concrete (design mix) of specified grade in substructure at all levels using batching plant, transit mixer, concrete pump and vibrater including cost of form work complete as per drawing and clause 1500, 1700 and 2200 of MoRT&H specification including all scaffolding, material, labour, machinery etc.		
14.7.1	RCC Grade M -20	cum	5,450.00
14.7.2	RCC Grade M -25	cum	5,860.00
14.7.3	RCC Grade M -30	cum	5,890.00
14.7.4	RCC Grade M -35	cum	5,970.00
14.7.5	RCC Grade M -40	cum	6,040.00
14.7.6	RCC Grade M -45	cum	6,310.00
14.8	Providing weep holes in brick/ stone masonry/ Plain/ Reinforced concrete abutment, wing wall/ return wall with following dia AC pipe, extending through the full width of the structure with slope of 1V : 20H towards drawing face complete as per drawing, technical specifications and clause 2205 of MoRT&H Specification including all scaffolding, material, labour, machinery etc.		
14.8.1	100 mm dia	metre	117.00
14.8.2	150 mm dia	metre	136.50
14.9	Supplying, fitting and fixing in position true to line and level Elastomeric Bearing conforming to IRC:83 (Part-II) section IX and clause 2005 of MoRT&H specification complete including all accessories as per drawing and technical specification and as per clause 2000 & 2200 of MoRT&H Specification including all scaffolding, material, labour, machinery etc.	Cubic centi-metre	1.50
14.10	Supplying, fitting and fixing in position true to line and level POT-PTFE bearing consisting of a metal piston supported by a disc or unreinforced elastomer confined within a metal cylinder, sealing rings, dust seals, PTFE surface sliding against stainless steel mating surface, complete assembly to be of cast steel/fabricated structural steel, metal and elastomer elements to be as per IRC: 83 part-I & II respectively and other parts conforming to BS: 5400, section 9.1 & 9.2 and clause 2006 of MoRT&H Specifications complete as per drawing and approved technical specifications and as per clause 2000 & 2200 of MoRT&H Specification including all scaffolding, material, labour, machinery etc.	per tonne vertical load	534.00

Code No	Description	Unit	Rate Rs.
14.11	Providing and laying of Filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2504.2.2. of MoRT&H specifications with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and technical specification including all material, labour, machinery as per clause 710.1.4 of IRC:78 and clause 2200 of MoRT&H specification.	cum	1,560.00
14.12	Back filing in foundation, trench behind abutment, wing wall and return wall etc and below pipe bed in layers not exceeding 20cm in depth, consolidating each deposited layer compacted by mechanical means with all lead and lift as per drawing and technical specification including all material, labour, machinery as per clause 2100 and 2200 of MoRT&H specification including all material, labour, machinery.		
14.12.1	Using selected granular material (as per clause 2200 of MoRT&H).	cum	1,178.00
14.13	Providing and laying precast cement concrete M-30 Grade interlocking paving blocks of 100mm thick over 50mm coarse sand bedding (duly compacted) including filling of joints with sand suitable for heavy pedestrian traffic/ light vehicle traffic of pattern as approved by Engineer.	sqm	855.00
14.14	Providing and laying precast cement concrete M-30 Grade 100mm thick paving blocks of approved shape and size (not less than 0.20 sqm), over 100mm thick PCC M-10 Grade bedding (duly compacted) including filling of joints with cement sand mortar (1:3) complete as per drawing and specification and as approved by Engineer.	sqm	1,334.00
14.15	Providing and laying structural reinforced/ prestressed cement concrete (design mix) of specified grade in superstructure using concrete mixer and vibrater at all levels including cost of steel form work complete as per drawing and clause 1500, 1600 and 1700 of MoRT&H specification including all scaffolding, material, labour, machinery etc.		
14.15.1	RCC Grade M -25		
14.15.1.1	For solid slab superstructure	cum	7,180.00
14.15.1.2	For T-beam & slab	cum	7,470.00
14.15.1.3	For box girder/ voided slab and balanced cantilever	cum	8,620.00
14.15.2	RCC Grade M -30		
14.15.2.1	For solid slab superstructure	cum	7,300.00
14.15.2.2	For T-beam & slab	cum	7,590.00
14.15.2.3	For box girder/ voided slab and balanced cantilever	cum	8,760.00
14.15.3	RCC/PSC Grade M -35		
14.15.3.1	For solid slab superstructure	cum	7,310.00

Code No	Description	Unit	Rate Rs.
14.15.3.2	For T-beam & slab	cum	7,610.00
14.15.3.3	For box girder/ voided slab and balanced cantilever	cum	8,800.00
14.15.4	RCC/PSC Grade M -40		
14.15.4.1	For solid slab superstructure	cum	7,610.00
14.15.4.2	For T-beam & slab	cum	7,920.00
14.15.4.3	For box girder/ voided slab and balanced cantilever	cum	9,150.00
14.16	"Fabrication, Welding, Riveting, bolting by HSFG bolts wherever required, supply, transportation to site, Assembling, Launching, Erecting of steel girder spans as per drawings and specifications approved by Railway and department for composite construction i.e. (Steel +RCC) of superstructure of the Road Over Bridge with contractor's own mild steel confirming to IS: 2062 Grade 250(B) with all welds, rivets, nuts bolts rivet materials, weld materials, HSFG bolts, service bolts, with other ancillary steel structures fixed to the girder where necessary in proper level and alignment and as per technical specifications. etc. with contractor's own materials, fabrication, machinery, templates, fixtures, equipments tools and plants, transportation to site, skilled/ unskilled labour, excise duty., Octroi, sales tax and other taxes, all leads and lifts, descent, loading, unloading, crossing one or more Railway track if required etc. complete and as per technical specifications. The rate shall also be inclusive of cold straightening of deformed and bent girder parts before their assembly. The structural steel to be used should be manufactured by SAIL/ RINL/ TISCO/ ESSAR/ JINDAL only. For Painting prior approval for superior brand/ make of the paint should be taken from engineer in charge." "The rate shall be inclusive of supply, erection and dismantling of staging and scaffolding and other temporary arrangements required for the purpose of assembly, erection and launching of girders. The rate shall also be inclusive of cold straightening of deformed and bent girder parts before/after their assembly. " "Metalizing girder/ girder component such as cross girder, top chord channels, bracing etc of BG new steel girder as directed by engineer with epoxy paint spray not less than two layers after preparing surface by sand/grit blasting as per provision laid in Appendix VI of IRS B-1179 code (latest alteration) including one coat wash primer one coat epoxy zinc chrome primer and two coat of epoxy paint with approved paint conforming to IS specification for fabrication & erection of steel girder bridge (RS B 1-79) as corrected up to date with contractor's own materials, tools, plants, labour, handling, re-handling if any including all lead, lifts descents, crossing of track/ obstruction etc. complete in all respect and as per direction of the engineer. Note:1. The fabrication of girders must be got done from RDSO approved firms only. 2. For Payment purpose, nominal weight of the girder as per drawing will only be considered."	kg	151.00

Code No	Description	Unit	Rate Rs.
14.17	Providing and laying structural reinforced/ prestressed cement concrete (design mix) of specified grade using batching plant, transit mixer, concrete pump and vibrater in superstructure at all levels including cost of steel form work complete as per clause 1500, 1600 and 1700 of MoRT&H specification including all scaffolding, material, labour, machinery etc.		
14.17.1	RCC Grade M -25		
14.17.1.1	For solid slab superstructure	cum	6,450.00
14.17.1.2	For T-beam & slab	cum	6,700.00
14.17.1.3	For box girder/ voided slab and balanced cantilever	cum	7,730.00
14.17.2	RCC Grade M -30		
14.17.2.1	For solid slab superstructure	cum	6,520.00
14.17.2.2	For T-beam & slab	cum	6,780.00
14.17.2.3	For box girder/ voided slab and balanced cantilever	cum	7,820.00
14.17.3	RCC/PSC Grade M -35		
14.17.3.1	For solid slab superstructure	cum	6,540.00
14.17.3.2	For T-beam & slab	cum	6,810.00
14.17.3.3	For box girder/ voided slab and balanced cantilever	cum	7,870.00
14.17.4	RCC/PSC Grade M -40		
14.17.4.1	For solid slab superstructure	cum	6,620.00
14.17.4.2	For T-beam & slab	cum	6,890.00
14.17.4.3	For box girder/ voided slab and balanced cantilever	cum	7,970.00
14.17.5	RCC/PSC Grade M -45		
14.17.5.1	For solid slab superstructure	cum	6,820.00
14.17.5.2	For T-beam & slab	cum	7,100.00
14.17.5.3	For box girder/ voided slab and balanced cantilever	cum	8,230.00
14.17.6	RCC/PSC Grade M -50		
14.17.6.1	For solid slab superstructure	cum	6,980.00
14.17.6.2	For T-beam & slab	cum	7,270.00
14.17.6.3	For box girder/ voided slab and balanced cantilever	cum	8,430.00
14.18	Providing, precasting, transportation and placing in position at all level precast pre/post-tensioned specified grade girders complete as per drawing and clause 1800 & 2300 of MoRT&H specifications including all material, labour, machinery including suitable crane etc.		
14.18.1	RCC M-40	cum	24,700.00
14.18.2	RCC M-45	cum	24,800.00

Code No	Description	Unit	Rate Rs.
14.19	Providing, precasting, transportation and placing in position at all level precast pre/post-tensioned specified grade girders as per drawing and clause 1800 & 2300 of MoRT&H specifications (excluding cost of reinforcement, HTS strands and pre-stressing) including all material, labour, machinery (suitable crane).		
14.19.1	RCC M-40	cum	12,200.00
14.19.2	RCC M-45	cum	12,350.00
14.20	Providing and fixing helical pipes in voided concrete slabs complete as per clause 1700 & 1800 of MoRT&H specifications including all material, labour, machinery etc.		
14.20.1	600mm dia (Hot dip galvnised GI Sheet 0.7mm thick)	metre	9,030.00
14.20.2	800mm dia (Hot dip galvnised GI Sheet 0.8mm thick)	metre	11,900.00
14.21	Providing and laying structural Reinforced cement concrete (design mix) of specified grade using mechanical concrete mixer and vibrater in approach slab, friction slab, edge beam, footpath and kerb as per approved drawing and specification as directed by the Engineer as per clause 1500 & 1700 of MoRT&H specification including all scaffolding, material, labour, machinery etc.		
14.21.1	RCC M-30	cum	7,590.00
14.21.2	RCC M-35	cum	7,610.00
14.22	Providing and laying structural Reinforced cement concrete (design mix) of specified grade using batching plant, transit mixer, concrete pump and vibrater in approach slab, friction slab, edge beam, footpath and kerb as per approved drawing and specification as directed by the Engineer as per clause 1500 & 1700 of MoRT&H specification including all scaffolding, material, labour, machinery etc.		
14.22.1	RCC M-30	cum	6,780.00
14.22.2	RCC M-35	cum	6,810.00
14.22.3	RCC M-40	cum	6,890.00
14.23	Designing, providing and erection of Precast RCC facia panels of minimum thickness 180mm made with M-35 Grade concrete batching plant, transit mixer, concrete pump and vibrater for retaining earth with all elements and accessories including reinforcing element, complete as per approved drawing and clause 3100 of MoRT&H specifications including all material, labour, machinery etc. (Scope of work includes designing, getting approval, casting in yard including reinforcement, curing, storing, transporting, lifting, placing in position, erection with all necessary fasteners etc complete excluding cost of excavation, RCC/CC for foundation, filter media and earth filling in RE portion)	sqm	4,065.00

Code No	Description	Unit	Rate Rs.
14.24	Construction of M-40 grade reinforced prestressed precast concrete panel of 200 mm thickness having size 4.5m x 3.5m or as per drawing, casting the panels as per approved design and drawing in factory or plant including cost of all materials, formwork, reinforcement, dowel bars, tie bars, chairs, lifting bolts, grout ports, labour and all necessary machineries which are required for prestressing the wires, preparing concrete mix as per job mix design (The minimum cement content for M40 grade of PPCP shall be 440 kg/cum of concrete), making slots in panels for fixing dowel bars, tie bars, and placing necessary reinforcement as per design and drawing, steam/curing for 28 days including lifting, transporting and placing the panels at the required position, line, level and alignment as directed by Engineer in Charge, with max 20% fly Ash (Fly-ash upto 20% by weight of Cement) over a prepared sub base. including providing and fixing in position MS Plain dowel bars precoated with anticorrosive epoxy paint of required Dia. having 45 cms. length and at 30.00 cm. c/c lubricated for half length with bituminous paint and providing & fixing TMT Fe 500 tie bars 12 mm dia. 60 cm long at 75 cm c/c, handling, straightening, necessary cutting supported by TMT FE 500, chairs with proper alignment by using properly designed assembly of Bulkheads. Including, Grouting of base of the panels as well as dowel and tie slots in the panels, Providing contraction joints polysulphide sealant (Pouring grade) confirming to BS : 5212 - 1989 into groove of specified size and shape as per detailed drawing including fixing Polyethylene foam backer rod of required diameter (approx. 25% larger than the initial 3 mm.to 4 mm. joint) overlaid with bond breaking tape as per detailed drawing. Item includes cleaning the joints with water jet / air compressor and allowing joint to become thoroughly dry before sealant is applied and applying primer.(A) Contraction and longitudinal joints (50 mm. deep x max. 6 mm wide)	cum	4,425.00
14.25	Providing, placing and compacting to desired density approved backfill material in layers as per approved methodology including testing for reinforced fill portion and random fill portion in the approaches between the Reinforced Soil (RS) Wall panels as per approved drawings as per clause 3103 of MoRT&H specification The soil should be predominately coarse grained not more than 10% of particle should pass 75 micron sieve The item shall be measured and paid for the finished volume of backfill and sub-grade placed in position excluding the volume of filter media at base and behind the RS walls.	cum	431.00
14.26	Supplying, fitting and placing TMT bar reinforcement in sub structure/ superstructure at all level complete as per drawing and clause 1600 & 2200 of MoRT&H Specification including all material, labour, machinery etc.	tonne	66,200.00
14.27	Providing and laying High tensile steel wires/ strands at any level including all accessories for stressing, stressing operations and grouting complete as per drawing, technical specification and as per clause 1800 of MoRT&H Specification.	tonne	1,55,300.00

Code No	Description	Unit	Rate Rs.
14.28	Providing and laying reinforced cement concrete wearing coat M-30 grade at any level including formwork and reinforcement @ 75kg/cum complete as per drawing and technical specification and as per clause 2702 of MoRT&H Specification including all material, labour, machinery etc.	cum	11,050.00
14.29	Providing and laying Precast Reinforced cement concrete slab for footpath and median with approved finish, constructed with specified grade concrete as per dimensions in the approved drawing and at locations directed by the Engineer including form work and excluding reinforcement and complete as per clause 1500 & 1700 of MoRT&H specification including all material, labour, machinery.		
14.29.1	RCC M-20	cum	6,040.00
14.29.2	RCC M-25	cum	6,470.00
14.29.3	RCC M-30	cum	6,490.00
14.30	Construction of precast/ cast-in-situ RCC railing M-30 grade, true to line and grade, center to center spacing between vertical post not to exceed 2000mm leaving adequate space between vertical post for expansion, complete as per drawing and technical specification and as per clause 1500, 1600, 1700 & 2703 of MoRT&H Specification including all material, labour, machinery etc.	Metre	1,792.00
14.31	Providing and fixing Mild steel railing including painted, complete as per drawing and technical specification and as per clause 1900 & 2703.2 of MoRT&H Specification including all material, labour, machinery etc.	Metre	2,595.00
14.32	Providing and laying expansion joint complete as per drawing and technical specification and as per clause 2605 of MoRT&H Specification including all material, labour, machinery etc		
14.32.1	Filler joint with 20m thick compressible fibre board.	sqm	918.00
14.32.2	Filler joint with Joint sealing compound with coarse sand and 6 % bitumen by weight.	metre per cm. Depth	38.80
14.33	Providing, laying and fixing of strip seal expansion joint catering to maximum horizontal movement upto 70 mm complete as per approved drawings and as per clause 2600 of MoRT&H specifications to be installed by manufacturer's authorized representative ensuring to compliance to manufacturer's instruction for installation including preparing the edges of bridge, welding to exposed reinforcement, concreting with design mix of grade of bridge or M-35 whichever is richer including all material, labour, machinery etc complete.	Metre	9,750.00
14.34	Providing and erecting Drainage Spouts with 0.15m long GI pipe 150mm dia and GI bolt 10mm dia with Galvanised MS flat clamp complete as per drawing and Technical specification as per clause 2705 of MoRT&H specifications including all material, labour, machinery etc.	each	903.00

Code No	Description	Unit	Rate Rs.
14.35	Providing and applying 2 coats of water based cement paint to unplastered concrete surface at all level after cleaning the surface of dirt, dust, oil, grease, efflorescence and applying paint @ of 1 litre for 2 sqm including all material, labour, scaffolding complete as per clause 800 of MoRT&H specifications including all material, labour scaffolding etc.	sqm	67.80
14.36	Providing and constructing of Reinforced cement concrete crash barrier at the edges of the road, approaches to bridge structures and medians, constructed with specified grade concrete using mechanical mixer and vibrator with 450 mm long at expansion joints filled with pre-moulded asphalt filler board, keyed to the structure on which it is built and installed as per design and dimensions in the approved drawing and at locations directed by the Engineer, all as specified as per clause 809 of MoRT&H specification including all material, labour scaffolding etc.		
14.36.1	RCC M-25	cum	7,200.00
14.36.2	RCC M-30	cum	7,320.00
14.36.3	RCC M-35	cum	7,330.00
14.37	Providing and constructing of Reinforced cement concrete crash barrier at the edges of the road, approaches to bridge structures and medians, constructed with specified grade concrete using batching plant, transit mixer, concrete pump and vibrator with 450 mm long at expansion joints filled with pre-moulded asphalt filler board, keyed to the structure on which it is built and installed as per design and dimensions in the approved drawing and at locations directed by the Engineer, all as specified as per clause 809 of MoRT&H specification including all material, labour scaffolding etc.		
14.37.1	RCC M-25	cum	6,460.00
14.37.2	RCC M-30	cum	6,540.00
14.37.3	RCC M-35	cum	6,560.00
14.37.4	RCC M-40	cum	6,630.00
14.38	Providing and erecting a "W" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 1.8 m high, 1.1 m below ground/road level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per clause 810 of MoRT&H specification including all material, labour machinery etc.	Metre	2,710.00

Code No	Description	Unit	Rate Rs.
14.39	Providing and erecting a "Thrie" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 85 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 2 m high with 1.15 m below ground level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a space of channel section 150 x 75 x 5 mm, 546 mm long complete as per clause 810 of MoRT&H specification including all material, labour machinery etc.	Metre	4,210.00
14.40	Providing and fixing G.I. Pipes railing of 80 mm dia. (Class B) over brackets of 16 mm thick MS plate with 200 mm at bottom & 120 mm at top with 200 mm height welded to 16 mm thick MS Plates of size 200 X 175 anchored with 400 mm long 4-12 mm dia. steel bars at the top of RCC crash barrier @1.0m c/c including fixing arrangement as per the drawing, clause 800 of MoRTH specification and as per the direction of the Engineer	metre	1,189.00
14.41	Load testing of one or more spans of bridge as selected by the Engineer as per approved load test procedure following relevant IS/IRC/Railway codes with contractor's labour, deflection measuring instruments, loading materials, recoding and analyzing the load testing results including all lead & lift, etc. complete as required. The rates are all inclusive and will be paid after load test is finished and girder is cleared of the kentledges /loading material etc. The load shall be 1.25 times the stipulated design load Based on Design load & not span (Load = 200 T)		
14.41.1	For span design load upto 100 MT.	per test	2,59,600.00
14.41.2	Extra for increase of 100 MT or part thereof in the span load capacity upto 800 MT.	per 100 T per test	32,400.00
14.42	Providing and applying elastic, elastomeric membrane forming system with anti carbonation and breathing properties. The system should be based on solvent free acrylic polymer with selected minerals fillers and should be ultra violet resistant, crack bridging type, carbonation resistant, breathable, environment friendly, water proofing coating for anti-carbonation equivalent air layer thickness denoted as R or SDCO2 $\geq$ 50mm and for breathability equivalent air layer thickness denoted as SDH2O shall be $\leq$ 4mm for vapour transmitting barrier. The system consist of one coat primer namely PREMIX 250 or equivalent @ 75-100 g/sqm. The consumption of main polymer namely EMCECOLORFLEX or equivalent to give film thickness of 200-225 microns(solid content,70% $\pm$ 3%)should be application (either by roller or brush)and surface smoothness of concrete. The total dry film thickness of the coating should be min. 200 microns for the above system. Polymer coating should be in suitable shades, including cost of materials, cleaning, chipping and removing the dirt particles of the concrete slabs with wire brush & water, labour charges for filling the bug holes, cracks, joints etc. with one component polymer modified fine repair and cosmetic mortar, labour for applying above coating, scaffolding charges, taxes all inclusive.	sqm	516.00

Code No	Description	Unit	Rate Rs.
14.43	Providing, fixing, maintaining, shifting & refixing, barricading of minimum 2.0 mtr height at stipulated active site of the same project site, made with angle iron frame of 50x50x5mm and GI sheet of 0.63mm thick including primer painted initially, painting, lettering & border with reflective paint at the time of every shifting, traffic diversion arrangement, safety guard, suitable lightning arrangement during night, complete in all respect till completion of the project as per technical specification and direction of Engineer-In-charge and same shall be possessed by the contractor after completion of the Project. Payment under this item will be released (1) 50% At the time of Providing new barricading at the time of start of project at location and plan as approved by the Engineer & certification (2) 50% After completion of project including shifting re-erecting and maintaining the barricading in position, during entire construction tenure with requisite manpower /flagman etc. complete for guiding traffic and safety etc and dismantling after completion of project.	metre	3,355.00

15.0 RIVER TRAINING & PROTECTION WORKS

Code No	Description	Unit	Rate Rs.
15.1	Providing and laying specified apron for protection against scour complete as per drawing and technical specification as per clause 2503 of MoRT&H Specification.		
15.1.1	Boulder/Quarry stone, not less than 40 kg each and specific gravity not less than 2.65, without wire crates.	cum	1,732.00
15.1.2	Boulder/Quarry stone, not less than 40 kg each in wire creates made with 4mm dia GI wire confirming to IS : 280 & IS : 4826 in 100mmX100mm mesh (weaved diagonally).	cum	2,755.00
15.2	Providing and laying Pitching on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical specifications and as per clause 2504 of MoRT&H Specification.		
15.2.1	With R.R. Stone/ bolder, weighing not less than 40 kg, thickness not less than 150mm, Specific gravity not less than 2.65.	cum	1,732.00
15.3	Providing and laying graded stone aggregate Filter Material underneath pitching in slopes complete as per drawing and Technical specifications and as per clause 2504 of MoRT&H Specification.	cum	1,178.00
15.4	Providing and laying flooring complete as per drawing and Technical specifications and as per clause 2505 of MoRT&H Specification.		
15.4.1	Rubble stone laid in cement mortar 1:3	cum	4,575.00
15.5	Construction of dry rubble flooring at cross drainage works complete as per drawing and Technical specifications and as per clause 2506 of MoRT&H Specification.	cum	1,812.00
15.6	Constructing curtain wall complete as per drawing and Technical specification per clause 2507.2 of MoRT&H Specification.		
15.6.1	Cement concrete Grade M-15	cum	5,070.00
15.7	Providing, constructing coffer dam in river basin / dam storages as per type design including excavation, filling the middle portion with B.C. soil (in gunny bags if required). Providing impervious / semipervious materials on both sides of B.C. soil (in gunny bags if required) including ramming, compacting to the satisfaction of Engineer-in-charge till the completion of work including dismantling coffer dam after completion of works and disposing off the material as directed by the Engineer-in-charge. Note : Maximum top width payable shall be 2 Mtr. and maximum payable side slopes shall be 1.5 horizontal to 1 vertical, if the constructed top width of the side slopes are less, then the measurements at actual are payable. Extra top width or flat slopes are not payable. Contractor is free to use ballies, plastic sheets, piles, pipes, CGI sheets for supporting hearting materials instead of impervious/ semi-pervious hearting materials for which no extra payments shall be payable. 30% payment shall be withheld for dismantling of coffer dam.	cum	492.50

Code No	Description	Unit	Rate Rs.
15.8	Supplying & Laying of a geotextile filter between pitching and embankment slopes on which pitching is laid to prevent escape of the embankment material through the voids of the stone pitching/ cement concrete blocks as well as to allow free movement of water without creating any uplift head on the pitching.	sqm	207.00

16.0 REPAIR & REHABILITATION

Code No	Description	Unit	Rate Rs.
16.1	Removal of existing cement concrete wearing coat manually or with the help of jack hammers including its disposal within a lead of 1000 metres, complete as per technical specification without causing any detrimental effect to any part of the bridge structure as per clause 2809, 100 of MoRT&H Specification.	sqm	112.50
16.2	Removal of existing asphaltic wearing coat comprising of 50 mm thick asphaltic concrete laid over 12 mm thick mastic asphalt including disposal with all lift and lead upto 1000 m as per clause 2809, 100 of MoRT&H Specification.	sqm	84.10
16.3	Guniting (Minimum density 2T/Cum.) on concrete/masonry surface with wire mesh size 50x50mm of wire thickness 3mm and cement mortar 1:3, applied with compressor after cleaning surface and applying with epoxy complete as per technical specification as per clause 2807 of MoRT&H Specification.	sqm	1,218.00
16.4	Providing and inserting nipples with approved fixing compound after drilling holes for grouting as per technical specification including subsequent cutting/ removal and sealing of the holes as necessary of nipples after completion of grouting with cement/ Epoxy as per clause 2807 of MoRT&H Specification.		
16.4.1	Cement grout as per clause 2800 & 2806 of MoRT&H specification.	each	204.50
16.4.2	Epoxy grout as per clause 2800 & 2803 of MoRT&H specification.	each	204.50
16.5	Sealing of cracks/ porous concrete with following by injection process through nipples including cost of material and labour complete as per drawing and technical specification complete.		
16.5.1	Cement grout as per clause 2800 & 2806 of MoRT&H specification.	Kg	235.00
16.5.2	Epoxy grout as per clause 2800 & 2803 of MoRT&H specification.	kg	1,234.00
16.5.3	Cement mortar (1:1) grout as per clause 2800 & 2806 of MoRT&H specification.	kg	231.00
16.6	Patching of damaged concrete surface with polymer concrete and curing compounds, initiator and promoter, available in present formulations, to be applied as per instructions of manufacturer and as approved by the Engineer complete as per clause 2800 of MoRT&H specification.	sqm	756.00
16.7	Removal of defective concrete, cleaning the surface thoroughly, applying the shotcrete mixture mechanically with compressed air under pressure, comprising of cement, sand, coarse aggregates, water and quick setting compound in the proportion as per clause 2807.1., sand and coarse aggregates conforming to IS: 383 and table 1 of IS: 9012 respectively, water cement ratio ranging from 0.35 to 0.50, density of gunite not less than 2000 kg/cum, strength not less than 25 Mpa and workmanship conforming to clause 2807.6. complete as per clause 2807 of MoRT&H specification.	sqm	352.50

17.0 SEWER LINE WORKS

Code No	Description	Unit	Rate Rs.
17.1	Earth work for Sewer line and Manhole in excavation in foundation, trenches manholes, road side chambers etc. including dressing of sides and ramming of bottoms, including getting out the excavated material, refilling after laying pipe/ foundation and disposal of surplus excavated material at a lead upto 50m suitable site as per direction of Engineer for following depths, below natural ground / Road top level including allowances for any additional excavation beyond the drawings (measurement for payment to be as per standard drawings), re-handling of material/earth to complete the task.		
17.1.1	In all types soils/ saturated soil such as moorum, sand, sandy silt, clay, black cotton soil, kankar, etc.		
17.1.1.1	Depth upto 1.5 m	cum	274.50
17.1.1.2	Add extra for over all depth of excavation above 1.5 m and upto 3.0 m over item no 17.1.1.1	cum	19.20
17.1.1.3	Add extra for over all depth of excavation above 3.0 m and upto 4.5 m over item no 17.1.1.1	cum	43.90
17.1.1.4	Add extra for over all depth of excavation above 4.5 m and upto 6.0 m over item no 17.1.1.1	cum	76.90
17.1.1.5	Add extra for over all depth of excavation above 6.0 m and upto 7.5 m over item no 17.1.1.1	cum	118.00
17.1.1.6	Add extra for over all depth of excavation above 7.5 m and upto 9.0 m over item no 17.1.1.1	cum	164.50
17.1.1.7	Add extra for over all depth of excavation above 9.0 m and upto 10.5 m over item no 17.1.1.1	Cum	329.50
17.1.2	In ordinary rock.		
17.1.2.1	Depth upto 1.5 m	cum	1,172.00
17.1.2.2	Add extra for over all depth of excavation above 1.5 m and upto 3.0 m over item no 17.1.2.1	cum	82.00
17.1.2.3	Add extra for over all depth of excavation above 3.0 m and upto 4.5 m over item no 17.1.2.1	cum	187.50
17.1.2.4	Add extra for over all depth of excavation above 4.5 m and upto 6.0 m over item no 17.1.2.1	cum	328.00
17.1.2.5	Add extra for over all depth of excavation above 6.0 m and upto 7.5 m over item no 17.1.2.1	cum	504.00
17.1.2.6	Add extra for over all depth of excavation above 7.5 m and upto 9.0 m over item no 17.1.2.1	cum	703.00
17.1.3	In hard rock (required blasting) including Blasting materials.		
17.1.3.1	Depth upto 1.5 m	cum	1,967.00

Code No	Description	Unit	Rate Rs.
17.1.3.2	Add extra for over all depth of excavation above 1.5 m and upto 3.0 m over item no 17.1.3.1	cum	137.50
17.1.3.3	Add extra for over all depth of excavation above 3.0 m and upto 4.5 m over item no 17.1.3.1	cum	314.50
17.1.3.4	Add extra for over all depth of excavation above 4.5 m and upto 6.0 m over item no 17.1.3.1	cum	551.00
17.1.3.5	Add extra for over all depth of excavation above 6.0 m and upto 7.5 m over item no 17.1.3.1	cum	846.00
17.1.3.6	Add extra for over all depth of excavation above 7.5 m and upto 9.0 m over item no 17.1.3.1	cum	1,180.00
17.1.4	In hard rock (Blasting prohibited)		
17.1.4.1	Depth upto 1.5 m	cum	3,965.00
17.1.4.2	Add extra for over all depth of excavation above 1.5 m and upto 3.0 m over item no 17.1.4.1	cum	277.50
17.1.4.3	Add extra for over all depth of excavation above 3.0 m and upto 4.5 m over item no 17.1.4.1	cum	634.00
17.1.4.4	Add extra for over all depth of excavation above 4.5 m and upto 6.0 m over item no 17.1.4.1	cum	1,110.00
17.1.4.5	Add extra for over all depth of excavation above 6.0 m and upto 7.5 m over item no 17.1.4.1	cum	1,705.00
17.1.4.6	Add extra for over all depth of excavation above 7.5 m and upto 9.0 m over item no 17.1.4.1	cum	2,379.00
17.1.4.7	Add extra for over all depth of excavation above 9.0 m and upto 10.5 m over item no 17.1.4.1	Cum	3,965.00
17.2	Add extra over item no 17.1.1, 17.1.2, 17.1.3 and 17.1.4 in RUIDP SOR for excavation in saturated soil, silt, rock and sludge where pumping or bailing out of water including well point if required for sewer line and manhole.		
17.2.1	Excavation depth from ground level 0.0 to 9.0 m		
17.2.1.1	Excavation from Encountered depth of water table 0.0 to 1.5 m	cum	54.90
17.2.1.2	Excavation from Encountered depth of water table 1.5 to 3.0 m	cum	110.00
17.2.1.3	Excavation from Encountered depth of water table 3.0 to 4.5 m	cum	219.50
17.2.1.4	Excavation from Encountered depth of water table 4.5 to 6.0 m	cum	329.50
17.2.1.5	Excavation from Encountered depth of water table 6.0 to 7.5 m	cum	439.00
17.2.1.6	Excavation from Encountered depth of water table 7.5 to 9.0 m	cum	878.00
17.2.1.7	Excavation from encountered depth of water table 9.0 to 10.5 m	Cum	1,318.00
17.3	Providing and fixing CLOSE timbering in trenches of sewer line and manholes including strutting, shoring and packing cavities (wherever required) complete. (Measurements to be taken of the face area timbered) for following depth below NGL.		

Code No	Description	Unit	Rate Rs.
17.3.1	Depth upto 3.0 m	sqm	136.00
17.3.2	Depth more than 3.0 m and upto 6.0 m	sqm	137.50
17.3.3	Depth beyond 6.0 m	sqm	140.00
17.4	Extra for planking, strutting and packing material for cavities IN CLOSE TIMBERING of sewer line and manholes if required to be left permanently in position (face area of timber permanently left to be measured)	sqm	1,078.00
17.5	Providing and fixing OPEN timbering in trenches of sewer line and manholes including strutting, shoring and packing cavities (wherever required) complete for following depth below NGL.		
17.5.1	Depth upto 3.0 m	sqm	69.30
17.5.2	Depth more than 3.0 m and upto 6.0 m	sqm	69.90
17.5.3	Depth beyond 6.0 m	sqm	71.10
17.6	Extra for planking, strutting and packing material for cavities IN OPEN TIMBERING of sewer line and manholes if required to be left permanently in position (face area of timber permanently left to be measured)	sqm	458.50
17.7	Providing and fixing close timbering made of Steel Girder Piling in sewer line and manholes work for support the both side of trenches with ISMB 250 as vertical member at 1.25 m centre to centre, ISMB 250 as horizontal member for tie at two depths, Struts to support the both side of trench of ISMB 250 and face of trench to be covered with 100*100*1235 mm wooden planks and removing Steel Girder piling after laying the sewers etc. complete as per specifications and as directed by Engineer. (Measurements to be taken of the face area timbered)		
17.7.1	Depth more than 3.0 m and upto 6.0 m	sqm	541.00
17.7.2	Depth beyond 6.0 m	sqm	649.00
17.8	Dismantling of flexible pavements for sewer line and manholes and disposal of dismantled materials up to a lead of 50 metres as directed by Engineer including allowances for any additional dismantling beyond the drawings (measurement for payment to be as per standard drawings), re-handling of material/earth to complete the task.		
17.8.1	Bituminous courses	cum	493.50
17.8.2	Granular courses	cum	343.50
17.9	Dismantling of cement concrete pavement for sewer line and manholes by mechanical means using pneumatic tools, cutting the peripheral edge by CC cutter, breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials up to a lead of 1000 metres including allowances for any additional dismantling beyond the drawings (measurement for payment to be as per standard drawings), re-handling of material/earth to complete the task.	cum	1,170.00

Code No	Description	Unit	Rate Rs.
17.10	Providing and laying in position cement concrete 1:3:6 (1 Cement : 1 graded stone aggregate 20 mm nominal size) in base course complete including all material, labour, machinery, lighting, guarding for road restoration under sewer line and manhole work including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.	cum	5,740.00
17.11	Providing and laying in position cement concrete of specified grade over prepared base course complete including finishing, curing, all material, labour, machinery, lighting, guarding for road restoration under sewer line and manhole work including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.		
17.11.1	1:1:2 (1 Cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size) (As per design mix)	cum	7,060.00
17.11.2	1:1½:3 (1 Cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size).	cum	6,970.00
17.12	Providing laying, spreading and compacting stone aggregates of specific sizes as per Table 400-7 to Water Bound Macadam specification including spreading in uniform thickness; hand packing, rolling with power roller 8-10 tonnes, in stages to proper grade and camber, applying and brooming requisite type of screening (Table 400-8) binding materials to fill up the interstices of coarse aggregates, watering (with water browser) and compacting to required density, making necessary earthen bund to protect edges as per clause 404 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion under sewer line and manhole work complete including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.		
17.12.1	Hand broken - Grade-I (90-45mm)	cum	2,019.00
17.12.2	Hand broken - Grade-II (63-45mm)	cum	1,968.00
17.12.3	Crusher broken - Grade-II (63-45mm)	cum	2,205.00
17.12.4	Crusher broken - Grade-III (53-22.4mm)	cum	2,184.00
17.13	Providing and applying tack coat on the prepared surface with bitumen emulsion as per IS: 8887 and approved quality @ 0.2 kg/sqm with the help of spray set fitted on bitumen Container (boiler) after cleaning the surface with brooms or soft brushes and finally dusting with old gunny bags and compressed air to receive bituminous treatment complete as per clause 502 of MoRT&H specification including all material, labour, machinery, lighting, guarding under sewer line and manhole work including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.	sqm	11.90

Code No	Description	Unit	Rate Rs.
17.14	Extra for additional bitumen emulsion used in above item for every 1 kg per 10 sqm including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.	sqm	5.30
17.15	Providing and laying open graded premix carpet 20mm thick (compacted), on prepared surface in a single course as wearing course, composed of specified graded crushed stone aggregate as per Table 500-23, premixed with bituminous binder @ 14.60 kg/ 10sqm (including Cost of anti stripping compound Minimum 1% in Lime/Cement as per design wherever required), including loading of material with F.E. loader, hot mixing of stone aggregate and bitumen in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensor control to the required level and grade, compacting smooth wheeled roller 8-10 tonne capacity and finishing to required level to achieve the desired density as per clause 511 of MoRT&H specification including all material, labour, machinery, lighting, guarding but excluding cost of tack coat/ seal coat under sewer line and manhole work including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.		
17.15.1	With Bitumen VG-grade 30	sqm	128.00
17.15.2	With bitumen of grade CRMB-60	sqm	117.50
17.16	Providing and applying liquid seal coat type "A" comprising of a layer of bituminous binder @ 9.8 kg/ 10 Sqm (including Cost of anti stripping compound Minimum 1% in Lime/Cement as per design wherever required) followed by a cover of stone chipping @ 0.09 Cum/10 sqm of specified grading and rolling with power roller 8-10 tonne complete as per clause 513 of MoRT&H specification including all material, labour, machinery, lighting, guarding under sewer line and manhole work including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.		
17.16.1	With Bitumen VG-grade 30	sqm	73.20
17.16.2	With bitumen of grade CRMB-60	sqm	66.40
17.17	Providing and applying premixed seal coat Type "B" comprising of thin application of fine aggregate 0.06 Cum/ 10 sqm premix with bitumen binder @ 6.8 Kg/ 10 Sqm (including Cost of anti stripping compound Minimum 1% in Lime/Cement as per design wherever required) laying with paver finisher with electronic sensor control and rolling with power roller 8-10 tonne complete as per clause 513 of MoRT&H specification including all material, labour, machinery, lighting, guarding under sewer line and manhole work including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.		

Code No	Description	Unit	Rate Rs.
17.17.1	With Bitumen VG-grade 30	sqm	51.00
17.17.2	With bitumen of grade CRMB-60	sqm	46.30
17.18	Providing at site, lowering & laying in trenches, aligning & jointing of RCC pipes NP4 class (with s/s ends) IS: 458 - 2003 (amended up to date) marked and pipes from 300 mm and upto 1800 mm manufactured through vertical / vibrated casting process at all depths with Rubber gaskets (EPDM/SBR) for sewer lines as per IS: 5382 (including cost of Rubber gaskets, lubricants) as per drawing, sectional hydro testing of the sewer pipe line (including cost and conveyance of water to site for testing) etc., complete as per specification and / or as directed by Engineer. Note : E/w to be measured and paid separately. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.18.1	150 mm internal diameter	metre	485.00
17.18.2	200 mm internal diameter	metre	618.00
17.18.3	250 mm internal diameter	metre	883.00
17.18.4	300 mm internal diameter	metre	1,158.00
17.18.5	350 mm internal diameter	metre	1,872.00
17.18.6	400 mm internal diameter	metre	2,190.00
17.18.7	450 mm internal diameter	metre	2,715.00
17.18.8	500 mm internal diameter	metre	3,035.00
17.18.9	600 mm internal diameter	metre	3,790.00
17.18.10	700 mm internal diameter	metre	4,715.00
17.18.11	800 mm internal diameter	metre	6,070.00
17.18.12	900 mm internal diameter	metre	7,340.00
17.18.13	1000 mm internal diameter	metre	8,330.00
17.18.14	1100 mm internal diameter	metre	8,580.00
17.18.15	1200 mm internal diameter	metre	11,500.00
17.18.16	1400 mm internal diameter	metre	16,750.00
17.18.17	1600 mm internal diameter	metre	20,900.00
17.18.18	1800 mm internal diameter	metre	27,300.00
17.18.19	2000 mm internal diameter	metre	36,200.00
17.19	Providing at site, lowering & laying in trenches, aligning & jointing of RCC pipes NP3 class (with s/s ends) IS: 458 - 1988 (amended up to date) marked and pipes from 300 mm upto 2000 mm manufactured through vertical / vibrated casting process all levels with Rubber gaskets (EPDM/SBR) for sewer lines as per IS: 5382 (including cost		

Code No	Description	Unit	Rate Rs.
	of Rubber gaskets lubricants) as per drawing, sectional hydro testing of the sewer pipe line (including cost and conveyance of water to site for testing) etc., complete as directed by Engineer. Note : E/w to be measured and paid separately. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.19.1	150 mm internal diameter	metre	462.50
17.19.2	200 mm internal diameter	metre	574.00
17.19.3	250 mm internal diameter	metre	804.00
17.19.4	300 mm internal diameter	metre	1,101.00
17.19.5	350 mm internal diameter	metre	1,744.00
17.19.6	400 mm internal diameter	metre	2,019.00
17.19.7	450 mm internal diameter	metre	2,345.00
17.19.8	500 mm internal diameter	metre	2,665.00
17.19.9	600 mm internal diameter	metre	3,390.00
17.19.10	700 mm internal diameter	metre	4,190.00
17.19.11	800 mm internal diameter	metre	5,680.00
17.19.12	900 mm internal diameter	metre	6,700.00
17.19.13	1000 mm internal diameter	metre	6,770.00
17.19.14	1100 mm internal diameter	metre	9,210.00
17.19.15	1200 mm internal diameter	metre	11,450.00
17.19.16	1400 mm internal diameter	metre	14,300.00
17.19.17	1600 mm internal diameter	metre	15,450.00
17.19.18	1800 mm internal diameter	metre	20,400.00
17.19.19	2000 mm internal diameter	metre	26,600.00
17.20	Providing at site, lowering & laying in trenches, aligning & jointing of RCC pipes NP2 class (with s/s ends IS: 458 - 1988 (amended up to date) marked and manufactured through spun process at all levels with Rubber gaskets (EPDM/SBR) for sewer lines as per IS: 5382 (including cost of Rubber gaskets lubricants) as per drawing, sectional hydro testing of the sewer pipe line (including cost and conveyance of water to site for testing) etc., complete as directed by Engineer. Note : E/w to be measured and paid separately. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers, Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.20.1	150 mm internal diameter	metre	436.50

Code No	Description	Unit	Rate Rs.
17.20.2	200 mm internal diameter	metre	635.00
17.20.3	250 mm internal diameter	metre	646.00
17.20.4	300 mm internal diameter	metre	783.00
17.20.5	350 mm internal diameter	metre	943.00
17.20.6	400 mm internal diameter	metre	1,101.00
17.20.7	450 mm internal diameter	metre	1,266.00
17.20.8	500 mm internal diameter	metre	1,620.00
17.20.9	600 mm internal diameter	metre	2,029.00
17.20.10	700 mm internal diameter	metre	2,428.00
17.20.11	800 mm internal diameter	metre	2,900.00
17.20.12	900 mm internal diameter	metre	3,770.00
17.20.13	1000 mm internal diameter	metre	4,360.00
17.20.14	1100 mm internal diameter	metre	5,470.00
17.20.15	1200 mm internal diameter	metre	6,360.00
17.20.16	1400 mm internal diameter	metre	7,890.00
17.20.17	1600 mm internal diameter	metre	10,250.00
17.20.18	1800 mm internal diameter	metre	10,950.00
17.20.19	2000 mm internal diameter	metre	12,300.00
17.21	Add extra for manufacturing of RCC pipe with Sulphate Resistant Cement instead of OPC/PPC cement		
17.21.1	NP2 Pipes		
17.21.1.1	150 mm internal diameter	metre	7.30
17.21.1.2	200 mm internal diameter	metre	9.35
17.21.1.3	250 mm internal diameter	metre	11.40
17.21.1.4	300 mm internal diameter	metre	16.50
17.21.1.5	350 mm internal diameter	metre	20.30
17.21.1.6	400 mm internal diameter	metre	23.00
17.21.1.7	450 mm internal diameter	metre	28.30
17.21.1.8	500 mm internal diameter	metre	31.20
17.21.1.9	600 mm internal diameter	metre	48.30
17.21.1.10	700 mm internal diameter	metre	62.40
17.21.1.11	800 mm internal diameter	metre	70.70
17.21.1.12	900 mm internal diameter	metre	87.40
17.21.1.13	1000 mm internal diameter	metre	106.00
17.21.1.14	1100 mm internal diameter	metre	126.00

Code No	Description	Unit	Rate Rs.
17.21.1.15	1200 mm internal diameter	metre	148.00
17.21.1.16	1400 mm internal diameter	metre	184.00
17.21.1.17	1600 mm internal diameter	metre	223.50
17.21.1.18	1800 mm internal diameter	metre	283.00
17.21.1.19	2000 mm internal diameter	metre	349.50
17.21.2	NP3 and NP4 Pipes		
17.21.2.1	150 mm internal diameter	metre	7.30
17.21.2.2	200 mm internal diameter	metre	11.50
17.21.2.3	250 mm internal diameter	metre	14.00
17.21.2.4	300 mm internal diameter	metre	22.60
17.21.2.5	350 mm internal diameter	metre	53.10
17.21.2.6	400 mm internal diameter	metre	59.30
17.21.2.7	450 mm internal diameter	metre	65.50
17.21.2.8	500 mm internal diameter	metre	71.80
17.21.2.9	600 mm internal diameter	metre	96.90
17.21.2.10	700 mm internal diameter	metre	111.00
17.21.2.11	800 mm internal diameter	metre	141.50
17.21.2.12	900 mm internal diameter	metre	166.50
17.21.2.13	1000 mm internal diameter	metre	213.50
17.21.2.14	1100 mm internal diameter	metre	232.50
17.21.2.15	1200 mm internal diameter	metre	263.50
17.21.2.16	1400 mm internal diameter	metre	345.00
17.21.2.17	1600 mm internal diameter	metre	405.50
17.21.2.18	1800 mm internal diameter	metre	487.00
17.21.2.19	2000 mm internal diameter	metre	614.00
17.22	Extra for providing 2.5mm thick HDPE Lining inside RCC pipe (while casting of pipe) as required.		
17.22.1	600 mm internal diameter	metre	764.00
17.22.2	700 mm internal diameter	metre	891.00
17.22.3	800 mm internal diameter	metre	893.00
17.22.4	900 mm internal diameter	metre	1,145.00
17.22.5	1000 mm internal diameter	metre	1,272.00
17.22.6	1100 mm internal diameter	metre	1,400.00
17.22.7	1200 mm internal diameter	metre	1,527.00
17.22.8	1400 mm internal diameter	metre	1,781.00

Code No	Description	Unit	Rate Rs.
17.22.9	1600 mm internal diameter	metre	2,035.00
17.22.10	1800 mm internal diameter	metre	2,291.00
17.22.11	2000 mm internal diameter	metre	2,545.00
17.23	Providing at site, lowering, laying, aligning, fixing in position and jointing in trenches at all level/ depths, ISI marked following class AC (Mazza process) pipes for sewer and drainage application as per IS 6908-1991 (amended upto date) with AC coupler joints sealed with Rubber gaskets (EPDM/SBR) as per IS 5382 complete including cost of all materials, labour, jointing, water, sectional hydro testing (including cost and conveyance of water to site for testing) etc. and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.23.1	Class-1		
17.23.1.1	150mm Nominal dia	metre	542.00
17.23.1.2	200 mm Nominal dia	metre	833.00
17.23.1.3	250 mm Nominal dia	metre	1,085.00
17.23.1.4	300 mm Nominal Dia	metre	1,373.00
17.23.1.5	350 mm Nominal Dia	metre	1,751.00
17.23.1.6	400 mm Nominal Dia	metre	2,123.00
17.23.1.7	450 mm Nominal Dia	metre	2,481.00
17.23.1.8	500 mm Nominal Dia	metre	3,155.00
17.23.1.9	600 mm Nominal Dia	metre	3,805.00
17.23.1.10	700 mm Nominal Dia	metre	6,870.00
17.23.1.11	800 mm Nominal Dia	metre	9,050.00
17.23.1.12	900 mm Nominal Dia	metre	9,820.00
17.23.1.13	1000 mm Nominal Dia	metre	13,800.00
17.23.2	Class-2		
17.23.2.1	150mm Nominal dia	metre	660.00
17.23.2.2	200 mm Nominal dia	metre	1,082.00
17.23.2.3	250 mm Nominal dia	metre	1,347.00
17.23.2.4	300 mm Nominal Dia	metre	1,850.00
17.23.2.5	350 mm Nominal Dia	metre	2,339.00
17.23.2.6	400 mm Nominal Dia	metre	2,955.00
17.23.2.7	450 mm Nominal Dia	metre	3,500.00

Code No	Description	Unit	Rate Rs.
17.23.2.8	500 mm Nominal Dia	metre	4,375.00
17.23.2.9	600 mm Nominal Dia	metre	6,190.00
17.23.2.10	700 mm Nominal Dia	metre	7,590.00
17.23.2.11	800 mm Nominal Dia	metre	10,750.00
17.23.2.12	900 mm Nominal Dia	metre	13,450.00
17.23.2.13	1000 mm Nominal Dia	metre	16,550.00
17.23.3	Class-3		
17.23.3.1	150mm Nominal dia	metre	817.00
17.23.3.2	200 mm Nominal dia	metre	1,341.00
17.23.3.3	250 mm Nominal dia	metre	1,666.00
17.23.3.4	300 mm Nominal Dia	metre	2,357.00
17.23.3.5	350 mm Nominal Dia	metre	2,935.00
17.23.3.6	400 mm Nominal Dia	metre	3,835.00
17.23.3.7	450 mm Nominal Dia	metre	4,630.00
17.23.3.8	500 mm Nominal Dia	metre	5,630.00
17.23.3.9	600 mm Nominal Dia	metre	7,970.00
17.23.3.10	700 mm Nominal Dia	metre	10,500.00
17.23.3.11	800 mm Nominal Dia	metre	14,050.00
17.23.3.12	900 mm Nominal Dia	metre	17,400.00
17.23.3.13	1000 mm Nominal Dia	metre	21,800.00
17.24	Providing, lowering, laying in trenches, aligning, fixing in position and jointing Ductile Iron (DI) ISI marked K-7 grade S&S pipes as per IS:8329-2000 (amended up to date), with internal High Alumina Cement (HAC) mortar lining for gravity sewer network with rubber ring (EPDM) joints as per IS: 5382-1985 (excluding special accessories) complete including all material, labour, hydraulic testing and commissioning as per technical specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
17.24.1	100mm	metre	1,297.00
17.24.2	150mm	metre	1,858.00
17.24.3	200mm	metre	2,450.00
17.24.4	250mm	metre	3,135.00
17.24.5	300mm	metre	3,940.00
17.24.6	350 mm	metre	4,820.00
17.24.7	400 mm	metre	5,730.00
17.24.8	450 mm	metre	6,680.00

Code No	Description	Unit	Rate Rs.
17.24.9	500 mm	metre	8,050.00
17.24.10	600mm	metre	10,600.00
17.24.11	700mm	metre	14,100.00
17.24.12	800mm	metre	18,400.00
17.24.13	900mm	metre	22,300.00
17.24.14	1000mm	metre	26,500.00
17.24.15	1100mm	metre	34,400.00
17.25	Providing, lowering & laying in trenches, aligning & jointing of IS marked SW pipes (IS: 651:1980 amended up date) at all depths with rubber gaskets (EPDM/ SBR) for sewer lines and laying as per IS:4127:1983 (amended up to date) including cost of Rubber gaskets, lubricants and sectional hydro testing of the sewer pipe line (including the cost and conveyance of water to site for testing) complete in all respect as per specification and the directed of the Engineer. Note : E/w to be measured and paid separately. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.25.1	100 mm Nominal Dia	metre	340.50
17.25.2	150 mm Nominal Dia	metre	594.00
17.25.3	200 mm Nominal Dia	metre	960.00
17.25.4	250 mm Nominal Dia	metre	1,132.00
17.25.5	310 mm Nominal Dia	metre	1,633.00
17.26	Providing at site, lowering & laying in trenches, aligning & jointing of PVC-U pipes (SN 8) as per IS 15328 (amended up to date) and as per specifications with rubber rings with socket and spigot joint, (EPDM/SBR) for all depths for pipe length as per drawing and specification including hydraulic field testing (including the cost and conveyance of water to site for testing) and commissioning etc complete as directed by Engineer. Note : E/w to be measured and paid separately. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.26.1	110 mm Nominal Dia	metre	267.50
17.26.2	160 mm Nominal Dia	metre	558.00
17.26.3	200 mm Nominal Dia	metre	866.00
17.26.4	250 mm Nominal Dia	metre	1,326.00
17.26.5	315 mm Nominal Dia	metre	2,109.00

Code No	Description	Unit	Rate Rs.
17.27	Providing at site, lowering & laying in trenches, aligning & jointing of U-PVC pipe as per IS 13592 (amended up to date) and as per specifications with rubber rings with socket and spigot joint, (EPDM/SBR) for all depths for pipe length as per drawing and specification including hydraulic field testing (including the cost and conveyance of water to site for testing) and commissioning etc complete as directed by Engineer for house sewer connection work. Note : E/w to be measured and paid separately. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.27.1	110 mm Nominal Dia	metre	249.00
17.28	Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths ISI marked HDPE pipes of PE-100 grade and PN 6 for sewer application as per IS 14333-1996 (amended upto date) in trenches in complete including all material, labour, sectional hydro testing (including the cost and conveyance of water to site for testing) and commissioning as per Technical Specifications and as per direction of Engineer. Note: E/w to be measured and paid separately. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.28.1	200mm Nominal dia	metre	1,757.00
17.28.2	225 mm Nominal dia	Metre	1,996.00
17.28.3	250 mm Nominal dia	metre	2,725.00
17.28.4	315 mm Nominal dia	metre	4,405.00
17.28.5	355 mm Nominal Dia	Metre	5,150.00
17.28.6	400 mm Nominal Dia	metre	7,110.00
17.28.7	450 mm Nominal Dia	metre	8,960.00
17.28.8	500 mm Nominal Dia	metre	11,800.00
17.28.9	560 mm Nominal Dia	Metre	14,650.00
17.28.10	630 mm Nominal Dia	Metre	18,500.00
17.28.11	800 mm Nominal Dia	metre	30,100.00
17.28.12	900 mm Nominal Dia	metre	38,100.00
17.28.13	1000 mm Nominal Dia	metre	47,100.00
17.29	Providing, lowering, laying, aligning, fixing in position and jointing at all level/ depths full round HDPE DWC (double wall corrugated) pipes of SN8 grade as per IS 16098 (Part 2) amended upto date in trenches in complete including all material, labour, sectional hydro testing (including the cost and conveyance of water to site for testing) and commissioning as per Technical Specifications,		

Code No	Description	Unit	Rate Rs.
	drawings and as per direction of Engineer. Note : E/w to be measured and paid separately. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.29.1	150 mm ID	metre	436.50
17.29.2	200 mm ID	metre	627.00
17.29.3	250 mm ID	metre	964.00
17.29.4	300 mm ID	metre	1,327.00
17.29.5	400 mm ID	metre	2,286.00
17.29.6	500 mm ID	metre	3,455.00
17.29.7	600 mm ID	metre	5,910.00
17.29.8	800 mm ID	metre	10,050.00
17.29.9	1000 mm ID	metre	16,350.00
17.30	Providing granular bedding having width = outer dia of pipe (Bc) + 500mm, thickness below pipe = 0.25Bc or 100mm (whichever is higher) and haunching = 0.5Bc, with graded hard crusher broken stone of 100% passing through 20mm sheive, 20 to 50 % passing through 10mm sheive and 100 % retain on 6.3mm sheive, laying in layers of thickness 10/15cm including ramming, consolidation etc complete for all type of pipes of following sizes as per drawing and or as directed by Engineer.		
17.30.1	100 mm internal diameter	metre	121.00
17.30.2	150 mm internal diameter	metre	137.00
17.30.3	200 mm internal diameter	metre	158.00
17.30.4	250 mm internal diameter	metre	175.50
17.30.5	300 mm internal diameter	metre	199.50
17.30.6	350 mm internal diameter	metre	263.50
17.30.7	400 mm internal diameter	metre	298.50
17.30.8	450 mm internal diameter	metre	335.50
17.30.9	500 mm internal diameter	metre	371.00
17.30.10	600 mm internal diameter	metre	467.50
17.30.11	700 mm internal diameter	metre	549.00
17.30.12	800 mm internal diameter	metre	653.00
17.30.13	900 mm internal diameter	metre	761.00
17.30.14	1000 mm internal diameter	metre	889.00
17.30.15	1100 mm internal diameter	metre	995.00
17.30.16	1200 mm internal diameter	metre	1,119.00

Code No	Description	Unit	Rate Rs.
17.30.17	1400 mm internal diameter	metre	1,397.00
17.30.18	1600 mm internal diameter	metre	1,676.00
17.30.19	1800 mm internal diameter	metre	2,005.00
17.30.20	2000 mm internal diameter	metre	2,405.00
17.31	Providing granular bedding having width = outer dia of pipe (Bc) + 500mm, thickness below pipe = 0.25Bc or 100mm (whichever is higher) and haunching = 0.5Bc, with graded hard crusher broken stone of 100% passing through 20mm sheive, 20 to 50 % passing through 10mm sheive and 100 % retain on 6.3mm sheive, laying in layers of thickness 10/15cm including ramming, consolidation etc complete for PVC/HDPE pipes of following sizes as per drawing and or as directed by Engineer.		
17.31.1	110mm nominal dia	metre	109.00
17.31.2	160mm nominal dia	metre	124.00
17.31.3	200mm nominal dia	metre	138.50
17.31.4	250mm nominal dia	metre	155.50
17.31.5	315mm nominal dia	metre	177.00
17.32	Providing and laying plain cement concrete M15 grade (using mechanical concrete mixer) using 20mm graded hard crusher broken stone aggregate, laying in layers of not more than 15cm thick, for bedding having width = outer dia of pipe (Bc) + 200mm or 1.25Bc (whichever is higher), thickness below pipe = 0.25Bc or 100mm (whichever is higher) and haunching = 0.25Bc, for all type of pipes of following sizes, including compaction, curing, form work, etc complete as per drawing and/ or as directed by Engineer.		
17.32.1	150 mm internal diameter	metre	275.00
17.32.2	200 mm internal diameter	metre	335.00
17.32.3	250 mm internal diameter	metre	388.50
17.32.4	300 mm internal diameter	metre	468.00
17.32.5	350 mm internal diameter	metre	704.00
17.32.6	400 mm internal diameter	metre	824.00
17.32.7	450 mm internal diameter	metre	953.00
17.32.8	500 mm internal diameter	metre	1,092.00
17.32.9	600 mm internal diameter	metre	1,460.00
17.32.10	700 mm internal diameter	metre	1,845.00
17.32.11	800 mm internal diameter	metre	2,388.00
17.32.12	900 mm internal diameter	metre	2,950.00
17.32.13	1000 mm internal diameter	metre	3,685.00
17.32.14	1100 mm internal diameter	metre	4,310.00

Code No	Description	Unit	Rate Rs.
17.32.15	1200 mm internal diameter	metre	5,050.00
17.32.16	1400 mm internal diameter	metre	6,800.00
17.32.17	1600 mm internal diameter	metre	8,610.00
17.32.18	1800 mm internal diameter	metre	10,750.00
17.32.19	2000 mm internal diameter	metre	13,350.00
17.33	Providing and laying reinforced cement concrete M15 grade (using mechanical concrete mixer) with 0.4% steel reinforcement) using 20mm graded hard crusher broken stone aggregate, laying in layers of not more than 15cm thick, for bedding having width = outer dia of pipe (Bc) + 200mm or 1.25Bc (whichever is higher), thickness below pipe = 0.25Bc or 100mm (whichever is higher) and haunching = 0.25Bc, for all type of pipes of following sizes, including reinforcement, compaction, curing, form work, etc complete as per drawing and/ or as directed by Engineer.		
17.33.1	150 mm internal diameter	metre	384.00
17.33.2	200 mm internal diameter	metre	468.50
17.33.3	250 mm internal diameter	metre	542.00
17.33.4	300 mm internal diameter	metre	653.00
17.33.5	350 mm internal diameter	metre	984.00
17.33.6	400 mm internal diameter	metre	1,152.00
17.33.7	450 mm internal diameter	metre	1,332.00
17.33.8	500 mm internal diameter	metre	1,526.00
17.33.9	600 mm internal diameter	metre	2,039.00
17.33.10	700 mm internal diameter	metre	2,580.00
17.33.11	800 mm internal diameter	metre	3,335.00
17.33.12	900 mm internal diameter	metre	4,120.00
17.33.13	1000 mm internal diameter	metre	5,150.00
17.33.14	1100 mm internal diameter	metre	6,020.00
17.33.15	1200 mm internal diameter	metre	7,060.00
17.33.16	1400 mm internal diameter	metre	9,500.00
17.33.17	1600 mm internal diameter	metre	12,050.00
17.33.18	1800 mm internal diameter	metre	15,000.00
17.33.19	2000 mm internal diameter	metre	18,650.00
17.34	Providing and laying granular bedding in layers of not more than 15cm thick, for bedding having width = outer dia of pipe (Bc) + 500mm, thickness below pipe = 0.25Bc or 100mm (whichever is higher), haunching = 0.5Bc and reinforced cement concrete M15 grade (using mechanical concrete mixer) with 1% steel reinforcement) using 20mm graded hard crusher broken stone		

Code No	Description	Unit	Rate Rs.
	aggregate to cover pipe having width = outer dia of pipe (Bc) + 200mm or 1.25Bc (whichever is higher), thickness over pipe = 0.25Bc or 100mm (whichever is higher) for all type of pipes of following sizes, including reinforcement, compaction, curing, form work, etc complete as per drawing and/ or as directed by Engineer.		
17.34.1	150 mm internal diameter	metre	786.00
17.34.2	200 mm internal diameter	metre	959.00
17.34.3	250 mm internal diameter	metre	1,109.00
17.34.4	300 mm internal diameter	metre	1,326.00
17.34.5	350 mm internal diameter	metre	1,924.00
17.34.6	400 mm internal diameter	metre	2,224.00
17.34.7	450 mm internal diameter	metre	2,545.00
17.34.8	500 mm internal diameter	metre	2,880.00
17.34.9	600 mm internal diameter	metre	3,775.00
17.34.10	700 mm internal diameter	metre	4,715.00
17.34.11	800 mm internal diameter	metre	6,050.00
17.34.12	900 mm internal diameter	metre	7,420.00
17.34.13	1000 mm internal diameter	metre	9,220.00
17.34.14	1100 mm internal diameter	metre	10,750.00
17.34.15	1200 mm internal diameter	metre	12,550.00
17.34.16	1400 mm internal diameter	metre	16,750.00
17.34.17	1600 mm internal diameter	metre	21,100.00
17.34.18	1800 mm internal diameter	metre	26,300.00
17.34.19	2000 mm internal diameter	metre	32,500.00
17.35	Providing arranging and Hydraulic testing of following RCC sewer pipe line as per IS: 783 code of practice and / or as directed by Engineer-in-charge complete including cost of water.		
17.35.1	150 mm Nominal Inside dia	metre	56.00
17.35.2	200 mm Nominal Inside dia	metre	68.00
17.35.3	250 mm Nominal Inside dia	metre	70.00
17.35.4	300 mm Nominal Inside dia	metre	75.50
17.35.5	350 mm Nominal Inside dia	metre	106.00
17.35.6	400 mm Nominal Inside dia	metre	109.00
17.35.7	450 mm Nominal Inside dia	metre	126.00
17.35.8	500 mm Nominal Inside dia	metre	130.00
17.35.9	600 mm Nominal Inside dia	metre	187.00
17.35.10	700 mm Nominal Inside dia	metre	221.00

Code No	Description	Unit	Rate Rs.
17.35.11	800 mm Nominal Inside dia	metre	249.00
17.35.12	900 mm Nominal Inside dia	metre	279.00
17.35.13	1000 mm Nominal Inside dia	metre	311.00
17.35.14	1100 mm Nominal Inside dia	metre	344.00
17.35.15	1200 mm Nominal Inside dia	metre	395.00
17.36	Providing and constructing of SEWER-BRICK (As per IS-4885 amended upto date) masonry circular manholes of "Type-A" with internal dia 0.90m and depth upto 1.65m having 230mm thick sewer brick masonry wall in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.36.1	Manhole "Type-A" of depth 0.90 m	each manhole	14,250.00
17.36.2	Providing and constructing extra depth of manhole "Type-A" for depth beyond 0.90 m and upto 1.65 m with SEWER-BRICK masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	7,540.00
17.37	Providing and constructing of SEWER-BRICK (As per IS-4885 amended upto date) masonry circular manholes of "Type-B" with internal dia 1.20m and depth upto 2.50m having sewer brick masonry wall 230mm thick upto 1.5m, 345mm thick from 1.50m to 2.50m in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty		

Code No	Description	Unit	Rate Rs.
	SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.37.1	Manhole "Type-B" of depth 1.70 m	each manhole	28,900.00
17.37.2	Providing and constructing extra depth of manhole "Type-B" for depth beyond 1.70 m and upto 2.50 m with SEWER-BRICK masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	13,200.00
17.38	Providing and constructing of SEWER-BRICK (As per IS-4885 amended upto date) masonry circular manholes of "Type-C" with internal dia 1.50m and depth upto 5.0m having sewer brick masonry wall 230mm thick upto 1.5m, 345mm thick from 1.50m to 2.50m and 460mm from 2.50 to 5.0m in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.38.1	Manhole "Type-C" of depth 2.60 m	each manhole	51,700.00
17.38.2	Providing and constructing extra depth of manhole "Type-C" for depth beyond 2.60 m and upto 5.0 m with SEWER-BRICK masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	20,700.00
17.39	Providing and constructing of SEWER-BRICK (As per IS-4885 amended upto date) masonry circular manholes of "Type-D" with internal dia 1.50m and depth upto 9.0m having sewer brick masonry wall 230mm thick upto 1.5m, 345mm thick from 1.50m to 2.50m, 460mm from 2.50 to 5.0m and 575mm from 5.0 to 9.0m in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for		

Code No	Description	Unit	Rate Rs.
	fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.39.1	Manhole "Type-D" of depth 5.10m	each manhole	1,04,700.00
17.39.2	Providing and constructing extra depth of manhole "Type-D" for depth beyond 5.10 m and upto 9.0 m with SEWER-BRICK masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	25,700.00
17.40	Providing and constructing of SEWER-BRICK (As per IS-4885 amended upto date) masonry circular manholes of "Type-E" with internal dia 1.80m and depth upto 14.0m having sewer brick masonry wall 230mm thick upto 1.5m, 345mm thick from 1.50m to 2.50m, 460mm from 2.50 to 5.0m, 575mm from 5.0 to 9.0m and 690mm from 9.0 to 14.0m in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.40.1	Manhole "Type-E" of depth 9.10m	each manhole	2,45,500.00
17.40.2	Providing and constructing extra depth of manhole "Type-E" for depth beyond 9.10 m and upto 14.0 m with SEWER-BRICK masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	35,700.00

Code No	Description	Unit	Rate Rs.
17.41	Providing and constructing of RR stone masonry circular manholes of "Type-Z" with internal dia 0.56m and depth upto 0.90 m having 300mm thick RR stone masonry wall in cement sand mortar 1:4, including concreting PCC M-10 grade (1:3:6) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, PCC M15 for fixing the manhole frame and cover using stone aggregate 20mm Nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and roof. Supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note-Only Excavation work will be measured and paid separately (Z-Type Manholes)	each	8,150.00
17.42	Providing and constructing of RR stone masonry circular manholes of "Type-A" with internal dia 0.90m and depth upto 1.65m having 300mm thick RR stone masonry wall in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.42.1	Manhole "Type-A" of depth 0.90 m	each manhole	15,550.00
17.42.2	Providing and constructing extra depth of manhole "Type-A" for depth beyond 0.90 m and upto 1.65 m with RR stone masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	8,380.00
17.43	Providing and constructing of RR stone masonry circular manholes of "Type-B" with internal dia 1.20m and depth upto 2.50m having RR stone masonry wall 300 thick upto 1.5m, 450mm thick from 1.50m to 2.50m in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing		

Code No	Description	Unit	Rate Rs.
	compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.43.1	Manhole "Type-B" of depth 1.70 m	each manhole	29,700.00
17.43.2	Providing and constructing extra depth of manhole "Type-B" for depth beyond 1.70 m and upto 2.50 m with RR stone masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	11,800.00
17.44	Providing and constructing of RR stone masonry circular manholes of "Type-C" with internal dia 1.50m and depth upto 5.0m having RR stone masonry wall 300mm thick upto 1.5m, 450mm thick from 1.50m to 2.50m and 600mm from 2.50 to 5.0m in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.44.1	Manhole "Type-C" of depth 2.60 m	each manhole	51,300.00
17.44.2	Providing and constructing extra depth of manhole "Type-C" for depth beyond 2.60 m and upto 5.0 m with RR stone masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	17,650.00

Code No	Description	Unit	Rate Rs.
17.45	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-E" with internal dia 1.40m and depth upto 3.50m having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.45.1	Manhole of depth 1.8m as per drawing and direction of Engineer.	each manhole	40,900.00
17.45.2	Providing and constructing extra depth of manhole for depth beyond 1.8 m and upto 3.5 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	10,800.00
17.46	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-E" with internal dia 1.50m and depth upto 3.50m having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.46.1	Manhole of depth 1.8m as per drawing and direction of Engineer.	each manhole	43,700.00
17.46.2	Providing and constructing extra depth of manhole for depth beyond 1.8 m and upto 3.5 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	11,400.00
17.47	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-E" with internal dia 1.55m and depth upto 3.50m having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1		

Code No	Description	Unit	Rate Rs.
	around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.47.1	Manhole of depth 1.8m as per drawing and direction of Engineer.	each manhole	44,700.00
17.47.2	Providing and constructing extra depth of manhole for depth beyond 1.8 m and upto 3.5 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	11,700.00
17.48	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-E" with internal dia 1.75m and depth upto 3.50m having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.48.1	Manhole of depth 1.8m as per drawing and direction of Engineer.	each manhole	52,100.00
17.48.2	Providing and constructing extra depth of manhole for depth beyond 1.8 m and upto 3.5 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	13,000.00
17.49	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-E" with internal dia 2.00m and depth upto 3.50m having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		

Code No	Description	Unit	Rate Rs.
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.49.1	Manhole of depth 1.8m as per drawing and direction of Engineer.	each manhole	56,900.00
17.49.2	Providing and constructing extra depth of manhole for depth beyond 1.8 m and upto 3.5 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	14,550.00
17.50	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-E" with internal dia 2.20m and depth upto 3.50m having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.50.1	Manhole of depth 1.8m as per drawing and direction of Engineer.	each manhole	66,200.00
17.50.2	Providing and constructing extra depth of manhole for depth beyond 1.8 m and upto 3.5 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	15,800.00
17.51	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 1.4m and depth upto 8.0m (2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.51.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each manhole	48,200.00
17.51.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	11,700.00

Code No	Description	Unit	Rate Rs.
17.52	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 1.5m and depth upto 8.0m (2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.52.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each manhole	50,500.00
17.52.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	12,300.00
17.53	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 1.55m and depth upto 8.0m (2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.53.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each manhole	50,900.00
17.53.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	12,750.00
17.54	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 1.75m and depth upto 8.0m (2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot		

Code No	Description	Unit	Rate Rs.
	steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.54.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each manhole	56,700.00
17.54.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	14,050.00
17.55	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 2.0m and depth upto 12.0m (2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.55.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each manhole	66,900.00
17.55.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	16,100.00
17.55.3	Providing and constructing extra depth of manhole for depth beyond 8.0 m and upto 12.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	18,500.00
17.56	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 2.2m and depth upto 12.0m (2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole,		

Code No	Description	Unit	Rate Rs.
	conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.56.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each manhole	75,600.00
17.56.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	17,400.00
17.56.3	Providing and constructing extra depth of manhole for depth beyond 8.0 m and upto 12.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	20,100.00
17.57	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 2.4m and depth upto 12.0m (2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 360 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC footsteps of approved make at every 0.34m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 330mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.57.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each	85,000.00
17.57.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	18,750.00
17.57.3	Providing and constructing extra depth of manhole for depth beyond 8.0 m and upto 12.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	21,300.00
17.58	Providing and constructing of pre-cast RCC M-40 grade circular circular manholes with internal dia 0.56m and depth upto 0.90 m, including concreting PCC M-10 grade (1:3:6) for 225mm thick foundation including curing compaction and foRM work etc complete, PCC M15 for benching and channel portion, PCC M15 for fixing the manhole frame and cover using stone aggregate 20mm Nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and roof. Supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note-Only Excavation work will be measured and paid separately	each	8,360.00

Code No	Description	Unit	Rate Rs.
17.59	Providing, fixing and constructing of pre-cast RCC M-40 grade circular manholes with internal dia 1.0m and up to specified depth having pre-cast RCC M-40 grade circular manhole cover frame (ID 0.56m, OD 0.92m), conical piece (top ID 0.56m, bottom ID 1.0m, vertical height 0.805m, wall thickness 125mm), and circular rings of required heights (ID 1.0m, height 150/225/300/600 mm, wall thickness 125mm) below conical piece as per required depth of manhole and having steel reinforcement in conical piece @ not less than 80 kg per cum of concrete, including cast-in-situ PCC M-10 grade (1:3:6) foundation of 1.625m dia and 150mm thickness, PCC M15 grade circular wall ID 0.925m, wall thickness 200mm, height equal to ID of sewer pipe + one wall thickness of pipe + 50 mm (to flush the manhole frame with road top, height of wall can be increased but not more than 100mm), PCC M15 grade benching and channel portion and up to top level of sewer pipe etc complete with curing compaction and form work, supplying and fixing heavy duty SFRC manhole cover as per IS 12592 (Part I and II), supplying and fixing plastic encapsulated CI/MS foot steps / SFRC foot steps, including cost of shuttering, steel reinforcement, testing for water tightness etc. complete in all respect as per drawing, as per specification and the direction of the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.59.1	Pre-cast RCC M-40 grade circular manhole conical piece with inbuilt cover and frame (height 0.805), cast-in-situ PCC M-10 grade foundation, PCC M15 grade circular wall ID 0.925m, wall thickness 200mm, wall height equal to ID of sewer pipe + one wall thickness of pipe + 50 mm, PCC M15 grade benching and channel portion. Depth of manhole shall be measured from top of manhole cover upto lowest invert of pipe. (Depth includes in the item = height of Conical piece + ID of Sewer pipe + 1 Wall thickness of pipe + 50mm)	Each manhole	13,700.00
17.59.2	Providing and fixing pre-cast RCC M-40 grade circular ring of ID 1.0m, wall thickness 125mm, height 150/225/300/600 mm for constructing extra depth of manhole beyond depth mentioned in item no-17.59.1 as per drawing.	metre	6,780.00
17.60	Providing, fixing and constructing of pre-cast RCC M-40 grade circular manholes with internal dia 1.2m and up to specified depth having pre-cast RCC M-40 grade circular manhole cover frame (ID 0.56m, OD 0.92m), conical piece (top ID 0.56m, bottom ID 1.2m, vertical height 1.005m, wall thickness 125mm), and circular rings of required heights (ID 1.2m, height 150/225/300/600/900mm, wall thickness 125mm) below conical piece as per required depth of manhole and having steel reinforcement in Conical piece @ not less than 80 kg per cum of concrete, including cast-in-situ PCC M-10 grade (1:3:6) foundation of 1.825m dia and 150mm thickness, PCC M15 grade circular wall ID 1.125m, wall thickness 200mm, height equal to ID of sewer pipe + one wall thickness of pipe + 50 mm (to flush the manhole frame with road top, height of wall can be		

Code No	Description	Unit	Rate Rs.
	increased but not more than 100mm), PCC M15 grade benching and channel portion and up to top level of sewer pipe etc complete with curing compaction and form work, supplying and fixing heavy duty SFRC manhole cover as per IS 12592 (Part I and II), supplying and fixing plastic encapsulated CI/MS footsteps / SFRC footsteps, including cost of shuttering, steel reinforcement, testing for water tightness etc complete in all respect as per drawing, as per specification and the direction of the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.60.1	Pre-cast RCC M-40 grade circular manhole conical piece with inbuilt cover and frame (height 1.005), cast-in-situ PCC M-10 grade foundation, PCC M15 grade circular wall ID 1.125m, wall thickness 200mm, wall height equal to ID of sewer pipe + one wall thickness of pipe + 50 mm, PCC M15 grade benching and channel portion. Depth of manhole shall be measured from top of manhole cover upto lowest invert of pipe. (Depth includes in the item = height of Conical piece + ID of Sewer pipe + 1 Wall thickness of pipe + increased height of wall (if any) + 50mm)	Each manhole	17,250.00
17.60.2	Providing and fixing pre-cast RCC M-40 grade circular ring of ID 1.2m, wall thickness 125mm, height 150/225/300/600/900mm for constructing extra depth of manhole beyond depth mentioned in item no-17.60.1 as per drawing.	metre	7,590.00
17.61	Providing, fixing and constructing of pre-cast RCC M-40 grade circular manholes with internal dia 1.5m and up to specified depth having pre-cast RCC M-40 grade circular manhole cover frame (ID 0.56m, OD 0.92m), conical piece (top ID 0.56m, bottom ID 1.5m, vertical height 1.305m, wall thickness 125mm), and circular rings of required heights (ID 1.5m, height 150/225/300/600/900/1200 mm, wall thickness 125mm) below conical piece as per required depth of manhole and having steel reinforcement in conical piece @ not less than 80 kg per cum of concrete, including cast-in-situ PCC M-10 grade (1:3:6) foundation of 2.125m dia and 150mm thickness, PCC M15 grade circular wall ID 1.425 m, wall thickness 200mm, height equal to ID of sewer pipe + one wall thickness of pipe + 50 mm (to flush the manhole frame with road top, height of wall can be increased but not more than 100mm), PCC M15 grade benching and channel portion and up to top level of sewer pipe etc complete with curing compaction and form work, supplying and fixing heavy duty SFRC manhole cover as per IS 12592 (Part I and II), supplying and fixing plastic encapsulated CI/MS footsteps / SFRC footsteps, including cost of shuttering, steel reinforcement, testing for water tightness etc complete in all respect as per drawing, as per specification and the direction of the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		

Code No	Description	Unit	Rate Rs.
17.61.1	Pre-cast RCC M-40 grade circular manhole conical piece with inbuilt cover and frame (height 1.305), cast-in-situ PCC M-10 grade foundation, PCC M15 grade circular wall ID 1.425m, wall thickness 200mm, wall height equal to ID of sewer pipe + one wall thickness of pipe + 50 mm, PCC M15 grade benching and channel portion. Depth of manhole shall be measured from top of manhole cover upto lowest invert of pipe. (Depth includes in the item = height of Conical piece + ID of Sewer pipe + 1 Wall thickness of pipe + increased height of wall (if any) + 50mm)	Each manhole	23,100.00
17.61.2	Providing and fixing pre-cast RCC M-40 grade circular ring of ID 1.5m, wall thickness 125mm, height 150/225/300/600/900/1200mm for constructing extra depth of manhole beyond depth mentioned in item no-17.61.1 as per drawing.	metre	8,980.00
17.62	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910, on 12 mm dia steel bar conforming to IS: 1786, having minimum cross section as 23 mmx25mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes while casting in RCC manhole and with 30x20x15 cm cement concrete block 1:3:6 in brick/RR stone manhole complete as per design.	each	436.50
17.63	Providing, fixing of Plastic HDPE Circular Manhole Chamber made from 100% virgin UV Stabilized special rotomoulding grade Polyethylene (PE) material having internal diameter of 1000mm, shall provide access for cleaning and inspection, to be used in sewers for gravity system. Chamber shall be made as per EN 13598-2 for use in non- pressure underground sewerage system. It shall be used for receiving / connecting solid wall plain surface (PVC, uPVC, HDPE) or structured wall corrugated DWC) pipes or CI/FRP/CLAY/PP/RCC, etc. by use of appropriate transition adaptors. Chamber shall have a base and riser shaft of 1000mm internal diameter and top cone with cover opening of internal diameter of 600mm and height adjustment of minimum 450mm. Chambers shall be provided with arrangement for 4 nos. connections at the base and shall be designed to receive / connect various diameter pipes. Chamber shaft also shall be designed to receive / connect anywhere at the shaft level. Chamber base / shaft shall receive maximum of pipe having OD of 715mm. Chamber shall have integrated base benching. The riser shaft outside shall be reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 55mm to enhance the products resistance to compression and anchoring in the soil. These ribs shall provide lift-retention system in case of ground water. Chamber shall have moulded-in PE manhole steps. In order for a person to step down		

Code No	Description	Unit	Rate Rs.
	safely the steps shall be provided at vertical distance of 250mm and the minimum width and depth of each step shall be 300mm and 125mm respectively. These steps shall be able to take a vertical load of 2kN and pull-out resistance of 1kN. Chamber shall be placed on PCC M-10 grade (1:4:8) 150mm thick, 1200mm dia foundation, etc. complete with curing, compaction and form work, supplying and fixing heavy duty SFRC manhole cover as per IS 12592 (Part I and II) complete in all respect including testing for water tightness (including the cost of RCC load distribution ring and SFRC manhole frame and cover) as per specification and the direction of the Engineer. Note: Excavation of earth work, road cutting and non-cohesive backfilling material (quarry dust / rock sand, etc., depending on native soil condition), compaction, etc. for manhole will be measured and paid separately).		
17.63.1	HDPE circular manholes 1000mm ID, 2000mm deep to invert with HDPE conical piece and bottom piece, Cast-in-situ PCC M-10 grade foundation.	each	58,500.00
17.63.2	Providing and fixing HDPE circular column extension piece of dia 1000mm ID and height 250mm/500mm/1000mm each in HDPE manhole for making extra depth beyond 2000mm as per drawing and direction of Engineer.	metre	26,900.00
17.64	Providing, fixing of Plastic HDPE Circular Manhole Chamber made from 100% virgin UV Stabilized special rotomoulding grade Polyethylene (PE) material having internal diameter of 1200mm, shall provide access for cleaning and inspection, to be used in buried sewers for gravity system. Chamber shall be made as per EN 13598-2 for use in non- pressure underground drainage and sewerage system. It shall be used for receiving / connecting solid wall plain surface (PVC, uPVC, HDPE) or structured wall corrugated (DWC) pipes or CI/FRP/CLAY/PP/RCC, etc. by use of appropriate transition adaptors. Chamber shall have a base and riser shaft of 1200mm internal diameter and top cone with cover opening of internal diameter of 600mm and height adjustment of minimum 450mm. Chambers shall be provided with arrangement for 4 nos. connections at the base and shall be designed to receive / connect various diameter pipes. Chamber shaft also shall be designed to receive / connect anywhere at the shaft level. Chamber base / shaft shall receive maximum of pipe having OD of 1200mm. Chamber shall have integrated base benching. The riser shaft outside shall be reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 55mm to enhance the products resistance to compression and anchoring in the soil. These ribs shall provide lift-retention system in case of ground water. Chamber shall have moulded-in PE manhole steps. In order for a person to step down safely the steps shall be provided at vertical distance of 250mm and the minimum width and depth of each step shall be 300mm and 125mm respectively. These steps shall be able to take a vertical load of 2kN and pull-out resistance of 1kN. Chamber shall be placed		

Code No	Description	Unit	Rate Rs.
	on PCC M-10 grade (1:4:8) 150mm thick, 1400mm dia foundation, etc. complete with curing, compaction and form work, supplying and fixing heavy duty SFRC manhole cover as per IS 12592 (Part I and II) complete in all respect including testing for water tightness (including the cost of RCC load distribution ring and SFRC manhole frame and cover) as per specification and the direction of the Engineer. {Note: Excavation of earth work, road cutting and non-cohesive backfilling material (quarry dust / rock sand, etc., depending on native soil condition)}, compaction, etc. for manhole will be measured and paid separately).		
17.64.1	HDPE circular manholes 1200mm ID, 2000mm deep to invert with HDPE conical piece and bottom piece, Cast-in-situ PCC M-10 grade foundation.	each	67,200.00
17.64.2	Providing and fixing HDPE circular column extension piece of dia 1200mm ID and height 250mm/500mm/1000mm each in HDPE manhole for making extra depth beyond 2000mm as per drawing and direction of Engineer.	metre	31,200.00
17.65	Construction of brick masonry cylindrical road side inspection chamber of 450mm dia (internal) with 230mm thick wall of brick masonry (75 class designation brick) in cement mortar 1:4 (1 cement : 4 coarse sand), wall 230mm thick, filling of Jhiri, 20mm thick inside and outside plastering with CM (1:3), inside plaster finished with neat coat of cement, with cast in situ PCC M10 grade foundation of 1010 mm dia and 100 mm thickness, 75mm thick PCC M15 flooring, precast SFRC/RCC circular 450mm dia MD manhole frame and cover (as per IS 12592 amended upto date) embedded in 200mm thick PCC M20 grade concrete, including providing and fixing 2 Nos 110mm OD, 0.5m long PVC-U pipe pieces of stiffness class SN 8 as per IS 15328 and plugging the same, testing for water tightness etc. complete as per approved drawing and/or directed by Engineer. Note: Excavation of earth work and road cutting will be measured and paid separately		
17.65.1	BM Road side inspection chamber of 450mm depth	each	5,460.00
17.65.2	BM Road side inspection chamber of 600mm depth	each	6,080.00
17.65.3	BM Road side inspection chamber of 900mm depth	each	7,310.00
17.66	Construction of stone masonry cylindrical road side inspection chamber of 450mm dia (internal) with 300mm thick wall of stone masonry in cement mortar 1:4 (1 cement : 4 coarse sand), filling of Jhiri, 20mm thick inside and outside plastering with CM (1:3), inside plaster finished with neat coat of cement, with cast in situ PCC M10 grade foundation of 1150 mm dia and 100 mm thickness,, 75mm thick PCC M15 flooring, precast SFRC/RCC circular 450mm dia MD manhole frame and cover (as per IS 12592 amended upto date) embedded in 200mm thick PCC M20 grade concrete, including providing and fixing 2 Nos 110mm OD, 0.5m long PVC-U pipe pieces of stiffness class SN 8 as per IS 15328 and plugging the same, testing for water tightness etc. complete as per approved		

Code No	Description	Unit	Rate Rs.
	drawing and/or directed by Engineer. Note: Excavation of earth work and road cutting will be measured and paid separately		
17.66.1	SM Road side inspection chamber of 450mm depth	each	6,210.00
17.66.2	SM Road side inspection chamber of 600mm depth	each	6,930.00
17.66.3	SM Road side inspection chamber of 900mm depth	each	8,370.00
17.67	Constructing providing and fixing of pre-cast RCC M-40 grade circular Road Side Inspection Chamber including earthwork with following dia and depth cylindrical piece with 100mm wall thickness, inbuilt 100mm thick base slab, inbuilt cover & frame on top, provision for 110mm OD in and out sewer connection with making proper inbuilt benching and channel with PCC M-15 grade including providing cast-in-situ 100mm thick base foundation of PCC M-10 grade, supplying and fixing circular precast SFRC Circular 300 / 450 mm dia manhole cover with frame MD-10 (as per IS-12592 amended upto date), including steel reinforcement minimum @ 80kg/cum, testing for water tightness complete in all respect as per drawing, specification and the direction of the Engineer.		
17.67.1	Pre-cast Road side inspection chamber of 300mm dia (internal), 450mm depth and 600mm dia base foundation	each	4,430.00
17.67.2	Pre-cast Road side inspection chamber of 450mm dia (internal), 600mm depth and 750mm dia base foundation	each	6,080.00
17.67.3	Pre-cast Road side inspection chamber of 450mm dia (internal), 900mm depth and 750mm dia base foundation	each	7,330.00
17.68	Providing, fixing of Plastic HDPE Circular Inspection Chamber made from 100% virgin UV Stabilized special rotomoulding grade Polyethylene (PE) material having internal diameter of 600mm, shall provide access for cleaning and inspection, to be used in buried sewers for gravity system. Chamber shall be made as per EN 13598-1 for use in non- pressure underground sewerage system. It shall be used for receiving / connecting solid wall plain surface (PVC, uPVC, HDPE) or structured wall corrugated DWC) pipes or CI/FRP/CLAY/PP/RCC, etc. by use of appropriate transition adaptors; and/or for changing the direction of drainage / sewerage runs. Chamber shall have a base and riser shaft of internal diameter 600mm. Chambers shall be provided with arrangement for 4 nos. connections at the base and shall be designed to receive / connect various diameter pipes. Chamber shaft also shall be designed to receive / connect anywhere at the shaft level. Chamber base / shaft shall receive maximum of pipe having OD of 315mm. Chamber shall have integrated base benching. The riser shaft outside shall be reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 40mm to enhance the products resistance to compression and anchoring in the soil. These ribs shall provide lift-retention system in case of ground water. Chamber shall be placed on PCC M-10 grade (1:4:8) 150mm thick, 800mm dia foundation, etc. complete with curing, compaction and form work, supplying and fixing heavy duty SFRC manhole cover as per IS 12592 (Part I and		

Code No	Description	Unit	Rate Rs.
	II) complete in all respect including testing for water tightness (including the cost of RCC load distribution ring and SFRC manhole frame and cover) as per specification and the direction of the Engineer. {Note: Excavation of earth work, road cutting and non-cohesive backfilling material (quarry dust / rock sand, etc., depending on native soil condition)}, compaction, etc. for manhole will be measured and paid separately).		
17.68.1	HDPE Road side inspection chamber of 500 mm depth	each	8,850.00
17.68.2	HDPE Road side inspection chamber of 750 mm depth	each	12,250.00
17.68.3	HDPE Road side inspection chamber of 1000 mm depth	each	16,000.00
17.68.4	HDPE Road side inspection chamber of 1200 mm depth	each	19,500.00
17.68.5	HDPE Road side inspection chamber of 1500 mm depth	each	23,000.00
17.69	Providing and making connection to the manhole/ road side chamber/ property chamber by cutting hole in wall, making good the same with brick work/ stone masonry work in cement mortar 1:4, plaster in cement mortar 1:3, encasement of pipe at manhole with 75mm thick M15 grade concrete etc complete as directed by Engineer.	each	938.00
17.70	Providing PVC-U pipes as per IS 15328 drop connection externally for depth from 0.60 m and upto 1.0 m drop from branch sewer line to main sewer manhole or vice versa including inspection and cleaning eye, PVC-U drop pipe and bend encased around with cement concrete M15 with all form work, cutting holes in walls and making good with brick/ stone masonry work in cement sand mortar 1:4 plastered with cement sand mortar 1:3 with stiff cement mortar 1:1 around PVC-U pipe in masonry wall, making required channels complete as per standard design and specifications and/ or as the directed of the Engineer:		
17.70.1	110mm dia	each	6,210.00
17.70.2	160mm dia	each	9,900.00
17.70.3	200mm dia	each	13,300.00
17.70.4	250mm dia	each	20,700.00
17.70.5	315mm dia	each	31,600.00
17.70.6	350mm dia	each	32,500.00
17.70.7	400mm dia	each	35,100.00
17.70.8	500mm dia	each	37,900.00
17.70.9	700mm dia	each	41,400.00
17.71	Extra for additional drop depth of PVC-U pipes as per IS 15328 drop connection beyond 1.0 m complete as per standard specification and the direction of the Engineer. (To be paid for actual depth beyond 1.0 m)		
17.71.1	110mm dia	metre	1,660.00

Code No	Description	Unit	Rate Rs.
17.71.2	160mm dia	metre	2,190.00
17.71.3	200mm dia	metre	2,750.00
17.71.4	250mm dia	metre	3,380.00
17.71.5	315mm dia	metre	5,070.00
17.71.6	350mm dia	metre	5,380.00
17.71.7	400mm dia	metre	5,550.00
17.71.8	500mm dia	metre	5,770.00
17.71.9	700mm dia	metre	6,710.00
17.72	Providing, fixing and erecting precast RCC (M20) Vent shaft with cowl, 125mm and 225mm internal and external dia respectively at top, 300mm and 450mm internal and external dia at bottom and 9.0m over all length, bottom 1.175m below ground level fixed in the pit 900mmx900mmx1500mm with PCC M15, 250mm in bed and minimum 200mm all around with top 150mm in PCC M15 with 20mm nominal size graded stone aggregate , junction of vent shaft and concrete grouted with cement mortar 1: including making connection with sewer manhole with 150mm dia NP4 RCC pipe (IS 458-amended upto date) as required including Type-A bedding complete as per standard design and finished with water proofing cement of approved brand as per drawings and/or as directed by Engineer. Note : Only Excavation work will be measured and paid separately	each	30,400.00
17.73	Construction of House Sewer Connection inside and outside of a dwelling properties to connect all the outlets of Kitchen, Bath, toilet/WC of the property to existing inspection chamber of Sewer Network, which includes Door-to-door survey of all properties to be connected with Sewer Network, Preparation of sketch / drawing of arrangement for each house with all the details and obtain approval from Engineer In charge or his representative and Preparation of as built drawing (Layout plan) in AutoCAD for each property / dwelling connection with sewer network up to manhole. Including Dismantling of all type of flooring and roads, i.e. BT/CC/WMM/interlocking block etc with mechanical cutter. Including Required Excavation of pipe trench/chamber in all type of strata of specified width up to all depth, Providing, laying, jointing and aligning of PVC-U pipes (SN-8) as per 15328 (amended up to date) / HDPE DWC (double wall corrugated) pipes of SN-8 grade as per IS 16098 (amended up to date) with required PVC/ DWC fittings with required level & location in buried position over bedding of 50 mm thick M-10 grade and in open position above ground/floor with an encasing of pipe 50 mm cover at 3 sides with M10 grade concrete, Providing, laying, jointing and aligning 160 mm dia PVC-U pipes (SN-8) as per IS15328 (Amended up to date) providing as sleeve to 110 mm dia PVC-U pipes / HDPE DWC (double wall corrugated) pipes (exposed to atmosphere) for crossing open drains, demolishing, If required and reconstruction of drain in		

Code No	Description	Unit	Rate Rs.
	original position with PCC M-10, Brick work with modular extruded burnt fly ash clay sewer bricks (Conforming to IS: 4885 - 1988) in CM 1:4, 12 mm thick plaster in CM 1:3 and Construction of 2 Nos brick masonry chamber of bricks class designation 75 of 115 mm wall thickness in cement mortar 1:4, clear inside dimension 320 x 320 x 550 mm, 50 mm thick base PCC 1:3:6, providing & fixing 350 x 350 mm RCC precast cover with frame of LD-2.5, earth filling in gaps, finishing with PCC 1:3:6 inside the chamber, Chamber-1 with square mouth S.W. gulley trap P-type of size 100 x 100 mm as per IS 651: 1992 (amended up to date) with CI grating, in slope around the mouth of Gulley Trap including provision for fixing of 2 nos. 110 mm dia PVC-U pipe etc. to connect a single inlet after connecting all the outlets of kitchen & bath & outlet of this chamber will connect to Chamber-2 or inspection chamber and the Chamber-2 with a provision for fixing of 2 nos. 110 mm dia PVC-U pipe etc. i.e. a single inlet after connecting all outlets of toilet & WC of premises to exiting Inspection chamber, Emptying of septic tank/soakage well etc. disposing of sludge within a lead of 5 Km and taking out the sewage, Bypass of septic tank/soakage well by providing, laying, jointing of 110 mm dia PVC-U pipes for all length from inlet to outlet, including PVC coupler, MS clamp and dismantling, repairing, making good the holes etc, Making connection with 110 mm dia PVC-U pipe with exiting inspection chamber (including making holes in Inspection Chamber) for pipes coming out from inside property and Chamber 1/2, making and repairing holes with CM in 1:4, repairing of floor and road with CC M-30 grade same as original thickness of floor and road, watering, backfilling, compaction and disposal of all surplus material and sewage etc. to a suitable location with all lead and lift, repairing of underground utilities, if damaged, Complete job to connect a dwelling premises to sewer network including all material, labour, taxes, charges etc. as per Specifications, drawing and directions of Engineer In charge		
17.73.1	Length up to 5 m	each	8,000.00
17.73.2	Length more than 5 m and upto 10 m	each	10,400.00
17.73.3	Length more than 10 m and upto 15 m	each	13,050.00
17.74	Temporary bypassing of sewer including Plugging the mouth of pipe/s inside sewer manhole using suitable plugging system and installation of bypass arrangement for bypassing the sewage flow, including, but not limited, to pumps, pipes, connections, couplings, electrical accessories, support traffic diversions arrangements etc. including desilting of manholes, disposal of debris as per the instructions of Engineer-in-Charge and keeping the manhole free from seepage and removal of bypass by unplugging the mouth of pipe inside sewer manhole and removal of by pass system and making the sewer system operational including all labour, Machinery, material, taxes etc. as per the specifications and directions of the Engineer.		

Code No	Description	Unit	Rate Rs.
17.74.1	For manholes of pipes upto 1200 mm dia	per manhole	60,500.00
17.74.2	For Manholes of above pipes from 1200 mm dia and upto 1500 mm dia	per manhole	97,300.00
17.74.3	For manholes of pipes above 1500 mm dia and upto 1800 mm	per manhole	1,19,000.00
17.75	Raising circular brick/RR stone masonry manhole with circular opening 560mm dia and frame slab to required level including dismantling existing slab, taking out the existing CI frame & cover of manhole and raising it upto ground/ road level, refixing of frame and cover in M15 (1:2:4) concrete all around the frame, including making good the damage, form work, curing, complete as directed by Engineer. (Brick work / RR stone work of raising depth of manhole to be paid separately)	each	570.00
17.76	Raising circular inspection chamber with circular cover 450mm dia and frame slab to required level including dismantling existing slab, taking out the existing CI frame & cover of inspection chamber and raising it upto ground/ road level, refixing of frame and cover in M15 (1:2:4) concrete all around the frame, including making good the damage, form work, curing, complete as directed by Engineer. (Brick/ concrete work of raising depth of manhole to be paid separately)	each	323.50
17.77	Raising precast circular manhole cover and frame by taking out existing precast frame and cover, providing and fixing precast SFRC circular spacer of required height, re-fixing existing manhole cover frame and cover with cement sand mortar (1:3), including making good the damage, complete as directed by Engineer.	each	1,828.00
17.78	Lowering of circular brick / RR stone masonry manhole with circular opening 560mm dia and frame slab to required level including dismantling existing slab and manhole wall, taking out the existing CI frame & cover of manhole and lowering it upto ground/ road level, refixing of frame and cover in M15 (1:2:4) concrete all around the frame, including making good the damage, form work, curing, complete as directed by Engineer. (Dismantling of brick work / RR stone work depth of manhole to be paid separately)	each	570.00
17.79	Lowering of circular inspection chamber with circular cover 450mm dia and frame slab to required level including dismantling existing slab and inspection chamber wall, taking out the existing CI frame & cover of inspection chamber and lowering it upto ground/ road level, refixing of frame and cover in M15 (1:2:4) concrete all around the frame, including making good the damage, form work, curing, complete as directed by Engineer. (Dismantling of brick/ concrete work depth of manhole to be paid separately)	each	323.50

Code No	Description	Unit	Rate Rs.
17.80	Supplying & fixing 560mm dia opening SFRC manhole frame & cover as per IS : 12592-2002 in existing manholes including grouting the frame in PCC M-15 complete in all respect as directed by the Engineer.		
17.80.1	HD-20	each	2,685.00
17.80.2	EHD-35	each	3,005.00
17.81	Supplying & fixing 560mm opening dia SFRC manhole cover as per IS : 12592-2002 in existing manholes frame complete in all respect as directed by the Engineer.		
17.81.1	HD-20	each	1,407.00
17.81.2	EHD-35	each	1,724.00
17.82	Supplying and fixing of 560 mm opening dia Ductile Iron manhole frame & cover, Hinged Type, Heavy Duty with test load of 400 KN, class D-400 as per BS EN 124, in existing manholes including grouting the frame in PCC M-15 complete in all respect as directed by the Engineer.	set	6,510.00
17.83	Extra for supplying and fixing of 560 mm opening dia Ductile Iron manhole frame & cover, Hinged Type, Heavy Duty with test load of 400 KN, class D-400 as per BS EN 124, in place of RCC/ SFRC manhole frame & cover (ED/EHD) in manhole.	each	3,710.00
17.84	Supplying and fixing of approved brand composite fiberglass reinforced polymer manhole cover with frame 560mm opening Dia (circular) confirming to BSEN – 124 : 1994 of specified load capacity including grouting. Top shall have abrasion resistant layer of decorative grey granite finish. It shall also confirm “permanent Set” criterion as per BSEN 24. Product should be tested MSME accredited test lab for load capacity and permanent set as per IS - 1726.		
17.84.1	HD - 20 Ton	each	7,980.00
17.84.2	EHD - 35 Ton	each	9,630.00
17.85	Emptying of domestic septic tank/ soakage well etc, disposing of sludge within a lead of 5km and taking out sewage by mechanical means including refilling with local earth, ramming and compaction in layers, cleaning of site.	each	4,630.00
17.86	Emptying of septic tank/ soakage well etc, disposing of sludge within a lead of 5km and taking out sewage & sludge	each	1,392.00
17.87	Supply and Pushing of MS casing pipe of specified thickness by trenchless method adopting micro-tunnelling or any suitable mechanical technology or technology approved by Railway below ground at all depth under running traffic condition as per railway standard including carrying out survey work at the job site for determining underground cable trenches like telephone, cable, water & sanitary lines and resistivity test for finding the soil strata using necessary equipment's for completion of works, mobilizing of		

Code No	Description	Unit	Rate Rs.
	machineries and specialized crew at the job site complete in all respect, including excavation of driven pit and exit pit (upto 3 metre depth) with proper protection at three sites with shoring sheets and ISMB's. Providing MS cutting edges for front shield and Constructing thrust bed at designated level. Necessary de-watering and providing concrete foundation at the base of the driven pit, PVC/Rubber saddle as per the requirement of Railway Authority, crane for handing of pipe and any other machinery, tools, and tackles required, construction of temporary works as per requirement and as per approved by railway authorities, specification and the direction of the Engineer. (Protective coating/ lining if done that will be paid extra) Note- 1. Manual Pipe jacking is not permitted for workmen safety reasons. 2. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.87.1	In all type of soils		
17.87.1.1	600 mm dia 12 mm thick casing pipe	Metre	42,200.00
17.87.1.2	700 mm dia 12 mm thick casing pipe	Metre	52,300.00
17.87.1.3	800 mm dia 12 mm thick casing pipe	Metre	56,600.00
17.87.1.4	900 mm dia 12 mm thick casing pipe	Metre	60,900.00
17.87.1.5	1000 mm dia 14 mm thick casing pipe	Metre	80,900.00
17.87.1.6	1100 mm dia 16mm thick casing pipe	Metre	94,000.00
17.87.1.7	1200 mm dia 16mm thick casing pipe	Metre	99,700.00
17.87.1.8	1400 mm dia 20mm thick casing pipe	Metre	1,42,500.00
17.87.1.9	1600 mm dia 22 mm thick casing pipe	Metre	1,68,600.00
17.87.1.10	1800 mm dia 22 mm thick casing pipe	Metre	1,89,000.00
17.87.1.11	2000 mm dia 22 mm thick casing pipe	Metre	2,04,800.00
17.87.2	In Rock		
17.87.2.1	600 mm dia 12 mm thick casing pipe	Metre	1,76,200.00
17.87.2.2	700 mm dia 12 mm thick casing pipe	Metre	2,00,500.00
17.87.2.3	800 mm dia 12 mm thick casing pipe	Metre	2,04,800.00
17.87.2.4	900 mm dia 12 mm thick casing pipe	Metre	2,09,100.00
17.87.2.5	1000 mm dia 14 mm thick casing pipe	Metre	2,70,800.00
17.87.2.6	1100 mm dia 16mm thick casing pipe	Metre	2,83,900.00
17.87.2.7	1200 mm dia 16mm thick casing pipe	Metre	2,89,600.00
17.87.2.8	1400 mm dia 20mm thick casing pipe	Metre	3,99,700.00
17.87.2.9	1600 mm dia 22 mm thick casing pipe	Metre	4,47,800.00
17.87.2.10	1800 mm dia 22 mm thick casing pipe	Metre	4,93,500.00
17.87.2.11	2000 mm dia 22 mm thick casing pipe	Metre	5,09,300.00

Code No	Description	Unit	Rate Rs.
17.88	Providing, laying and jointing RCC NP4 jacking pipe (with steel pushing collar) with suitable leak proof joints (with using 12mm MDF sheets etc.) with compliance for maintaining slope as per design by trenchless method adopting Micro tunnelling method or any suitable mechanical technology below ground at all depth under running traffic condition including carrying out survey work at the job site for determining underground cable trenches like telephone, power cable, water & sanitary lines and resistivity tests for finding the soil strata using necessary equipment's for completion of work, mobilizing of machineries and specialized crew at the job site, etc. complete in all respects, including excavation of drive pit and exit pit (upto 3 metre depth) with proper protection at the three sides, providing and casting of MS cutting edges for front shield and constructing thrust bed at designed level as directed by the Engineer, necessary de-watering and providing concrete foundations at the base of the Drive pit, crane for handling of pipes, and any other machinery, tool & tackles required, construction of temporary works as per requirement complete in all respect (all depths) with all lead and lifts, as per specification and the direction of the Engineer. Note- 1. Manual Pipe jacking is not permitted for workmen safety reasons. 2. Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers. Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable.		
17.88.1	In all type of soils including mixed starta / soil		
17.88.1.1	150 mm dia RCC pipe	Metre	14,300.00
17.88.1.2	200 mm dia RCC pipe	metre	14,700.00
17.88.1.3	250 mm dia RCC pipe	metre	15,500.00
17.88.1.4	300 mm dia RCC pipe	metre	16,350.00
17.88.1.5	350 mm dia RCC pipe	metre	18,200.00
17.88.1.6	400 mm dia RCC pipe	metre	18,850.00
17.88.1.7	450 mm dia RCC pipe	metre	19,900.00
17.88.1.8	500 mm dia RCC pipe	metre	22,000.00
17.88.1.9	600 mm dia RCC pipe	metre	23,600.00
17.88.1.10	700 mm dia RCC pipe	Metre	31,300.00
17.88.1.11	800 mm dia RCC pipe	Metre	34,100.00
17.88.1.12	900 mm dia RCC pipe	Metre	35,500.00
17.88.1.13	1000 mm dia RCC pipe	Metre	45,300.00
17.88.1.14	1100 mm dia RCC pipe	Metre	47,400.00
17.88.1.15	1200 mm dia RCC pipe	Metre	49,800.00
17.88.1.16	1400 mm dia RCC pipe	Metre	68,000.00

Code No	Description	Unit	Rate Rs.
17.88.1.17	1600 mm dia RCC pipe	Metre	72,800.00
17.88.1.18	1800 mm dia RCC pipe	Metre	87,400.00
17.88.1.19	2000 mm dia RCC pipe	metre	1,01,100.00
17.88.2	In Rock		
17.88.2.1	150 mm dia RCC pipe	Metre	96,300.00
17.88.2.2	200 mm dia RCC pipe	metre	96,700.00
17.88.2.3	250 mm dia RCC pipe	metre	97,500.00
17.88.2.4	300 mm dia RCC pipe	metre	98,400.00
17.88.2.5	350 mm dia RCC pipe	metre	1,23,700.00
17.88.2.6	400 mm dia RCC pipe	metre	1,24,300.00
17.88.2.7	450 mm dia RCC pipe	metre	1,25,400.00
17.88.2.8	500 mm dia RCC pipe	metre	1,56,000.00
17.88.2.9	600 mm dia RCC pipe	metre	1,57,600.00
17.88.2.10	700 mm dia RCC pipe	Metre	1,79,500.00
17.88.2.11	800 mm dia RCC pipe	Metre	1,82,300.00
17.88.2.12	900 mm dia RCC pipe	Metre	1,83,700.00
17.88.2.13	1000 mm dia RCC pipe	Metre	2,35,200.00
17.88.2.14	1100 mm dia RCC pipe	Metre	2,37,300.00
17.88.2.15	1200 mm dia RCC pipe	Metre	2,39,700.00
17.88.2.16	1400 mm dia RCC pipe	Metre	3,25,100.00
17.88.2.17	1600 mm dia RCC pipe	Metre	3,51,900.00
17.88.2.18	1800 mm dia RCC pipe	Metre	3,91,900.00
17.88.2.19	2000 mm dia RCC pipe	metre	4,05,600.00
17.89	Providing, jointing, laying, testing and commissioning of HDPE PE-100/PN-6 (suitable for pulling method for jointing) pipes for sewer line as per IS-14333 (amended upto date) with compliance for maintaining slope as per design by trenchless adopting HDD method (Horizontal Directional Drilling) below ground at all depth including carriage etc. complete in all respect, construction of thrust pit and receiving pit of required size upto 3 metre depth and soil investigation, making suitable arrangement for barricading of pits, traffic diversion, lights, traffic permission from relevant authority (though department will assist in getting the permission), refilling of pits in compacted layers of 150 mm including disposal of surplus material with all lift and lead upto 50 metre as per specification and the direction of the Engineer. Note-1 Length of pipe shall be measured in between the outer wall of two manholes / Inspection chambers, Pipe in the manhole/inspection chamber's wall shall deemed to be included in the item of manhole/inspection chamber shall not be payable. Note- 2. Manual Pipe jacking is not permitted for workmen safety reasons.		

Code No	Description	Unit	Rate Rs.
17.89.1	In all types of soil including mixed starta		
17.89.1.1	200 mm outer dia	Metre	4,920.00
17.89.1.2	225 mm outer dia	metre	6,760.00
17.89.1.3	250 mm outer dia	Metre	7,480.00
17.89.1.4	315 mm outer dia	Metre	9,130.00
17.89.1.5	400 mm outer dia	Metre	15,500.00
17.89.1.6	450 mm outer dia	metre	17,300.00
17.89.1.7	500 mm outer dia	Metre	30,600.00
17.89.1.8	630 mm outer dia	Metre	37,400.00
17.89.1.9	800 mm outer dia	Metre	57,700.00
17.89.1.10	900 mm outer dia	Metre	65,600.00
17.89.1.11	1000 mm outer dia	Metre	74,500.00
17.89.2	In all types of rock		
17.89.2.1	200 mm outer dia	Metre	25,700.00
17.89.2.2	225 mm outer dia	Metre	30,000.00
17.89.2.3	250 mm outer dia	Metre	30,700.00
17.89.2.4	315 mm outer dia	Metre	32,300.00
17.89.2.5	400 mm outer dia	Metre	67,000.00
17.89.2.6	450 mm outer dia	Metre	68,800.00
17.89.2.7	500 mm outer dia	Metre	85,600.00
17.89.2.8	630 mm outer dia	Metre	92,400.00
17.89.2.9	800 mm outer dia	Metre	1,26,600.00
17.89.2.10	900 mm outer dia	Metre	1,34,600.00
17.89.2.11	1000 mm outer dia	Metre	1,43,400.00
17.90	Extra for excavation of driven pit/ exit pit / intermediate pit beyond 3 metre depth, required for pushing/ pulling of MS/HDPE/RCC pipe in trenchless technology, with proper protection at three sides with shoring sheets/ wooden planks and ISMB's, maintaining during pushing/ puling of pipe, back filling, necessary de-watering including all machinery, tools, and tackles required as per specification and the direction of the Engineer		
17.90.1	In all types of soil	per pit per metre depth	30,700.00
17.90.2	In rocks	per pit per metre depth	61,500.00

Code No	Description	Unit	Rate Rs.
17.91	Cleaning of RCC / SW / DWC / HDPE pipes and intermediate manholes which includes removal of vegetation, garbage, muck, brick and stone pieces or any type of trash etc. and Flow Test of already laid but not commissioned (including cost and conveyance of water to site, Manpower and machineries deployed) complete in all respect as per direction of Engineer-In-Charge.		
17.91.1	150 mm dia	metre	38.00
17.91.2	200 mm dia	metre	50.50
17.91.3	250 mm dia	metre	52.50
17.91.4	300 mm dia	metre	58.00
17.91.5	400 mm dia	metre	77.50
17.91.6	450 mm dia	metre	84.50
17.91.7	500 mm dia	metre	97.50
17.91.8	600 mm dia	metre	106.00
17.91.9	700 mm dia	metre	149.00
17.91.10	800 mm dia	metre	184.00
17.91.11	900 mm dia	metre	209.00
17.91.12	1000 mm dia	metre	236.00
17.92	Operation & maintenance of sewerage collection & conveyance system (RCC/ HDPE/HDPE DWC pipes) from consumer point to STP complete. (line between property chamber and sewer manhole will not be measured for payment purpose).	Km per month	3,521.00
17.93	Desilting the sewer lines through jetting and suction machines including cleaning, barricading, and reconstruction of manholes for section isolation by plugging and flow stoppage, setting up the over-pumping arrangements, traffic management jetting and dislodging of accumulated silt from the pipelines, removal of silt through suction hose, disposal of removed silt upto a distance of 20 Km, necessary temporary repairs of sewers to stop locational collapses, ingress of ground water in the desilted section of the pipelines all complete as per the specifications and direction of Engineer. Evaluation pipeline condition through inline Closed Circuit Television survey to assess the internal condition and material of the buried pipelines including accurate measurement of the length & diameter / cross section, invert levels and other physical attributes of buried pipelines, identification of all defects, joints and connections, measurement and recording of their location / position, sizes, & conditions of such pipelines including provision of survey report and records of the conditions, both through video recording in PAL format on a new VHS cassette as well as a report on the structural condition of the pipelines as per the specifications and direction of Engineer.		
17.93.1	200 mm dia sewer	metre	325.00
17.93.2	300 mm dia sewer	metre	609.00

Code No	Description	Unit	Rate Rs.
17.93.3	350 mm dia sewer	metre	925.00
17.93.4	450 mm dia sewer	metre	1,154.00
17.93.5	600 mm dia sewer	metre	1,549.00
17.93.6	800 mm dia sewer	metre	1,909.00
17.93.7	900 mm dia sewer	metre	2,251.00
17.93.8	1000 mm dia sewer	metre	2,590.00
17.93.9	1200 mm dia sewer	metre	3,005.00
17.94	Locating buried manholes through magnetic tracking process / appropriate technology in all types of soil conditions by the use of universal precision cable & manhole locator including marking the estimated findings on the plan of the area & making recommendations for related work execution location as per the specifications and direction of Engineer.	each	215.00
17.95	Rehabilitation of existing sewer pipeline by Cured-in-Place Pipe CIPP/ Machine Wound Spiral Lining (MWSL) method including site survey, plugging and flow diversion, cleaning, pre-lining CCTV survey, repair of defects, pre-lining measurements, designing, site preparatory work, installation of impregnated liner airing of liner using hot water/ steam recirculation, post-lining CCTV survey and commissioning and re-storation road and services all inclusive.		
17.95.1	Above 200 upto 500 mm	metre	32,900.00
17.95.2	Above 500 upto 750 mm	metre	42,700.00
17.95.3	Above 750 upto 1000 mm	metre	52,800.00
17.95.4	Above 1000 upto 1250 mm	metre	63,300.00
17.95.5	Above 1250 upto 1500 mm	metre	73,100.00
17.95.6	Above 1500 upto 1750 mm	metre	83,100.00
17.95.7	Above 1750 upto 2000 mm	metre	92,900.00
17.96	Replacement of pipelines through Pneumatic Pipe Bursting process including making of bursting tool entry pits, all related civil works for site preparation, like excavation, shoring/ strutting, maintaining the pits, traffic management etc., flow stoppage by the appropriate stinking methods, bypass pumping, installing the HDPE PE 100 PN-6 pipe, restoring the manholes after replacement pipe installation etc., completion and service reconnection as per the specifications and direction of Engineer.		
17.96.1	200 mm	metre	14,300.00
17.96.2	250 mm	metre	16,500.00
17.96.3	300 mm	metre	19,050.00
17.96.4	350 mm	metre	19,800.00
17.96.5	400 mm	metre	26,500.00

Code No	Description	Unit	Rate Rs.
17.96.6	450 mm	metre	33,800.00
17.96.7	500 mm	metre	36,700.00
17.96.8	600 mm	metre	45,100.00
17.97	Smart Manhole Monitoring System – Providing and installation of smart manhole device with battery powered, LDR and cable float switch water level sensor-based device capable for providing data over GSM/GPRS network to the management system. Device should be capable for continuous monitor of sewer water level in the manhole.	each	35,400.00
17.98	AMC of smart manhole monitoring system per month including change of battery as required excluding cost of replacement of any defective part after warranty period.	each	1,062.00

18.0 STP (Sewage Treatment Plant)

Code No	Description	Unit	Rate Rs.
18.1	Supply delivery at site with necessary packing, receiving, unloading, shifting, storing, installation, testing and commissioning of Non clog submersible pumping set of 2% Ni Cl Cascading, Impeller CF 8M ,Shaft SS 410,mechanical seal with 10M Power & Control cable , 5M Galvanized Chain,,10M, 50mm MS galvanized Guide pipe, Duck Foot Bend, with Guide wire SS 304 etc. complete with all respect as per specification		
18.1.1	Discharge 36 cum/hr and head 8 to 10 M	each	1,51,700.00
18.1.2	Discharge 36 cum/hr and head 11 to 15 M	each	1,51,700.00
18.1.3	Discharge 36 cum/hr and head 16 to 20 M	each	1,51,700.00
18.1.4	Discharge 75 cum/hr and head 8 to 10 M	each	1,63,600.00
18.1.5	Discharge 75 cum/hr and head 11 to 15 M	each	1,63,600.00
18.1.6	Discharge 75 cum/hr and head 16 to 20 M	each	1,63,600.00
18.1.7	Discharge 90 cum/hr and head 8 to 10 M	each	1,68,200.00
18.1.8	Discharge 90 cum/hr and head 11 to 15 M	each	1,68,200.00
18.1.9	Discharge 90 cum/hr and head 16 to 20 M	each	1,68,200.00
18.1.10	Discharge 110 cum/hr and head 8 to 10 M	each	1,68,200.00
18.1.11	Discharge 110 cum/hr and head 11 to 15 M	each	1,68,200.00
18.1.12	Discharge 110 cum/hr and head 16 to 20 M	each	2,78,800.00
18.1.13	Discharge 110 cum/hr and head 21 to 25 M	each	2,78,800.00
18.1.14	Discharge 110 cum/hr and head 26 To 30 M	each	2,78,800.00
18.1.15	Discharge 110 cum/hr and head 31 To 35 M	each	3,84,000.00
18.1.16	Discharge 160 cum/hr and head 8 to 10 M	each	1,68,200.00
18.1.17	Discharge 160 cum/hr and head 11 TO 15 M	each	3,05,800.00
18.1.18	Discharge 160 cum/hr and head 16 TO 20 M	each	3,05,800.00
18.1.19	Discharge 160 cum/hr and head 21 to 25 M	each	3,84,000.00
18.1.20	Discharge 160 cum/hr and head 26 to 30 M	each	4,24,500.00
18.1.21	Discharge 160 cum/hr and head 31 To 35 M	each	6,79,400.00
18.1.22	Discharge 220 cum/hr and head 8 to 10 M	each	3,13,700.00
18.1.23	Discharge 220 cum/hr and head 11 TO 15 M	each	3,43,700.00
18.1.24	Discharge 220 cum/hr and head 16 TO 20 M	each	3,89,300.00
18.1.25	Discharge 220 cum/hr and head 21 TO25 M	each	4,24,500.00
18.1.26	Discharge 220 cum/hr and head 26 to 30 M	each	4,24,500.00

Code No	Description	Unit	Rate Rs.
18.1.27	Discharge 220 cum/hr and head 31 To 35 M	each	6,79,400.00
18.1.28	Discharge 320 cum/hr and head 8 TO 10 M	each	3,43,700.00
18.1.29	Discharge 320 cum/hr and head 11 TO 15 M	each	3,89,300.00
18.1.30	Discharge 320 cum/hr and head 16 TO 20 M	each	4,24,500.00
18.1.31	Discharge 320 cum/hr and head 21 TO 25 M	each	6,79,400.00
18.1.32	Discharge 320 cum/hr and head 26 To 30 M	each	7,11,300.00
18.1.33	Discharge 320 cum/hr and head 31 To 35 M	each	7,86,000.00
18.1.34	Discharge 420 cum/hr and head 8 TO 10 M	each	3,89,300.00
18.1.35	Discharge 420 cum/hr and head 11 TO 15 M	each	4,24,500.00
18.1.36	Discharge 420 cum/hr and head 16 TO 20 M	each	4,24,500.00
18.1.37	Discharge 420 cum/hr and head 21 TO 25 M	each	7,11,300.00
18.1.38	Discharge 420 cum/hr and head 26 To 30 M	each	7,86,000.00
18.1.39	Discharge 420 cum/hr and head 31 To 35 M	each	7,86,000.00
18.1.40	Discharge 490 cum/hr and head 8 TO 10 M	each	6,22,500.00
18.1.41	Discharge 490 cum/hr and head 11 TO 15 M	each	6,47,700.00
18.1.42	Discharge 490 cum/hr and head 16 TO 20 M	each	7,42,600.00
18.1.43	Discharge 490 cum/hr and head 21 TO 25 M	each	7,86,000.00
18.1.44	Discharge 490 cum/hr and head 26 To 30 M	each	7,86,000.00
18.1.45	Discharge 490 cum/hr and head 31 To 35 M	each	13,58,400.00
18.1.46	Discharge 630 cum/hr and head 8 TO 10 M	each	6,47,700.00
18.1.47	Discharge 630 cum/hr and head 11 TO 15 M	each	7,42,600.00
18.1.48	Discharge 630 cum/hr and head 16 TO 20 M	each	7,57,700.00
18.1.49	Discharge 630 cum/hr and head 21 TO 25 M	each	7,86,000.00
18.1.50	Discharge 630 cum/hr and head 26 To 30 M	each	13,58,400.00
18.1.51	Discharge 630 cum/hr and head 31 To 35 M	each	13,58,400.00
18.1.52	Discharge 710 cum/hr and head 8 TO 10 M	each	7,55,200.00
18.1.53	Discharge 710 cum/hr and head 11 TO 15 M	each	8,83,000.00
18.1.54	Discharge 710 cum/hr and head 16 TO 20 M	each	11,20,800.00
18.1.55	Discharge 710 cum/hr and head 21 TO 25 M	each	13,58,400.00
18.1.56	Discharge 710 cum/hr and head 26 To 35 M	each	15,90,600.00
18.1.57	Discharge 840 cum/hr and head 8 TO 10 M	each	7,55,200.00
18.1.58	Discharge 840 cum/hr and head 11 TO 15 M	each	7,55,200.00
18.1.59	Discharge 840 cum/hr and head 16 TO 20 M	each	7,86,000.00
18.1.60	Discharge 840 cum/hr and head 21 TO 25 M	each	13,23,500.00

Code No	Description	Unit	Rate Rs.
18.1.61	Discharge 840 cum/hr and head 26 To 30 M	each	13,93,500.00
18.1.62	Discharge 840 cum/hr and head 31 To 35 M	each	17,38,200.00
18.1.63	Discharge 1050 cum/hr and head 8 TO 10 M	each	8,66,700.00
18.1.64	Discharge 1050 cum/hr and head 11 TO 15 M	each	8,66,700.00
18.1.65	Discharge 1050 cum/hr and head 16 TO 20 M	each	14,71,000.00
18.1.66	Discharge 1050 cum/hr and head 21 TO 25 M	each	15,06,100.00
18.1.67	Discharge 1050 cum/hr and head 26 to 30 M	each	17,38,200.00
18.1.68	Discharge 1050 cum/hr and head 31 To 35 M	each	24,51,000.00
18.1.69	Discharge 1410 cum/hr and head 8 TO 10 M	each	17,29,900.00
18.1.70	Discharge 1410 cum/hr and head 11 TO 15 M	each	18,05,400.00
18.1.71	Discharge 1410 cum/hr and head 16 TO 20 M	each	21,76,100.00
18.1.72	Discharge 1410 cum/hr and head 21 TO 25 M	each	22,01,100.00
18.1.73	Discharge 1410 cum/hr and head 26 to 30 M	each	24,51,000.00
18.1.74	Discharge 1880 cum/hr and head 8 TO 10 M	each	19,44,400.00
18.1.75	Discharge 1880 cum/hr and head 11 TO 15 M	each	22,98,000.00
18.1.76	Discharge 1880 cum/hr and head 16 TO 20 M	each	23,28,500.00
18.1.77	Discharge 1880 cum/hr and head 21 TO 30 M	each	24,51,000.00
18.1.78	Discharge 2350 cum/hr and head 8 TO 10 M	each	22,98,000.00
18.1.79	Discharge 2350 cum/hr and head 11 TO 15 M	each	23,28,500.00
18.1.80	Discharge 2350 cum/hr and head 16 TO 20 M	each	24,51,000.00
18.1.81	Discharge 2350 cum/hr and head 21 TO 25 M	each	24,51,000.00
18.2	Supply, Installation, Testing and Commissioning of Grit Separator Mechanism including Classifier on one side in inclined position and Organic Return pump interconnection pipes, valves and accessories complete in all respect for following PEAK FLOW as per specification and direction of the of Engineer.		
18.2.1	Up to 5 MLD	Set	19,02,500.00
18.2.2	5.1 MLD to 7.5 MLD	Set	19,43,000.00
18.2.3	7.6 MLD to 10 MLD	Set	19,43,000.00
18.2.4	11 MLD to 15 MLD	Set	19,93,500.00
18.2.5	16 MLD to 20 MLD	Set	19,93,500.00
18.2.6	21 MLD to 25 MLD	Set	20,18,800.00
18.2.7	26 MLD to 30 MLD	Set	20,18,800.00
18.2.8	31 MLD to 35 MLD	Set	20,18,800.00
18.2.9	36 MLD to 40 MLD	Set	21,04,900.00
18.2.10	41 MLD to 45 MLD	Set	21,04,900.00

Code No	Description	Unit	Rate Rs.
18.2.11	46 MLD to 50 MLD	Set	21,45,300.00
18.2.12	51 MLD to 55 MLD	Set	21,45,300.00
18.2.13	56 MLD to 60 MLD	Set	21,45,300.00
18.2.14	61 MLD to 65 MLD	Set	21,75,700.00
18.2.15	66 MLD to 70 MLD	Set	21,75,700.00
18.2.16	71 MLD to 75MLD	Set	21,75,700.00
18.2.17	76 MLD to 80 MLD	Set	21,75,700.00
18.2.18	81 MLD to 85 MLD	Set	21,75,700.00
18.2.19	86 MLD to 90 MLD	Set	22,76,900.00
18.2.20	91 MLD to 95 MLD	Set	22,76,900.00
18.2.21	96 MLD to 100 MLD	Set	22,76,900.00
18.3	Supply, fabrication, fixing and Testing of stainless steel (SS-316) Manual Coarse Bar screen with flat bar 50mm X 10mm, Spacing of bars 50mm suitable for mounting in channel of specified size with inclination not more than 45 degree and a movable covered containers of 1 cum capacity complete in all respect as per technical specification and the direction of the Engineer. Manually Raked Coarse Bar Screen with 50 mm clear opening for following PEAK FLOW and upto 3m channel depth.		
18.3.1	Up to 3 MLD	Set	1,06,300.00
18.3.2	3.1 MLD to 5 MLD	Set	1,06,300.00
18.3.3	5.1 MLD to 10 MLD	Set	1,06,300.00
18.3.4	10.1 MLD to 15 MLD	Set	1,11,300.00
18.3.5	15.1 MLD to 20 MLD	Set	1,26,500.00
18.3.6	20.1 MLD to 25 MLD	Set	1,36,600.00
18.3.7	25.1 MLD to 30 MLD	Set	1,51,800.00
18.3.8	30.1 MLD to 35 MLD	Set	1,56,900.00
18.3.9	35.1 MLD to 40 MLD	Set	1,59,400.00
18.3.10	40.1 MLD to 45 MLD	Set	1,61,900.00
18.3.11	45.1 MLD to 50 MLD	Set	1,65,300.00
18.3.12	50.1 MLD to 55 MLD	Set	1,81,800.00
18.3.13	55.1 MLD to 60 MLD	Set	1,98,300.00
18.3.14	60.1 MLD to 65 MLD	Set	1,98,300.00
18.3.15	65.1 MLD to 75 MLD	Set	2,16,000.00
18.3.16	75.1 MLD to 85 MLD	Set	2,16,000.00
18.3.17	85.1 MLD to 90 MLD	Set	2,28,700.00
18.3.18	90.1 MLD to 95MLD	Set	2,48,900.00

Code No	Description	Unit	Rate Rs.
18.3.19	95.1 MLD to 100MLD	Set	2,48,900.00
18.3.20	Add extra for additional depth of channel in manual coarse bar screen beyond 3M depth	metre	8,100.00
18.4	Supply, fabrication and fixing of stainless steel (SS-316) Coarse Bar screen (mechanically raked) with flat bar 50mm X 10mm Spacing of bars 50mm suitable for mounting in channel of specified size with inclination not more than 75 degree complete in all respect as per technical specification and the direction of the Engineer for following PEAK FLOW and upto 3m channel depth.		
18.4.1	5 MLD to 10 MLD	Set	16,03,900.00
18.4.2	10.1 MLD to 15 MLD	Set	16,79,800.00
18.4.3	15.1 MLD to 20 MLD	Set	17,40,600.00
18.4.4	20.1 MLD to 25 MLD	Set	17,91,200.00
18.4.5	25.1 MLD to 30 MLD	Set	19,27,800.00
18.4.6	30.1 MLD to 35 MLD	Set	19,73,300.00
18.4.7	35.1 MLD to 40 MLD	Set	20,64,400.00
18.4.8	40.1 MLD to 45 MLD	Set	21,35,200.00
18.4.9	45.1 MLD to 50 MLD	Set	21,75,700.00
18.4.10	50.1 MLD to 55 MLD	Set	23,27,500.00
18.4.11	55.1 MLD to 60 MLD	Set	28,10,200.00
18.4.12	60.1 MLD to 65 MLD	Set	28,10,200.00
18.4.13	65.1 MLD to 75 MLD	Set	28,10,200.00
18.4.14	75.1 MLD to 85 MLD	Set	32,07,900.00
18.4.15	85.1 MLD to 90 MLD	Set	34,20,400.00
18.4.16	90.1 MLD to 95 MLD	Set	36,53,200.00
18.4.17	95.1 MLD to 100 MLD	Set	38,70,700.00
18.4.18	Add extra for additional depth of channel in mechanical coarse bar screen beyond 3 m depth.	metre	52,000.00
18.5	Supply, Installation, Testing and Commissioning of stainless steel (SS-316) Fine Bar screen (Mechanical operated) with flat bar 50 mm X 2 mm with 6 mm spacing suitable for mounting in channel of specified size with suitable inclination complete in all respect as per technical specification, reputed make and direction of the Engineer inclusive of Banner Make Upstream Type Ultrasonic Level Sensor for following PEAK FLOW and length up to 3M.		
18.5.1	5 MLD to 7.5 MLD	set	7,79,200.00
18.5.2	7.6 MLD to 10 MLD	set	8,09,600.00
18.5.3	10.1 MLD to 15 MLD	set	10,12,000.00

Code No	Description	Unit	Rate Rs.
18.5.4	15.1MLD to 20MLD	set	11,18,200.00
18.5.5	20.1 MLD to 25 MLD	set	11,48,600.00
18.5.6	25.1 MLD to 30 MLD	set	14,77,500.00
18.5.7	30.1 MLD to 35 MLD	set	15,98,900.00
18.5.8	35.1 MLD to 40 MLD	set	16,69,700.00
18.5.9	40.1 MLD to 45 MLD	set	17,70,900.00
18.5.10	45.1 MLD to 55 MLD	set	18,62,000.00
18.5.11	55.1 MLD to 65 MLD	set	19,63,200.00
18.5.12	65.1 MLD to 75 MLD	set	21,04,900.00
18.5.13	75.1 MLD to 85 MLD	set	22,16,200.00
18.5.14	85.1 MLD to 95 MLD	set	23,68,000.00
18.5.15	95.1 MLD to 105 MLD	set	35,82,300.00
18.5.16	Add extra for additional depth of channel in Mechanical Fine bar screen beyond 3m length	metre	52,000.00
18.6	Supply, Installation, Testing and commissioning of CI Open Channel Sluice Gates, Manually operated, Rising Spindle type suitable for mounting in between two parallel walls of an Open Channel. Water sealing shall be provided at two vertical sides and bottom side of gate aperture by means of rubber seal, mounted on gate slide and having forced contact with gate aperture. The gate shall be designed in such a manner, so that it can be operated at 2 meter head. Gate frame & Shutter of CI Grade IS 210 FG 260, Head Stock IS 210 Grade FG 260, Hinge Pin SS ASTM A276, Yoke IS MS 2062, Flush Bottom Seal Support Bar of SS ASTM A276 , Stem Operating Nut ASTM A276., Duly tested for tensile strength, Chemical testing and tested Shop tested for over all dimensions as per approved GA drawing complete in all respect as per specification and direction of Engineer for following PEAK FLOW up to 3m channel depth.		
18.6.1	Up to 5 MLD	Set	86,000.00
18.6.2	5.1 MLD to 7.5 MLD	Set	86,000.00
18.6.3	7.6 MLD to 10 MLD	Set	86,000.00
18.6.4	10.1 MLD to 15 MLD	Set	99,800.00
18.6.5	15.1 MLD to 20 MLD	Set	1,05,700.00
18.6.6	20.1MLD to 25MLD	Set	1,18,900.00
18.6.7	25.1 MLD to 30 MLD	Set	1,30,000.00
18.6.8	30.1 MLD to 35 MLD	Set	1,36,200.00
18.6.9	35.1 MLD to 40 MLD	Set	1,57,100.00
18.6.10	40.1 MLD to 45 MLD	Set	1,64,800.00
18.6.11	45.1 MLD to 50 MLD	Set	1,81,100.00

Code No	Description	Unit	Rate Rs.
18.6.12	50.1 MLD to 55 MLD	Set	2,00,200.00
18.6.13	55.1 MLD to 60 MLD	Set	2,19,300.00
18.6.14	60.1 MLD to 65 MLD	Set	2,38,400.00
18.6.15	65.1 MLD to 70 MLD	Set	2,57,500.00
18.6.16	70.1 MLD to 75 MLD	Set	2,76,600.00
18.6.17	75.1 MLD to 80 MLD	Set	2,95,700.00
18.6.18	80.1 MLD to 85 MLD	Set	3,09,500.00
18.6.19	85.1 MLD to 90 MLD	Set	3,28,300.00
18.6.20	90.1 MLD to 95MLD	Set	3,58,800.00
18.6.21	95.1 MLD to 100MLD	Set	3,65,900.00
18.6.22	100.1 MLD to 105MLD	Set	3,65,900.00
18.6.23	Add extra for additional depth of open channel beyond 3m depth	metre	5,200.00
18.7	Supply, Installation, Testing and Commissioning of CI Thimble Mounted Sluice Gate, Manually operated, Rising Spindle type. Sluice gates are as per IS 13349 Including all taxes, Freight, loading, unloading, fitting in position including Sluice gates are upward opening wall thimble mounted suitable for isolating the flow of sewer into out of the opening in the wall. It consists Gate frame, wall thimble, gate slide, shutter, seating/sealing faces .The gates will be provided with pads on sides, top and bottom to mount the wedges. The gate shall be designed in such a manner, so that it can be operated at 2 meter head. Gate frame & Shutter of CI Grade IS 210 FG 260, Head Stock assembly bolts & SS ASTM A276 Type 316, Stem, Operating Nut SS ASTM A276 Type 316., Duly tested for tensile strength, Tested for over all dimensions as per approved GA drawing complete in all respect as per specification and direction of Engineer for following PEAK FLOW and depth up to 3M.		
18.7.1	Up to 5 MLD	Set	1,10,600.00
18.7.2	5.1 MLD to 7.5 MLD	Set	1,39,400.00
18.7.3	7.6 MLD to 10 MLD	Set	1,69,900.00
18.7.4	10.1 MLD to 15 MLD	Set	1,76,100.00
18.7.5	15.1 MLD to 20 MLD	Set	1,78,400.00
18.7.6	20.1MLD to 25MLD	Set	1,84,500.00
18.7.7	25.1 MLD to 30 MLD	Set	2,25,400.00
18.7.8	30.1 MLD to 35 MLD	Set	2,66,300.00
18.7.9	35.1 MLD to 40 MLD	Set	2,85,900.00
18.7.10	40.1 MLD to 45 MLD	Set	3,05,400.00
18.7.11	45.1 MLD to 50 MLD	Set	3,24,900.00
18.7.12	50.1 MLD to 55 MLD	Set	3,49,300.00

Code No	Description	Unit	Rate Rs.
18.7.13	55.1MLD to 60MLD	Set	3,80,200.00
18.7.14	60.1 MLD to 65 MLD	Set	4,04,900.00
18.7.15	65.1 MLD to 70 MLD	Set	4,04,900.00
18.7.16	70.1 MLD to 75 MLD	Set	4,34,800.00
18.7.17	75.1 MLD to 80 MLD	Set	4,47,500.00
18.7.18	80.1 MLD to 85 MLD	Set	4,47,500.00
18.7.19	85.1 MLD to 90 MLD	Set	4,89,200.00
18.7.20	90.1 MLD to 95MLD	Set	5,79,800.00
18.7.21	95.1 MLD to 100MLD	Set	6,10,300.00
18.7.22	Add extra for additional depth beyond 3m depth.	metre	5,200.00
18.8	Supplying, erecting, testing & commissioning of Hand operated Travelling Crane (HOT) (single bridge girder carrying two wheels , complete with chain pulley block, load chain of welded construction of alloy steel as per IS:2429, hand chains for hoisting & traverse mechanism, totally encased Gears, trolley, trolley track wheels. Axle & shaft, swivel type lifting hook as per IS:3815, lock to prevent hook from swivelling, brakes for lifting gear, suitable for the above parameters and as per the direction of the Engineer.		
18.8.1	2 MT Capacity		
18.8.1.1	Span 3 M and Lift 3 M	set	2,87,100.00
18.8.1.2	Span 4 M and Lift 3 M	set	2,96,700.00
18.8.1.3	Span 5 M and Lift 3 M	set	3,15,500.00
18.8.1.4	Span 6 M and Lift 3 M	set	3,39,400.00
18.8.1.5	Span 7 M and Lift 3 M	set	3,66,500.00
18.8.1.6	Span 8 M and Lift 3 M	set	3,99,800.00
18.8.1.7	Span 9 M and Lift 3 M	set	4,19,700.00
18.8.2	3 MT Capacity		
18.8.2.1	Span 3 M and Lift 3 M	set	3,01,100.00
18.8.2.2	Span 4 M and Lift 3 M	set	3,16,800.00
18.8.2.3	Span 5 M and Lift 3 M	set	3,35,100.00
18.8.2.4	Span 6 M and Lift 3 M	set	3,61,300.00
18.8.2.5	Span 7 M and Lift 3 M	set	3,88,600.00
18.8.2.6	Span 8 M and Lift 3 M	set	4,23,800.00
18.8.2.7	Span 9 M and Lift 3 M	set	4,23,800.00
18.8.3	Add extra for additional per metre lift.	metre	911.00
18.9	Supplying, erecting, testing & commissioning of Electrically Operated Travelling Crane (EOT) .Main girder & End Carriage		

Code No	Description	Unit	Rate Rs.
	fabricated from Rolled Steel Section, Gear Box for all motion, Electro Magnetic Friction Disc Type Brakes, all safety limit switches , LT wheels EN 9, Double Flanged 4No, with Sq. Cage motor of adequate rating (KW), duly painted mechanical cleaning and one coat of primer and two coat of synthetic paint and as per the direction of the Engineer.		
18.9.1	2 MT Capacity		
18.9.1.1	Span 7 M and Lift 6 M	set	4,02,200.00
18.9.1.2	Span 9 M and Lift 6 M	set	4,62,600.00
18.9.2	3 MT Capacity		
18.9.2.1	Span 7 M and Lift 6 M	set	4,92,800.00
18.9.2.2	Span 9 M and Lift 6 M	set	5,60,800.00
18.9.3	5 MT Capacity		
18.9.3.1	Span 7 M and Lift 6 M	set	5,74,800.00
18.9.3.2	Span 9 M and Lift 6 M	set	6,29,700.00
18.9.4	Add extra for additional per metre lift.	metre	911.00
18.10	Supply, installation and commissioning of Mono Rail Single Girder Crane suitable for lift up to 9m with chain 9m pulley block and traveling trolley excluding cost of girder complete in all respect as per the direction of the Engineer.		
18.10.1	1 MT Capacity	set	26,600.00
18.10.2	2 MT Capacity	set	34,200.00
18.10.3	3 MT Capacity	set	42,000.00
18.10.4	Add extra for additional per metre lift.	metre	911.00
18.11	Providing, lowering, laying, aligning, fixing in position in pipe line, manually operated Knife Gate Valves of approved make for sewage applications of PN 10 class with valve Body of Cast Iron IS 210 FG 260 / Ductile Iron, Seal Retainer ring with Stainless Steel ASTM A743 type CF8, Inlet Seal / Rubber Seals of EPDM Rubber, Knife gate of Stainless Steel ASTM A 743 type 304, Bracket / Adaptor plate of Carbon Steel IS : 2062 grade A and packing of PTFE impregnated synthetic yarn of following dia complete in all respect (excluding jointing and jointing material) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer.		
18.11.1	80 mm dia	each	8,440.00
18.11.2	100 mm dia	each	10,950.00
18.11.3	125 mm dia	each	13,450.00
18.11.4	150 mm dia	each	15,850.00
18.11.5	200 mm dia	each	26,400.00

Code No	Description	Unit	Rate Rs.
18.11.6	250 mm dia	each	34,300.00
18.11.7	300 mm dia	each	41,600.00
18.11.8	350 mm dia	each	62,400.00
18.11.9	400 mm dia	each	85,100.00
18.11.10	450 mm dia	each	1,17,400.00
18.11.11	500 mm dia	each	1,48,100.00
18.11.12	600 mm dia	each	2,01,400.00
18.11.13	700 mm dia	each	3,11,600.00
18.11.14	750 mm dia	each	3,45,000.00
18.11.15	800 mm dia	each	3,69,300.00
18.11.16	900 mm dia	each	4,80,400.00
18.11.17	1000 mm dia	each	5,78,600.00
18.11.18	1200 mm dia	each	7,82,100.00
18.12	Supply, installation, testing and commissioning of following capacity Air Blowers coupled with suitable capacity 415V 3 phase 50Hz AC induction motor complete with base frame, suction air filter, silencer, pressure relief valve, delivery non return valve complete with all required accessories with Technical Specifications.		
18.12.1	810 cum per hour	Set	3,33,900.00
18.12.2	1600 cum per hour	Set	5,14,300.00
18.12.3	2200 cum per hour	Set	5,60,200.00
18.13	Supply and installation of Bio digester toilet system tank. Tank is made of FRP (Fibre Reinforced Plastic) with 7 mm thick sheet with inocolumn (bacteria). A specific high graded bacteria used to convert the facial matter into methane and water of pH value 6 to 9 only. (Excluding earth work and concrete base)		
18.13.1	325 liter tank capacity, 1000*1000*500 mm, 8 users	each	29,500.00
18.13.2	725 liter tank capacity, 1000*1000*725 mm, 18 users	each	55,600.00
18.13.3	1000 liter tank capacity, 1200*1000*1000 mm,25 users	each	76,000.00
18.13.4	2125 liter tank capacity, 2000*1500*725 mm,50 users	each	1,46,800.00
18.13.5	4350 liter tank capacity, 3000*2000*725mm, 110users	each	1,89,300.00
18.13.6	5000 liter tank capacity, 2600*1500*1300 mm,130 users	each	3,08,600.00
18.13.7	10000 liter tank capacity, 3000*1700*2000 mm, 250 users	each	4,71,200.00
18.14	Providing, installation of prefabricated septic tank made from Plastic with all accessories excluding earth work.		
18.14.1	800 liter	each	28,200.00
18.14.2	1200 liter	each	34,000.00

Code No	Description	Unit	Rate Rs.
18.14.3	1600 liter	each	44,100.00
18.14.4	1800 liter	each	50,800.00
18.14.5	2000 liter	each	57,500.00
18.14.6	3000 liter	each	84,300.00
18.14.7	4000 liter	each	1,09,400.00
18.14.8	5000 liter	each	1,36,200.00
18.14.9	6000 liter	each	1,61,300.00
18.15	Desludging of septage from soak wells/pits/ septic tanks and transporting and emptying at inlet of FSTP including operation and maintenance of the equipment with all accessories complete in all respect over the O&M period as per specification and direction of Engineer.		
18.15.1	O&M for 4000 liter truck	Trip	800.00
18.15.2	O&M for 1000 liter truck	Trip	500.00
18.16	Designing, providing, constructing, hydraulic testing, commissioning and giving satisfactory trials of STP for inlet Sewage parameters BOD=300, COD=600, TSS=600, TKN 55, pH= 6.5 to 7.5 based on SBR technology consisting of Inlet Chamber, Screen Chamber, Grit-Detritus Tanks and Biological CASP Basins, Chlorine Contact Tank, Chlorinator with Chlorinator shed & tonner Shed, Chemical Storage & Dosing shed with dosing Equipments, Sludge Sump, Gravity Sludge Thickener, Sludge dewatering system equipment and building, sludge storage shed, necessary piping work with required valves, gates, storm water drains and rain water harvesting system, bypass drains, roads & pathways, landscaping, Compound wall with gates, Administration Block cum Laboratory, Laboratory Equipments, staff quarters, Tools and Plants, Spare Parts, ESR and Tanker Filling points, Metering Room, Guard Room etc. complete as turnkey job with all involved civil, electrical, instrumentation and mechanical works inclusive of following items, units as per detailed specification for civil, electrical, instrumentation and mechanical components with all duties and taxes, etc. complete to achieve BOD < 10 ppm, COD < 100 ppm, TSS < 10 ppm, to get reusable quality of water for industrial / agricultural purposes. outlet parameters shall also include TN < 10 ppm, Nh3N < 2 ppm and TP < 1 ppm) with full automation including PLC-SCADA and Instrumentation, reuse arrangement (storage - GLR, OHSR and pumps) and treated effluent disposal line for treated water 1 KM as per specifications. (Rates are in Lacs)		
18.16.1	Capacity 1 MLD, Area 0.16 Hectare, 2 No of basins	LS	400.00
18.16.2	Capacity 2 MLD, Area 0.20 Hectare, 2 No of basins	LS	641.00
18.16.3	Capacity 5 MLD, Area 0.40 Hectare, 2 No of basins	LS	1,440.00
18.16.4	Capacity 10 MLD, Area 0.70 Hectare, 2 No of basins	LS	2,500.00

Code No	Description	Unit	Rate Rs.
18.16.5	Capacity 15 MLD, Area 0.75 Hectare, 2 No of basins	LS	3,375.00
18.16.6	Capacity 20 MLD, Area 0.80 Hectare, 4 No of basins	LS	4,500.00
18.17	Designing, providing, constructing, hydraulic testing, commissioning and giving satisfactory trials of STP for inlet Sewage parameters BOD=300, COD=600, TSS=600, TKN 55, pH= 6.5 to 7.5 based on SBR technology consisting of Inlet Chamber, Screen Chamber, Grit-Detritus Tanks, Distribution Chamber, Primary Clarifier and Biological CASP Basins, Chlorine Contact Tank, Chlorinator with Chlorinator shed & tonner Shed, Chemical Storage & Dosing shed with dosing Equipments, Sludge Sump, Gravity Sludge Thickener, Sludge dewatering system equipment and building and sludge storage shed, necessary piping work with required valves, gates, sludge digesters, power generation unit based on gas generated including gas holder, scrubber, generator, gas flaring system, storm water drains and rain water harvesting system, bypass drains, roads & pathways, landscaping, Compound wall with gates, Administration Block cum Laboratory, Laboratory Equipments, staff quarters, Tools and Plants, Spare Parts, ESR and Tanker Filling points, Metering Room, Guard Room etc. complete as turnkey job with all involved civil, electrical, instrumentation and mechanical works inclusive of following items, units as per detailed specification for civil, electrical, instrumentation and mechanical components with all duties and taxes, etc. complete to achieve BOD < 10 ppm, COD < 100 ppm, TSS < 10 ppm, to get reusable quality of water for industrial / agricultural purposes. (In Case Cyclic activated sludge plant is designed for N, P outlet parameters shall also include TN < 10 ppm, Nh3N < 2 ppm and TP < 1 ppm) with full automation including PLC-SCADA and Instrumentation, reuse arrangement (storage - GLR, OHSR and pumps) and treated effluent disposal line for treated water 1 KM as per specifications. (Rates are in Lacs)		
18.17.1	Capacity 30 MLD, Area 1.2 Hectare, 4 No of basins	LS	6,750.00
18.17.2	Capacity 40 MLD, Area 1.6 Hectare, 4 No of basins	LS	9,000.00
18.17.3	Capacity 50 MLD, Area 1.75 Hectare, 4 No of basins	LS	10,000.00
18.17.4	Capacity 60 MLD, Area 1.9 Hectare, 4 No of basins	LS	12,000.00
18.17.5	Capacity 75 MLD, Area 2.25 Hectare, 4 No of basins	LS	13,125.00
18.17.6	Capacity 100 MLD, Area 2.40 Hectare, 6 No of basins	LS	17,500.00
18.18	Designing, providing, constructing, hydraulic testing, commissioning and giving satisfactory trials of STP based on SBR technology consisting of Inlet Chamber, Screen Chamber, Detritus Tanks, Distribution Chamber and prefabricated with SS 306 lining Biological CASP Basins, Sludge Sump, Chlorine Contact Tank, Chlorinator Room/Shed, Sludge Centrifuge necessary piping work with required valves, gates, drains, pathways Administration Block cum Laboratory, Laboratory Equipments, Tools and Plants, Spare Parts, etc. complete as turnkey job with all involved civil, electrical, Instrumentation and mechanical works inclusive of following items,		

Code No	Description	Unit	Rate Rs.
	units as per detailed specification for civil, electrical, Instrumentation and mechanical components with all duties and taxes, etc. complete to achieve BOD < 10 ppm, COD < 100 ppm, TSS < 10 ppm, to get recyclable quality of water for industrial / agricultural purposes. (In Case Cyclic activated sludge plant is designed for N, P outlet parameters shall also include TN < 10 ppm, Nh3N < 2 ppm and TP < 1 ppm) with full automation, reuse arrangement (storage - GLR, OHSR and pumps) and disposal line for treated water 1 KM as per specifications. (Rates in Lacs)		
18.18.1	Capacity 1 MLD, Area 0.16 Hectare, 2 No of basins	LS	330.00
18.18.2	Capacity 2 MLD, Area 0.20 Hectare, 2 No of basins	LS	440.00
18.18.3	Capacity 5 MLD, Area 0.40 Hectare, 2 No of basins	LS	693.00
18.19	Designing, providing, constructing, hydraulic testing, commissioning and giving satisfactory trials of Sewage Treatment Plant based on Hybrid Sub Surface Constructed Wetland process with raw sewage Inlet Parameters as BOD: 250, COD:550, TSS :500, TKN : 55 & Total P:6 mg/ltr. The scope of work starts from the Primary Settling Tank followed by Constructed Wetland Bed. This excludes primary treatment units and disinfection units as well as disposal facilities. The design norms and hydraulic detention calculation shall be as per the CPHEEO/ Ministry of Urban Development / US EPA technology document. The scope also includes providing & administering all required chemicals, bio consortia & plants to achieve the desired outlet norms as per CPCB/MoEF Guidelines/ NGT order dated 30/04/2019. The water retaining structures shall be constructed in RCC M30 adhering to the IS:3370 (Latest Amended) The steel enforcement shall be Fe 550D TMT bars only as per the specifications and directions of the Engineer. (Rates in Lacs)		
18.19.1	Upto 0.5 MLD	LS	107.50
18.19.2	For Extra Capacity above 0.5 MLD upto 1.0 MLD	MLD	202.50
18.19.3	For Extra Capacity above 1.0 MLD upto 3.0 MLD	MLD	197.00
18.19.4	For Extra Capacity above 3.0 MLD upto 5.0 MLD	MLD	192.00
18.20	Design & Approval, Civil, Errection, electromechanical works & commissioning of Upgradation of existing Waste Stabilization Sewage Treatment Plant having design outlet parameters as BOD:100, COD:250 & TSS :100 mg/ltr based on Hybrid Sub Surface Constructed Wetland process. The scope of work includes construction of: a. Inlet Chamber b. Distribution Launder cum Weir c. Hybrid Sub Surface Constructed Wetland Bed (complete with filling and placement of bed with filter media and administering root zone enhancing chemicals, bio consortia & plantation) d. Outlet Collection Channel e. Interconnecting Pipeline in DI K7 The design norms and hydraulic detention calculation shall be as per the CPHEEO/ Ministry of Urban Development / US EPA technology document. The		

Code No	Description	Unit	Rate Rs.
	Upgradation STP shall be designed as per the CPCB/MoEF Guidelines/ NGT order dated 30/04/2019. (Rates in Lacs)		
18.20.1	Upto 5.0 MLD	LS	400.00
18.20.2	For Extra capacity 5.0-10 MLD	MLD	65.00
18.20.3	For Extra capacity 10-15 MLD	MLD	52.50
18.20.4	For Extra capacity above 15 MLD	MLD	48.00
18.21	Design & Approval, Civil, Errection, electromechanical works & commissioning of Upgradation of existing Conventional Activated Sludge / UASB Sewage Treatment Plant having design outlet parameters as BOD:30, COD:150 & TSS :50 mg/ltr based on Hybrid Sub Surface Constructed Wetland process. The scope of work includes construction of: a. Inlet Chamber b. Distribution Launder cum Weir c. Hybrid Sub Surface Constructed Wetland Bed (complete with filling and placement of bed with filter media and administering root zone enhancing chemicals, bio consortia & plantation) d. Outlet Collection Channel e. Interconnecting Pipeline in DI K7 The design norms and hydraulic detention calculation shall be as per the CPHEEO/ Ministry of Urban Development / US EPA technology document. The Upgradation STP shall be designed as per the CPCB/MoEF Guidelines/ NGT order dated 30/04/2019. (Rates in Lacs)		
18.21.1	Upto 5.0 MLD	LS	350.00
18.21.2	For Extra capacity 5.0-10 MLD	MLD	58.00
18.21.3	For Extra capacity 10-15 MLD	MLD	51.00
18.21.4	For Extra capacity above 15 MLD	MLD	42.00
18.22	IFAS - Design & Approval, Civil, Errection, electromechanical works & commissioning of Upgradation of existing Conventional Activated Sludge Sewage Treatment Plant having design outlet parameters as BOD:30, COD:150 & TSS :50 mg/ltr based on introduction of fixed film bio carriers, combination of pre anoxic / post anoxic nitrification – denitrification with Internal Liquor recirculation aiming at nutrient removal followed by excess biomass solids removal-disposal & disinfection units. The scope of work includes construction of: a. Pre-Anoxic Denitrification Unit b. Nitrifying Biological Unit c. DE Aeration Tank d. Post Anoxic Denitrification Unit e. Filter feed Tank f. Multigrade Filter Unit (Surface Flow rate of <12 m3/m3/hr, fully automated backwashing provisions with atleast 50% buffer hydraulic capacity to ensure uninterrupted forward operations during backwash cycle. The forward and backwash operations shall be fully		

Code No	Description	Unit	Rate Rs.
	automated using electrically actuated butterfly valves interlocked with the PLC of the Upgradation STP. The backwash effluent shall be recycled to the inlet chamber of the existing STP. The Biocarriers to be filled inside the Biological and denitrification units shall be required to be of only Virgin Polypropylene or HDPE or Thermosetting resin and not shall be of recycled material. The design norms and hydraulic detention calculation shall be as per the CPHEEO/ Ministry of Urban Development / US EPA technology document. The Upgradation STP shall be designed as per the CPCB/MoEF Guidelines/ NGT order dated 30/04/2019. (Rates in Lacs)		
18.22.1	Upto 5.0 MLD	LS	390.00
18.22.2	For Extra capacity 5.0-10 MLD	MLD	73.00
18.22.3	For Extra capacity 10-15 MLD	MLD	69.50
18.22.4	For Extra capacity above 15 MLD	MLD	67.00
18.23	IFAS - Design & Approval, Civil, Errection, electromechanical works & commissioning of Upgradation of existing Conventional Activated Sludge Sewage Treatment Plant having existing design outlet parameters as BOD:30, COD:150 & TSS :50 mg/ltr. The upgradation of the effluent from the existing CAS STP shall involve retrofitting of the existing STP based on introduction of fixed film bio carriers, creating or augmenting existing civil structures with combination of pre anoxic / post anoxic nitrification – denitrification reactors with Internal Liquor recirculation aiming at nutrient removal followed by excess biomass solids removal-disposal & disinfection units. The scope of work includes construction of: - Pre-Anoxic Denitrification Unit - Nitrifying Biological Unit - De-Aeration Tank - Post Anoxic Denitrification Unit - Filter feed Tank - Multigrade Filter Unit (Surface Flow rate of <12 m³/m³/hr, fully automated backwashing provisions with atleast 50% buffer hydraulic capacity to ensure uninterrupted forward operations during backwash cycle. The forward and backwash operations shall be fully automated using electrically actuated butterfly valves interlocked with the PLC of the Upgradation STP. The backwash effluent shall be recycled to the inlet chamber of the existing STP. The above units shall be utilized in adjacent to the existing secondary clarifier which is having ideal surface overflow rate, solids loading rate and weir overflow rate as per CPHEEO guidelines and peak flow. The Biocarriers to be filled inside the Biological and denitrification units shall be required to be of only Virgin Polypropylene or HDPE or Thermosetting resin and not shall be of recycled material. The design norms and hydraulic detention calculation shall be as per the CPHEEO/ Ministry of Urban Development / US EPA technology document. The Upgradation STP shall be designed as per the CPCB/MoEF Guidelines/ NGT order dated 30/04/2019.		

Code No	Description	Unit	Rate Rs.
	(Rates in Lacs)		
18.23.1	Upto 5.0 MLD	LS	325.00
18.23.2	For Extra capacity 5.0-10 MLD	MLD	59.50
18.23.3	For Extra capacity 10-15 MLD	MLD	57.00
18.23.4	For Extra capacity above 15 MLD	MLD	55.00
18.24	Complete on line monitoring of Sewage Treatment Plant through Artificial Intelligence including complete online monitoring system (analyser at Inlet and outlet), DO analysers and Hydrostatic level sensor, DLT, Other necessary instrumentation like flow meter, pressure gauge and accessories to run the complete system in automation, AI System, 10 days services as per specifications and direction of Engineer. (Rates in Lacs)		
18.24.1	Above 1 upto 5 MLD	LS	68.44
18.24.2	Above 5 upto 20 MLD	LS	74.93
18.24.3	Above 20 upto 50 MLD	LS	89.68
18.24.4	Above 50 to 100 MLD	LS	98.94
18.25	Odor Control - Designing, providing, constructing, hydraulic testing, commissioning and giving satisfactory trials of Odour Control Unit. The free air volume above the Top Water Level and between Plinth Level shall determine the filtration rate to be considered for design of Odour Control Unit. The system flow rate shall be designed for 6 times the Free Air Volume above the water level and between the plinth level of the sewage retaining structure. The Scope of the unit involves constructing an air tight canopy above the sewage retaining unit and creating a suction manifold which will then pass through Suspended particular filter, then through demistor and then via the centrifugal fan is passed through the Multi Media filter filled with Sodium or Potassium impregnated Activated Carbon and finally escaping into the atmosphere. The Multi-media filter to be used shall be non-combustible & fireproof type to avoid any fire hazards during peak summers adhering to IS 2752(1995). The Empty Bed Residence Time of the Multi- media Filter shall not be less than 3 secs. For large flow rates, more than one Multi-media filters shall be provided to ensure structural strength and safety of the Odour controlling tower . The Odour Control Unit shall be designed to bring down the VOCs, Mercaptans & Hydrogen Sulphide gases to below 0.1 ppm at the outlet of the Vent stack of the Filter. The material to be used for forming air tight canopy shall be of Fibre Reinforced Plastic as per ISO 18319:2015. Multimedia filter tower shall have arrangement for charging of fresh media from the top using fizzed platform made in Mil Steel and coated with corrosion resistance paint. Multimedia filter flushing arrangements using fresh feed water and discharge back to raw sewage sump shall be made appropriately. The interconnecting pipeline of the Odour control unit shall be in uPVC of PE1.6 pressure rating and appropriate nominal dia. The Odour Control Unit shall be made provision to be		

Code No	Description	Unit	Rate Rs.
	interlocked with the centralized PLC SCADA of the STP. The air-line shall be equipped with pressure indicator transmitter and temperature sensors as well Differential pressure transmitters at the upstream & downstream of the Multimedia filter, all of them interlocked with the central PLC of the STP. All the electromechanical components shall be provided with stand by option as well. The above scope includes all the civil foundation works necessary as per the dimensions of the Odour Control Unit to operate smoothly. (Rates in Lacs)		
18.25.1	Upto 3000 cum/hr	LS	33.60
18.25.2	Above 3000 upto 6000 cum/hr	LS	45.65
18.25.3	Above 6000 upto 9000 cum/ hr	LS	56.75
18.25.4	Above 9000 upto 12000 cum/hr	LS	64.25
18.25.5	Above 12000 upto 15000 cum/hr	LS	75.15
18.26	Design & Approval, Civil, Errection, electromechanical works & commissioning of Pressure Sand Filter and Activated Carbon filters of suitable flow rates with following components: 1. Filter Feed Tank of minimum 40 min Retention time at average flow after equalization. 2. Filter Feed Pumps: 100% standby VFD operated centrifugal pumps with minimum Head of 25 mtrs. 3. Pressure Sand Filter & Activated Carbon Assembly: Comprising of Sand Filter Towers & Activated Carbon Vessels distributed based on maximum dia of 3 m and Surface Flow Rate to be less than 12 m³/hr/m². Side Water Depth of each filter shall be around 2-2.5 m with filter media filled up to 50% height to address bed expansion during backwashing. The backwashing cycle shall be PLC controlled and each pressure sand filter & Activated Carbon Vessels shall be operated and backwashed without interrupting the average forward operations. VFD operated pumps shall ensure that 1 filter is undergoing backwash while others are forward operating and electrically actuated butterfly valves carry out the backwashing sequence smoothly. The backwashing shall be automatically initiated sensed by differential pressure transmitter at the upstream and downstream of header of sand & carbon filter units as well as time based sequence, interlocked with the main STP PLC. 4. Backwashing Pumps: Backwash pumps capacity shall be of minimum 2 times the filtration rate of each sand filter & carbon vessel. The head of the backwashing pumps shall be adequate to fluidize the filter bed and achieve critical upward velocity and also accommodate the frictional and other losses in the backwash line. 100% of the backwash pumps shall be provided interlocked with the main PLC. Make of Construction of Vessels as per IS 8419-1(1977):The Vessels shall be constructed in Mild Steel of minimum of 8 mm thinness for shell and 12 mm thinness for dish end for flow rates above 200 m cube /hr. Epoxy coating shall be provided inside		

Code No	Description	Unit	Rate Rs.
	and outside to prevent corrosion. Manholes shall be provided for inspection and regular maintenance. The interconnecting pipeline shall be provided in DI K9 with necessary fittings for pumps also in Ductile Iron. (Rates in Lacs)		
18.26.1	0-100 cum/hr	LS	52.50
18.26.2	100-200 cum/hr	LS	67.00
18.26.3	200-300 cum/hr	LS	75.00
18.26.4	300-400 cum/hr	LS	88.00
18.26.5	400-500 cum/hr	LS	99.15
18.26.6	500-600 cum/hr	LS	116.50
18.27	Design, manufacture, Supply, Installation, testing and commissioning including trial run of Fecal sludge receiving chamber mechanical unit for 30 KLD (for Screening and Organic material removal from septic tank sludge) with one spare electric motor of required capacity. This includes all required material ,specials, screw, motor with required RPM, electric panel compatible with PLC and running on solar power complete and as per specification, data sheet and directions of Engineer.	LS	15,75,040.00
18.28	Design, manufacture, Supply, Installation, testing and commissioning including trial run of Fecal sludge dewatering mechanical unit (for separation of sludge) with one spare electric motor of required capacity. This includes all required material ,flocculator, agitator, inbuilt poly dosing system, screw, motor with required RPM, electric panel compatible with PLC and running on solar power, including polyelectrolyte dosing system complete, including dosing pump, if required- complete and as per specification, data sheet and directions of Engineer.		
18.28.1	Upto 10 KLD	LS	10,67,200.00
18.28.2	Above 10 upto 30 KLD	LS	16,23,616.00
18.29	Design, manufacture, Supply, Installation, testing and commissioning including trial run of Fecal dewatered sludge electric dryer (from 20% to 85%) unit with one spare electric motor of required capacity, with one day storage at inlet SS 304 upto 30 KLD. This includes all required material, silo, vibro motor, electric dryer unit ,churning arms motor with gear box for required RPM, electric panel compatible with PLC and running on solar power complete and as per specification and data sheet and direction of Engineer.	No	8,68,480.00
18.30	Supply, installation and commissioning of FRP dual media filter, activated carbon filter and UV disinfection unit with necessary accessories such as multiport values and piping. To include all installations, testing and commissioning of the set up as per specifications and directions of Engineer.	No	6,69,760.00
18.31	RUIDP Tecknology - Design, supply, erection, installation, jointing, testing, trial run, and commissioning of prefabricated micro Sewage		

Code No	Description	Unit	Rate Rs.
	Treatment Plants based on RUIDP Technology for Inlet parameter (Ph-6.5-7.5; BOD5 @ 20 degree C-300 mg/l; COD-650 mg/l; TSS-600 mg/l; TKN-55 mg/l) and outlet parameter (Ph-6.5-9.0; BOD5 @ 20 degree C < 10 mg/l; COD-<= 50 mg/l; TSS- <=20 mg/l; N-Total-<=10 mg/l & Faecal Colliform-<100 MPN/100 ml)complete in all respects. STP will have following components:- A) Pretreatment Unit:- Design, Supply, Fabrication of Coarse Screen with Grit Separator Unit. The fine screen (2 Nos.; 1 W+1S) installed in sequence shall be made in SS316L using flat bars of 3 mm thick, 50 mm wide and spacing of 5 mm, tear shape and dimensions of the bar screen as per design approved by engineer. The grit and oil filter separation unit shall be also provided in SS 316 L with interconnecting pipeline made in 90 mm HDPE PE-100 PN-6 as per IS 14333 (amended up to date), necessary fittings while maintaining the hydraulic levels with capacity of removing grease, oil and grit particles having specific gravity 2.85 with removal efficiency of 80%. Prefabricated sump with non clog sewage submersible pump set 1 W +1S of 2% Ni Cl Cascading, Impeller CF 8M ,Shaft SS 410,mechanical seal with 10M Power & Control cable , 5M Galvanized Chain,,10M, 50mm MS galvanized Guide pipe, Duck Foot Bend, with Guide wire SS 304 etc. installed after the oil and grease chamber. Adequate arrangements shall be made for access to remove the screened waste and settled grit on manual basis. B) Primary Settling Tank Unit:- Design, Supply, Fabrication of Primary Settling Tank in Mild Steel of 2-4 mm thickness with FRP coating from inside and epoxy corrosion resistance paint on the outer surface having dimensions as per approved design and drawing by engineer. Necessary support elements shall be provided inside the Primary Settling Tank at a depth of 700mm(minimum) from the top and further down minimum depth of 1.250 m (0.50 m free board extra) for support of the Tube Deck Media. A conical section with adequate slope (1: 12) for sludge to settle and flow down into the sludge storage tank shall be provided. The construction shall be as per the provided drawing. Safety Rails shall also be provided around the top of the tank in 2 rows connected with vertical poles of 1.2 m height at 1.2 m distance apart of Aluminium pipe of 32 NB with modular fittings. A partition shall be provided after the Tube Deck media for collection of clarified effluent which shall be collected while flowing in upward direction. Including GST, Taxes and duties and erection at site. C) Secondary-cum-Biological Treatment Unit:- Design, Supply, Fabrication of Secondary cum Biological Treatment Unit in Mild Steel of 2-4 mm Thickness with FRP coating from inside and epoxy corrosion resistance paint on the outer surface having dimensions as per approved design drawing by employer with 3 vertical partitions (minimum) at equal spacing for a minimum length of 3.0 m. The depth of the partitions shall be minimum 1.250 m (0.50 m free board extra) from the vertical. The bottom of the unit shall be conical in shape for sludge collection , fraction of which shall be recycled		

Code No	Description	Unit	Rate Rs.

back into the top most zone of the unit. The construction shall be as per the provided drawing. Safety Rails shall also be provided around the top of the tank in 2 rows connected with vertical poles of 1.2 m height at 1.2 m distance apart of Aluminium pipe of 32 NB with modular fittings. The outlet portion shall be meant for overflow with a depth of 0.50m from the Top water level as provided in the section drawing.

E) Tertiary Treatment Unit:- Design, Supply, Fabrication of Tertiary Treatment Unit Mild Steel of 2-4 mm Thickness with FRP coating from inside and epoxy corrosion resistance paint on the outer surface having dimensions with circumference around the Primary and Secondary Treatment Units , width of 1 m (minimum) and depth of 1.5 m (minimum). The tank shall have partitions opening from top and bottom in alternate arrangement to provide sinusoidal flow. A drain valve arrangement shall be provided to collect the wash out sludge during any maintenance event.

F) Filter Media:- Filter media of required distribution and proportion to be filled in the Tertiary Treatment Unit (Qty of 100 mcube or as per deign requirement to fill to the top water level) , required hydrophytic plantation & impregnating inside the Tertiary Treatment Filter Bed.(Qty: 200 Nos of Umbrella Palm & Caina Indica) Bio consortium media comprising of Bacillus sp, bacteriofaciens sp, Phosphatidis sp, Nitrobacter sp, and other Nutrient removing species in wetland systems. (Qty of 100 liters)

G) Solar Power System:- Supply, Fabrication, Installation, Testing and Commissioning of Solar Power Unit MNRE approved of required capacity including allelectrical, peripheral and mounting accessories.

H) Sludge Storage tank:- Sludge storage tanks for primary and secondary sludge with a capacity of 2000 Liters as per the levels provided in the reference drawing, this sludge tank will be connected to the primary settling tank and secondary treatment unit bottom with 110 mm HDPE PE 100 PN-6 pipe with fillings as per IS 14333 (amended up to date). Manually operated butterfly valve of 100 mm dia shall be installed on both coming pipes to regulate the sludge flow.

I) RUIDP Technology component:- Supply, Administering, Installation and commissioning of only the Technology Components for :

1. Primary Settling Tank :- Macroporous Hydrogel constituting of polymers like Polyacrylamide gel - cross linking polymer of Water Insoluble entities with a life span of at least 5 years , impregnated and immobilized with acid resistant Methanation Bacteria like Methanosarcina sp on to the water flowing surface using synthetic adhesives. The system shall be capable for easy installation and maintenance.

2: Secondary Treatment Unit:-

a: Floating rafts of appropriate size as per the provided drawing

Code No	Description	Unit	Rate Rs.
	made of natural materials like bamboo or buoyant material with hydrophytic plantation on top to be installed in the upper most layer of the unit.		
	b. Middle Layer comprising of non-organic media support immobilized with aerobic bacteria. The media for support shall be alumina or ceramic based of cylindrical or spherical shapes with minimum 50% porosity to allow favorable bacteria for immobilization and colony formation. Total Depth of the middle layer shall be 925 mm with percentage fill of the media ranging between 35-50% depending on the hydraulic conductivity of the packed bed media column to cater to the peak flow. The average mean diameter of the media elements shall range between 5- 20 mm.		
	c. Bottom Most Layer: comprising of thermosetting resin polymer media with infinitesimal shape and protected surface area of not less than 900 m ² /m ³ . Minimum % fill of 35% and the Middle and Bottom layer shall be separated using retractable strainers made in UPVC or FRP lined MS grating for providing support for middle layer media , the same support shall be provided for the bottom most layer.		
	d. Manual Micro screen 1 mm 1W +1S in SS-316 at the outlet of secondary unit"		
	J) Other Ancillary works -		
	1. Boundary wall with gate of premises - wall height shall be 1.5 m from FGL. Foundation of boundary wall shall be 1.20 m below natural ground level. Construction up to plinth level shall be in RR masonry in 1:6 cement mortar with 100 mm thick PCC in 1:4:8 below masonry. First wall section shall be 90 cm wide with 30 cm height, and above it, second section of wall shall be 75 cm wide with 30 cm height, and above it, third section of wall shall be 60 cm wide with 30 cm height. and above it, fourth section of wall shall be 45 cm wide with 30 cm height. Above it, a brick (class-75) masonry wall of 30 cm thick with provision of columns of 45 cm x 45 cm at an interval of 3 m along with suitable joints provisions shall be constructed in CM 1:6.,		
	2. Access Road to STP with Drains - From gate of STP area to the different units of STP and all around precast concrete interlocking tiles at pedestrian and shoulders shall be of 80 mm thick and approved shape of M 30 grade laid on 75 mm thick PCC 1:4:8 on proper slope with side drainage of vibro-pressed 60 mm thick precast I-shape drains of 0.23X 0.3m on both side laid on 75 mm thick PCC 1:4:8.		
	3. Admin-cum-control-cum-laboratory-cum-office with toilet block building as per approved design and drawing by the engineer (maximum area of 15 sqm.)		
18.31.1	5- 10 KLD	LS	54,00,000
18.31.2	11-25 KLD	LS	62,50,000
18.31.3	26-50 KLD	LS	78,00,000

Code No	Description	Unit	Rate Rs.
18.31.4	51-100 KLD	LS	89,00,000
18.31.5	100-150 KLD	LS	95,00,000
18.31.6	150-200 KLD	LS	1,11,00,000
18.31.7	200-250 KLD	LS	1,25,00,000
18.31.8	251-300 KLD	LS	1,42,00,000
18.31.9	351-400 KLD	LS	1,55,00,000
18.31.10	401-450 KLD	LS	1,71,00,000
18.31.11	451-500 KLD	LS	1,95,00,000
18.32	Design, Supply, installation testing and commissioning of vaccum sewage pumping system with all civil, electrical, mechanical, instrumentation wotks including but not limited to following components - Horizontal vacuum tank with Vacuum pumps, pneumatically mechanical controlled controller operated Interface valves with collection chambers. isolation and non-return valves, discharge pumps, piping system, float valve, motor control centre, LPBS, cables, trays, conduit etc. including loading, unloading, installation, freight, taxes, tests, third party inspection & certifiacates if required along with Fittings & Connections for Pressure gauge, Presure and level transmitter/switch, sight glass, cradels, vacuum main. Also accesories are included. 1. Horizontal Vaccum Tank: Material : Steel sewage vacuum vessel Shell thickness : 10 mm, Volume : as per design (m3) Manhole : 600 mm dia Design pressure : Absolute vacuum Working pressure: 300 mbar Hydraulically tested to 1.5 bar Design temperature: 0° C to 60° C Corrosion allowance : 1 mm Vacuum gauge (Presssure range -1 to 0 bar, Stainless Steel body, 6" size with BSP/NPT type fitting) Required Set Pressure switch , alarm switch, stop switch : Required Set Level detection probe : Required Set Pressure Transducer : Required Set. 2. Vacuum pumps: oil cooled type. With i) Three phase electric motors complete with thermistors and single phase anti-condensate heaters. li) Oil mist separators. lii) Double Gas ballast. Iv) Inlet filter complete with polypropylene element and water return taping. v) 12mm condensate drain valve vi) Exhaust and inlet filters complete with Vacuum and Pressure Gauges. including loading, unloading, installation, freight & all taxes with certificates if required along with accessories. Type :- Roatary Vane, Single stage Oil sealed vacuum pumps, 500m³/hr each, Motor : 11 kw each, Voltage : 230/400V (soft starter), Frequency : 50 Hz Pipe & Fittings at Inlet (HDPE or UPVC). Size varies from 2" to 6": Required Set Pipe & Fittings at outlet (SS) with couplings & fittings :Required Set Knockout pot with Knitmesh element & bracket :Required Set 3. Sewage Discharge Pumps: horizontally mounted, mono block design, minimum sphere size 50mm diameter including installation, freight, taxes & certificates if required along with accessories. Type:-		

Code No	Description	Unit	Rate Rs.
	Dry well centrifugal sewage discharge pump, Capacity : as per design , Frequency : 50 Hz, Head : 15 m Pipe & Fittings at Inlet & Outlet(HDPE or D.I or C.I). Size varies from 4" to 6" : Required Set Equalising Line with fittings if required :Required Set.		
	4. DI Isolation Valve: PN 1.6 stem of SS (AIS 1410) and Bronze(gunmetal) working parts Sluice Valves ISI marked 14846-2000, including jointing , testing & cost of Nut ,Bolt & insertion sheet, all carriage complete.		
	5. DI Non Return Valve (NRV): flanged end as per IS:5312/2004 in pipe lines including jointing & cost of Nut Bolt , rubber insertion etc. complete.		
18.32.1	Up to 300 houses	Lot	15,00,000.00
18.32.2	301 to 500 houses	Lot	20,00,000.00
18.32.3	501 to 1000 houses	Lot	35,00,000.00

19.0 WATER SUPPLY

Code No	Description	Unit	Rate Rs.
19.1	Providing, lowering, laying in trenches, aligning, fixing in position and jointing socketed rubber gasket type ISI marked uPVC pipes of Class III (6 Kg/sqcm) suitable for potable water with rubber ring joints (as per IS 4985-2000) of following outer dia with all accessories (excluding specials) complete including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.1.1	90 mm dia	metre	207.00
19.1.2	110 mm dia	metre	300.50
19.1.3	125mm dia	metre	389.50
19.1.4	140 mm dia	metre	480.00
19.1.5	160 mm dia	metre	617.00
19.1.6	180mm dia	metre	782.00
19.1.7	200mm dia	metre	966.00
19.1.8	225 mm dia	metre	1,212.00
19.1.9	250 mm dia	metre	1,503.00
19.1.10	280 mm dia	metre	1,893.00
19.1.11	315 mm dia	metre	2,421.00
19.2	Providing, lowering, laying in trenches, aligning, fixing in position and jointing uPVC pipe fittings/ accessories of class III (6 Kg/sqcm) confirming to IS:7834 suitable for potable water with rubber rings joints in uPVC pipe line at all levels/ depth including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.2.1	Equal Tee (Moulded) welded with socket		
19.2.1.1	90 mm dia	each	491.50
19.2.1.2	110 mm dia	each	779.00
19.2.1.3	125mm dia	each	903.00
19.2.1.4	140 mm dia	each	1,335.00
19.2.1.5	160 mm dia	each	1,959.00
19.2.1.6	180mm dia	each	2,550.00
19.2.1.7	200mm dia	each	3,195.00
19.2.1.8	225 mm dia	each	5,050.00
19.2.1.9	250 mm dia	each	6,390.00

Code No	Description	Unit	Rate Rs.
19.2.2	Equal Tee (Fabricated)		
19.2.2.1	280 mm dia	each	7,000.00
19.2.2.2	315 mm dia	each	7,850.00
19.2.3	Unequal Tee (Moulded) welded with socket		
19.2.3.1	125 X 110 mm dia	each	1,087.00
19.2.3.2	140 X 110 mm dia	each	1,197.00
19.2.3.3	140 X 125 mm dia	each	1,210.00
19.2.3.4	160 X 110 mm dia	each	1,468.00
19.2.3.5	160 X 125 mm dia	each	1,651.00
19.2.3.6	160 X 140 mm dia	each	2,028.00
19.2.3.7	180 X 110 mm dia	each	1,835.00
19.2.3.8	180 X 125 mm dia	each	2,755.00
19.2.3.9	180 X 140 mm dia	each	2,830.00
19.2.3.10	180 X 160 mm dia	each	3,020.00
19.2.3.11	200 X 110 mm dia	each	2,875.00
19.2.3.12	200 X 125 mm dia	each	2,975.00
19.2.3.13	200 X 140 mm dia	each	3,000.00
19.2.3.14	200 X 160 mm dia	each	3,020.00
19.2.3.15	200 X 180 mm dia	each	3,085.00
19.2.3.16	225 X 110 mm dia	each	3,045.00
19.2.3.17	225 X 125 mm dia	each	3,225.00
19.2.3.18	225 X 140 mm dia	each	3,375.00
19.2.3.19	225 X 160 mm dia	each	3,750.00
19.2.3.20	225 X 180 mm dia	each	3,855.00
19.2.3.21	225 X 200 mm dia	each	3,910.00
19.2.3.22	250 X 110 mm dia	each	3,090.00
19.2.3.23	250 X 125 mm dia	each	3,195.00
19.2.3.24	250 X 140 mm dia	each	3,795.00
19.2.3.25	250 X 160 mm dia	each	3,960.00
19.2.3.26	250 X 180 mm dia	each	4,105.00
19.2.3.27	250 X 200 mm dia	each	4,335.00
19.2.3.28	250 X 225 mm dia	each	4,540.00
19.2.4	Unequal Tee (Fabricated)		
19.2.4.1	280 X 110 mm dia	each	3,090.00

Code No	Description	Unit	Rate Rs.
19.2.4.2	280 X 125 mm dia	each	3,830.00
19.2.4.3	280 X 140 mm dia	each	4,175.00
19.2.4.4	280 X 160 mm dia	each	4,200.00
19.2.4.5	280 X 180 mm dia	each	4,210.00
19.2.4.6	280 X 200 mm dia	each	4,350.00
19.2.4.7	280 X 225 mm dia	each	4,580.00
19.2.4.8	280 X 250 mm dia	each	4,875.00
19.2.4.9	315 X 110 mm dia	each	5,380.00
19.2.4.10	315 X 125 mm dia	each	5,400.00
19.2.4.11	315 X 140 mm dia	each	5,510.00
19.2.4.12	315 X 160 mm dia	each	5,590.00
19.2.4.13	315 X 180 mm dia	each	6,220.00
19.2.4.14	315 X 200 mm dia	each	6,270.00
19.2.4.15	315 X 225 mm dia	each	6,510.00
19.2.4.16	315 X 250 mm dia	each	6,620.00
19.2.4.17	315 X 280 mm dia	each	6,950.00
19.2.5	Reducer (Fabricated)		
19.2.5.1	125 X 110 mm dia	each	443.00
19.2.5.2	140 X 110 mm dia	each	557.00
19.2.5.3	140 X 125 mm dia	each	557.00
19.2.5.4	160 X 110 mm dia	each	797.00
19.2.5.5	160 X 125 mm dia	each	839.00
19.2.5.6	160 X 140 mm dia	each	881.00
19.2.5.7	180 X 110 mm dia	each	829.00
19.2.5.8	180 X 125 mm dia	each	849.00
19.2.5.9	180 X 140 mm dia	each	941.00
19.2.5.10	180 X 160 mm dia	each	954.00
19.2.5.11	200 X 110 mm dia	each	1,230.00
19.2.5.12	200 X 125 mm dia	each	1,327.00
19.2.5.13	200 X 140 mm dia	each	1,464.00
19.2.5.14	200 X 160 mm dia	each	1,475.00
19.2.5.15	200 X 180 mm dia	each	1,605.00
19.2.5.16	225 X 110 mm dia	each	1,388.00
19.2.5.17	225 X 125 mm dia	each	1,510.00

Code No	Description	Unit	Rate Rs.
19.2.5.18	225 X 140 mm dia	each	1,525.00
19.2.5.19	225 X 160 mm dia	each	1,533.00
19.2.5.20	225 X 180 mm dia	each	1,597.00
19.2.5.21	225 X 200 mm dia	each	1,635.00
19.2.5.22	250 X 110 mm dia	each	1,479.00
19.2.5.23	250 X 125 mm dia	each	1,606.00
19.2.5.24	250 X 140 mm dia	each	1,733.00
19.2.5.25	250 X 160 mm dia	each	1,776.00
19.2.5.26	250 X 180 mm dia	each	1,892.00
19.2.5.27	250 X 200 mm dia	each	2,024.00
19.2.5.28	250 X 225 mm dia	each	2,101.00
19.2.5.29	280 X 110 mm dia	each	1,749.00
19.2.5.30	280 X 125 mm dia	each	1,879.00
19.2.5.31	280 X 140 mm dia	each	2,021.00
19.2.5.32	280 X 160 mm dia	each	2,085.00
19.2.5.33	280 X 180 mm dia	each	2,114.00
19.2.5.34	280 X 200 mm dia	each	2,261.00
19.2.5.35	280 X 225 mm dia	each	2,332.00
19.2.5.36	280 X 250 mm dia	each	2,337.00
19.2.5.37	315 X 110 mm dia	each	2,530.00
19.2.5.38	315 X 125 mm dia	each	2,660.00
19.2.5.39	315 X 140 mm dia	each	2,775.00
19.2.5.40	315 X 160 mm dia	each	2,840.00
19.2.5.41	315 X 180 mm dia	each	2,880.00
19.2.5.42	315 X 200 mm dia	each	3,010.00
19.2.5.43	315 X 225 mm dia	each	3,020.00
19.2.5.44	315 X 250 mm dia	each	3,140.00
19.2.5.45	315 X 280 mm dia	each	3,280.00
19.2.6	Double/Single socketed 90 degree long bend (single piece welded with socket)		
19.2.6.1	90 mm dia	each	336.00
19.2.6.2	110 mm dia	each	543.00
19.2.6.3	125mm dia	each	740.00
19.2.6.4	140 mm dia	each	994.00
19.2.6.5	160 mm dia	each	1,407.00

Code No	Description	Unit	Rate Rs.
19.2.6.6	180mm dia	each	1,917.00
19.2.6.7	200mm dia	each	2,755.00
19.2.6.8	225 mm dia	each	3,890.00
19.2.6.9	250 mm dia	each	5,150.00
19.2.6.10	280 mm dia	each	7,750.00
19.2.6.11	315 mm dia	each	11,300.00
19.2.7	Double/Single socketed 45/22.5/11.25 degree long bend (single piece welded with socket)		
19.2.7.1	90 mm dia	each	274.50
19.2.7.2	110 mm dia	each	426.00
19.2.7.3	125mm dia	each	567.00
19.2.7.4	140 mm dia	each	750.00
19.2.7.5	160 mm dia	each	1,043.00
19.2.7.6	180mm dia	each	1,442.00
19.2.7.7	200mm dia	each	1,990.00
19.2.7.8	225 mm dia	each	2,735.00
19.2.7.9	250 mm dia	each	3,715.00
19.2.7.10	280 mm dia	each	5,180.00
19.2.7.11	315 mm dia	each	7,850.00
19.2.8	uPVC End Cap		
19.2.8.1	90 mm dia	each	86.80
19.2.8.2	110 mm dia	each	102.00
19.2.8.3	125mm dia	each	193.00
19.2.8.4	140 mm dia	each	233.00
19.2.8.5	160 mm dia	each	254.50
19.2.8.6	180mm dia	each	292.50
19.2.8.7	200mm dia	each	315.50
19.2.8.8	225 mm dia	each	721.00
19.2.8.9	250 mm dia	each	750.00
19.2.8.10	280 mm dia	each	1,471.00
19.2.8.11	315 mm dia	each	1,566.00
19.3	Providing, lowering, laying in trenches, aligning, fixing in position and jointing ISI marked uPVC pipe fittings/ accessories of class IV (8 Kg/sqcm) suitable for potable water with rubber rings joints in uPVC pipe line at all levels/ depth including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer.		

Code No	Description	Unit	Rate Rs.
19.3.1	Equal Tee (Moulded) welded with socket		
19.3.1.1	90 mm dia	each	662.00
19.3.1.2	110 mm dia	each	814.00
19.3.1.3	125mm dia	each	1,267.00
19.3.1.4	140 mm dia	each	1,547.00
19.3.1.5	160 mm dia	each	2,276.00
19.3.1.6	180mm dia	each	2,830.00
19.3.1.7	200mm dia	each	3,910.00
19.3.1.8	225 mm dia	each	5,080.00
19.3.1.9	250 mm dia	each	7,120.00
19.3.2	Equal Tee (Fabricated)		
19.3.2.1	280 mm dia	each	8,960.00
19.3.2.2	315 mm dia	each	13,700.00
19.3.3	Unequal Tee (Moulded) welded with socket		
19.3.3.1	125 X 110 mm dia	each	1,567.00
19.3.3.2	140 X 110 mm dia	each	1,964.00
19.3.3.3	140 X 125 mm dia	each	2,161.00
19.3.3.4	160 X 110 mm dia	each	2,665.00
19.3.3.5	160 X 125 mm dia	each	2,695.00
19.3.3.6	160 X 140 mm dia	each	2,720.00
19.3.3.7	180 X 110 mm dia	each	3,150.00
19.3.3.8	180 X 125 mm dia	each	3,455.00
19.3.3.9	180 X 140 mm dia	each	3,550.00
19.3.3.10	180 X 160 mm dia	each	3,865.00
19.3.3.11	200 X 110 mm dia	each	3,635.00
19.3.3.12	200 X 125 mm dia	each	3,860.00
19.3.3.13	200 X 140 mm dia	each	3,890.00
19.3.3.14	200 X 160 mm dia	each	3,910.00
19.3.3.15	200 X 180 mm dia	each	5,300.00
19.3.3.16	225 X 110 mm dia	each	5,760.00
19.3.3.17	225 X 125 mm dia	each	6,040.00
19.3.3.18	225 X 140 mm dia	each	6,120.00
19.3.3.19	225 X 160 mm dia	each	6,870.00
19.3.3.20	225 X 180 mm dia	each	7,640.00

Code No	Description	Unit	Rate Rs.
19.3.3.21	225 X 200 mm dia	each	9,330.00
19.3.3.22	250 X 110 mm dia	each	6,740.00
19.3.3.23	250 X 125 mm dia	each	6,880.00
19.3.3.24	250 X 140 mm dia	each	7,140.00
19.3.3.25	250 X 160 mm dia	each	6,890.00
19.3.3.26	250 X 180 mm dia	each	7,270.00
19.3.3.27	250 X 200 mm dia	each	7,630.00
19.3.3.28	250 X 225 mm dia	each	7,920.00
19.3.4	Unequal Tee (Fabricated)		
19.3.4.1	280 X 110 mm dia	each	8,000.00
19.3.4.2	280 X 125 mm dia	each	8,080.00
19.3.4.3	280 X 140 mm dia	each	8,180.00
19.3.4.4	280 X 160 mm dia	each	8,260.00
19.3.4.5	280 X 180 mm dia	each	8,340.00
19.3.4.6	280 X 200 mm dia	each	8,420.00
19.3.4.7	280 X 225 mm dia	each	8,720.00
19.3.4.8	280 X 250 mm dia	each	9,460.00
19.3.4.9	315 X 110 mm dia	each	7,980.00
19.3.4.10	315 X 125 mm dia	each	8,020.00
19.3.4.11	315 X 140 mm dia	each	8,070.00
19.3.4.12	315 X 160 mm dia	each	8,710.00
19.3.4.13	315 X 180 mm dia	each	8,790.00
19.3.4.14	315 X 200 mm dia	each	9,210.00
19.3.4.15	315 X 225 mm dia	each	9,470.00
19.3.4.16	315 X 250 mm dia	each	9,760.00
19.3.4.17	315 X 280 mm dia	each	10,950.00
19.3.5	Reducer (Fabricated)		
19.3.5.1	125 X 110 mm dia	each	454.50
19.3.5.2	140 X 110 mm dia	each	716.00
19.3.5.3	140 X 125 mm dia	each	740.00
19.3.5.4	160 X 110 mm dia	each	966.00
19.3.5.5	160 X 125 mm dia	each	1,021.00
19.3.5.6	160 X 140 mm dia	each	1,046.00
19.3.5.7	180 X 110 mm dia	each	1,198.00

Code No	Description	Unit	Rate Rs.
19.3.5.8	180 X 125 mm dia	each	1,220.00
19.3.5.9	180 X 140 mm dia	each	1,313.00
19.3.5.10	180 X 160 mm dia	each	1,327.00
19.3.5.11	200 X 110 mm dia	each	1,385.00
19.3.5.12	200 X 125 mm dia	each	1,414.00
19.3.5.13	200 X 140 mm dia	each	1,584.00
19.3.5.14	200 X 160 mm dia	each	1,664.00
19.3.5.15	200 X 180 mm dia	each	1,782.00
19.3.5.16	225 X 110 mm dia	each	1,937.00
19.3.5.17	225 X 125 mm dia	each	2,137.00
19.3.5.18	225 X 140 mm dia	each	2,161.00
19.3.5.19	225 X 160 mm dia	each	2,281.00
19.3.5.20	225 X 180 mm dia	each	2,421.00
19.3.5.21	225 X 200 mm dia	each	2,550.00
19.3.5.22	250 X 110 mm dia	each	2,775.00
19.3.5.23	250 X 125 mm dia	each	2,860.00
19.3.5.24	250 X 140 mm dia	each	2,980.00
19.3.5.25	250 X 160 mm dia	each	3,120.00
19.3.5.26	250 X 180 mm dia	each	3,150.00
19.3.5.27	250 X 200 mm dia	each	3,275.00
19.3.5.28	250 X 225 mm dia	each	3,330.00
19.3.5.29	280 X 110 mm dia	each	2,785.00
19.3.5.30	280 X 125 mm dia	each	2,815.00
19.3.5.31	280 X 140 mm dia	each	2,990.00
19.3.5.32	280 X 160 mm dia	each	3,180.00
19.3.5.33	280 X 180 mm dia	each	3,345.00
19.3.5.34	280 X 200 mm dia	each	3,450.00
19.3.5.35	280 X 225 mm dia	each	3,480.00
19.3.5.36	280 X 250 mm dia	each	3,685.00
19.3.5.37	315 X 110 mm dia	each	4,195.00
19.3.5.38	315 X 125 mm dia	each	4,315.00
19.3.5.39	315 X 140 mm dia	each	4,440.00
19.3.5.40	315 X 160 mm dia	each	4,485.00
19.3.5.41	315 X 180 mm dia	each	4,585.00

Code No	Description	Unit	Rate Rs.
19.3.5.42	315 X 200 mm dia	each	4,680.00
19.3.5.43	315 X 225 mm dia	each	4,825.00
19.3.5.44	315 X 250 mm dia	each	4,970.00
19.3.5.45	315 X 280 mm dia	each	4,990.00
19.3.6	Double/Single socketed 90 degree long bend (single piece welded with socket)		
19.3.6.1	90 mm dia	each	503.00
19.3.6.2	110 mm dia	each	823.00
19.3.6.3	125mm dia	each	1,187.00
19.3.6.4	140 mm dia	each	1,610.00
19.3.6.5	160 mm dia	each	2,338.00
19.3.6.6	180mm dia	each	3,745.00
19.3.6.7	200mm dia	each	4,615.00
19.3.6.8	225 mm dia	each	6,610.00
19.3.6.9	250 mm dia	each	8,910.00
19.3.6.10	280 mm dia	each	12,150.00
19.3.6.11	315 mm dia	each	19,150.00
19.3.7	Double/Single socketed 45/22.5/11.25 degree long bend (single piece welded with socket)		
19.3.7.1	90 mm dia	each	397.50
19.3.7.2	110 mm dia	each	654.00
19.3.7.3	125mm dia	each	881.00
19.3.7.4	140 mm dia	each	1,184.00
19.3.7.5	160 mm dia	each	1,692.00
19.3.7.6	180mm dia	each	2,346.00
19.3.7.7	200mm dia	each	3,275.00
19.3.7.8	225 mm dia	each	4,565.00
19.3.7.9	250 mm dia	each	6,200.00
19.3.7.10	280 mm dia	each	9,330.00
19.3.7.11	315 mm dia	each	13,150.00
19.3.8	uPVC End Cap		
19.3.8.1	90 mm dia	each	140.00
19.3.8.2	110 mm dia	each	229.00
19.3.8.3	125mm dia	each	280.50
19.3.8.4	140 mm dia	each	354.50

Code No	Description	Unit	Rate Rs.
19.3.8.5	160 mm dia	each	580.00
19.3.8.6	180mm dia	each	659.00
19.3.8.7	200mm dia	each	1,220.00
19.3.8.8	225 mm dia	each	1,306.00
19.3.8.9	250 mm dia	each	1,404.00
19.3.8.10	280 mm dia	each	1,723.00
19.3.8.11	315 mm dia	each	2,665.00
19.4	Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths ISI marked HDPE pipes of PE-100 grade & PN-6 for potable water as per IS 4984 (amended upto date) in trenches complete with all accessories like Bend, Tee, Reducer, Stub end, End cap etc including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.4.1	75 mm dia	metre	231.00
19.4.2	90 mm dia	metre	245.00
19.4.3	110 mm dia	metre	409.00
19.4.4	125mm dia	metre	529.00
19.4.5	140 mm dia	metre	656.00
19.4.6	160 mm dia	metre	825.00
19.4.7	180mm dia	metre	1,034.00
19.4.8	200mm dia	metre	1,243.00
19.4.9	225 mm dia	metre	1,562.00
19.4.10	250 mm dia	metre	1,780.00
19.4.11	280 mm dia	metre	2,226.00
19.4.12	315 mm dia	metre	2,820.00
19.5	Providing, lowering, laying and jointing in trenches, standard lengths HDPE ISI marked Pipes as per IS-4984: 1995 (amended upto date) with anti rodent food graded Material with necessary jointing material like mechanical connectors, i.e. thread/ insert joint/ quick release coupler joint/ compression fitting joint or flanged joint and specials jointing pipe by electro fusion welding method, including all taxes , transportation and freight charges, inspection charges, loading/ unloading charges, stacking of pipes, including cost of labour and material, specials (Tee, bend etc.), satisfactory hydraulic testing, disinfection, commissioning etc. complete as per technical specifications and direction of Engineer-in-charge of following class and diameter. (excluding earth work) . Note : Providing and fixing of all requisite specials as per drawing, design and layout are inclusive in RM measurement of the item and shall not be paid separately. Supply may be in coil or straight length in 6 M/12 M.		

Code No	Description	Unit	Rate Rs.
19.5.1	HDPE PE-100 PN-10 (In coils or piece)		
19.5.1.1	90 mm dia	metre	342.00
19.5.1.2	110 mm dia	metre	504.00
19.5.2	HDPE PE-100 PN-10		
19.5.2.1	125 mm dia	metre	705.00
19.5.2.2	140 mm dia	metre	863.00
19.5.2.3	160 mm dia	metre	1,131.00
19.5.2.4	180 mm dia	metre	1,409.00
19.5.2.5	200 mm dia	metre	1,710.00
19.5.2.6	225 mm dia	metre	2,144.00
19.6	Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths ISI marked HDPE pipes of PE-100 grade & PN-6 for potable water as per IS 4984 (amended upto date) in trenches in complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.6.1	75 mm dia	metre	217.00
19.6.2	90 mm dia	metre	230.50
19.6.3	110 mm dia	metre	384.50
19.6.4	125mm dia	metre	497.50
19.6.5	140 mm dia	metre	617.00
19.6.6	160 mm dia	metre	776.00
19.6.7	180mm dia	metre	972.00
19.6.8	200mm dia	metre	1,168.00
19.6.9	225 mm dia	metre	1,468.00
19.6.10	250 mm dia	metre	1,674.00
19.6.11	280 mm dia	metre	2,098.00
19.6.12	315 mm dia	metre	2,655.00
19.6.13	355 mm dia	metre	3,910.00
19.6.14	400 mm dia	metre	5,060.00
19.6.15	450 mm dia	metre	6,400.00
19.7	Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths HDPE pipe accessories/ fittings of PE-100 grade & PN-6 for potable water as per IS 8360/ IS 8008 for fabricated/ moulded (amended upto date) within pipe line in trenches complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.7.1	Equal Tee		

Code No	Description	Unit	Rate Rs.
19.7.1.1	75 mm dia	each	278.00
19.7.1.2	90 mm dia	each	367.00
19.7.1.3	110 mm dia	each	654.00
19.7.1.4	125mm dia	each	878.00
19.7.1.5	140 mm dia	each	1,049.00
19.7.1.6	160 mm dia	each	1,418.00
19.7.1.7	180mm dia	each	1,981.00
19.7.1.8	200mm dia	each	2,555.00
19.7.1.9	225 mm dia	each	3,585.00
19.7.1.10	250 mm dia	each	4,955.00
19.7.1.11	280 mm dia	each	6,840.00
19.7.1.12	315 mm dia	each	8,080.00
19.7.1.13	355 mm dia	each	11,350.00
19.7.1.14	400 mm dia	each	16,250.00
19.7.1.15	450 mm dia	each	23,100.00
19.7.2	90 degree bend		
19.7.2.1	75 mm dia	each	290.50
19.7.2.2	90 mm dia	each	374.00
19.7.2.3	110 mm dia	each	458.00
19.7.2.4	125mm dia	each	605.00
19.7.2.5	140 mm dia	each	779.00
19.7.2.6	160 mm dia	each	1,081.00
19.7.2.7	180mm dia	each	1,498.00
19.7.2.8	200mm dia	each	1,978.00
19.7.2.9	225 mm dia	each	2,760.00
19.7.2.10	250 mm dia	each	3,775.00
19.7.2.11	280 mm dia	each	5,130.00
19.7.2.12	315 mm dia	each	7,330.00
19.7.2.13	355 mm dia	each	10,200.00
19.7.2.14	400 mm dia	each	14,800.00
19.7.2.15	450 mm dia	each	21,000.00
19.7.3	End Cap		
19.7.3.1	75 mm dia	each	194.50
19.7.3.2	90 mm dia	each	215.50

Code No	Description	Unit	Rate Rs.
19.7.3.3	110 mm dia	each	270.50
19.7.3.4	125mm dia	each	297.00
19.7.3.5	140 mm dia	each	337.00
19.7.3.6	160 mm dia	each	451.00
19.7.3.7	180mm dia	each	491.50
19.7.3.8	200mm dia	each	660.00
19.7.3.9	225 mm dia	each	806.00
19.7.3.10	250 mm dia	each	994.00
19.7.3.11	280 mm dia	each	1,194.00
19.7.3.12	315 mm dia	each	1,333.00
19.7.3.13	355 mm dia	each	1,788.00
19.7.3.14	400 mm dia	each	2,635.00
19.7.3.15	450 mm dia	each	3,255.00
19.8	Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths HDPE Stub End (Long neck pipe end) of PE-100 grade & PN-6 (moulded/ machined) for potable water with MS galvanised flange as per to BS-10 table D/IS:1538 within pipeline in trenches complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.8.1	110mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 100mm dia	each	1,019.00
19.8.2	140/160 mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 125mm dia	each	1,099.00
19.8.3	200mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 200mm dia	each	1,310.00
19.8.4	250mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 250mm dia	each	1,485.00
19.8.5	315 mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 300mm dia	each	1,623.00
19.9	Providing, lowering, laying in trenches, aligning, fixing in position and jointing Ductile Iron (DI) ISI marked K-7 grade S&S pipes as per IS:8329-2000 (amended upto date), with internal cement mortar lining for potable water with rubber ring (EPDM/SBR) joints as per IS: 5382-1985 (excluding special accessories) complete including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.9.1	80mm	metre	1,214.00
19.9.2	100 mm	metre	1,444.00

Code No	Description	Unit	Rate Rs.
19.9.3	150mm	metre	1,955.00
19.9.4	200mm	metre	2,860.00
19.9.5	250mm	metre	3,130.00
19.9.6	300mm	metre	3,970.00
19.9.7	350 mm	metre	4,800.00
19.9.8	400 mm	metre	5,820.00
19.9.9	450 mm	metre	6,790.00
19.9.10	500 mm	metre	8,270.00
19.9.11	600mm	metre	10,800.00
19.9.12	700mm	metre	14,300.00
19.9.13	800mm	metre	17,850.00
19.9.14	900mm	metre	22,300.00
19.9.15	1000mm	metre	26,500.00
19.9.16	1100mm	metre	31,300.00
19.10	Providing, lowering, laying in trenches, aligning, fixing in position and jointing Ductile Iron (DI) ISI marked K-9 grade S&S pipes as per IS:8329-2000 (amended upto date), with internal cement mortar lining for potable water with rubber ring (EPDM/SBR) joints as per IS: 5382-1985 (excluding special accessories) complete including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.10.1	100mm	metre	1,630.00
19.10.2	150mm	metre	2,223.00
19.10.3	200mm	metre	2,885.00
19.10.4	250mm	metre	3,760.00
19.10.5	300mm	metre	4,745.00
19.10.6	350 mm	metre	5,740.00
19.10.7	400 mm	metre	6,950.00
19.10.8	450 mm	metre	8,210.00
19.10.9	500 mm	metre	9,790.00
19.10.10	600mm	metre	12,800.00
19.10.11	700mm	metre	16,100.00
19.10.12	800mm	metre	19,700.00
19.10.13	900mm	metre	23,900.00
19.10.14	1000mm	metre	28,700.00
19.10.15	1100mm	metre	34,600.00

Code No	Description	Unit	Rate Rs.
19.10.16	1200 mm	metre	40,000.00
19.11	Providing, lowering, laying in trenches, aligning, fixing in position and jointing Ductile Iron (DI) ISI marked K-9 grade Double Chambered Restrained Joint pipes as per IS:8329-2000 and ISO:10804-2018 (amended up to date), with rubber ring (EPDM) joints as per IS: 5382-1985 (excluding special accessories), locking rings and locking bars complete including all material, labour, hydraulic testing and commissioning as per technical specifications and as per direction of Engineer in pipeline bends with designed restraining length of Double Chambered Restrained Joint pipes in place of thrust blocks. Note : E/w to be measured and paid separately.		
19.11.1	100mm	metre	2,371.00
19.11.2	150mm	metre	3,280.00
19.11.3	200mm	metre	4,200.00
19.11.4	250mm	metre	5,550.00
19.11.5	300mm	metre	7,030.00
19.11.6	350 mm	metre	8,580.00
19.11.7	400 mm	metre	10,400.00
19.11.8	450 mm	metre	12,350.00
19.11.9	500 mm	metre	14,900.00
19.11.10	600mm	metre	19,400.00
19.11.11	700mm	metre	25,400.00
19.11.12	800mm	metre	28,000.00
19.11.13	900mm	metre	30,700.00
19.11.14	1000mm	metre	37,400.00
19.11.15	1100mm	metre	43,900.00
19.12	Providing, lowering, laying in trenches, aligning, fixing in position and jointing at all level/ depths DI K-12 standard, Ductile Iron Double Chambered Restrained Joint sends of 90°, 45°, 22.5° and 11.25° with rubber ring (EPDM) joints as per IS: 5382-1985, locking rings and locking bars within trenches in DI Restrained Joint pipe line complete including all material, labour, testing and commissioning along with pipe line and as per technical specifications and as per direction of Engineer.		
19.12.1	Specials Double Chambered Restrained joint DI K-12		
19.12.1.1	Upto 600 mm dia	kg	331.50
19.12.1.2	Above 600 mm dia	kg	389.00
19.13	Providing, lowering, laying in trenches, aligning, fixing in position and double flanged (welded) centrifugally (spun) Ductile iron ISI marked K-9 grade pipes as per IS:8329-2000 (amended upto date),		

Code No	Description	Unit	Rate Rs.
	(including jointing and jointing material) complete including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.13.1	100mm	metre	2,414.00
19.13.2	150mm	metre	3,120.00
19.13.3	200mm	metre	4,205.00
19.13.4	250mm	metre	5,550.00
19.13.5	300mm	metre	6,840.00
19.13.6	350 mm	metre	8,780.00
19.13.7	400 mm	metre	10,800.00
19.13.8	450 mm	metre	13,500.00
19.13.9	500 mm	metre	16,150.00
19.13.10	600mm	metre	21,300.00
19.13.11	700mm	metre	27,900.00
19.13.12	800mm	metre	33,300.00
19.13.13	900mm	metre	41,100.00
19.13.14	1000mm	metre	47,700.00
19.13.15	1100mm	metre	59,200.00
19.14	Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths DI K-12 standard specials with rubber ring (EPDM/SBR) joints as per IS: 5382-1985 such as tees, bends, tapers, caps etc. within trenches in DI pipe line complete including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.14.1	Specials S&S DI K-12		
19.14.1.1	Upto 300mm dia	Kg	130.50
19.14.1.2	Above 300mm dia and upto 600mm dia	Kg	137.00
19.14.1.3	Above 600mm dia and upto 900mm dia	kg	164.50
19.14.1.4	Above 900mm dia	kg	176.00
19.14.2	Specials flanged DI K-12		
19.14.2.1	Upto 300mm	Kg	133.00
19.14.2.2	Above 300mm dia and upto 600mm dia	Kg	142.00
19.14.2.3	Above 600mm dia and upto 900mm dia	kg	171.50
19.14.2.4	Above 900mm dia	kg	190.50

Code No	Description	Unit	Rate Rs.
19.15	Providing, lowering, laying, aligning, fixing in position at all level/ depths CI Class - B double flanged pipes of standard length of 2.75m as per IS : 7181 in trenches complete (including jointing and jointing material) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.15.1	100mm	metre	2,730.00
19.15.2	125mm	metre	3,525.00
19.15.3	150mm	metre	4,310.00
19.15.4	200mm	metre	6,170.00
19.15.5	250mm	metre	8,250.00
19.15.6	300mm	metre	10,550.00
19.15.7	350 mm	metre	13,000.00
19.15.8	400 mm	metre	16,050.00
19.15.9	450 mm	metre	19,350.00
19.15.10	500 mm	metre	22,700.00
19.15.11	600mm	metre	30,400.00
19.15.12	700mm	metre	39,200.00
19.15.13	750mm	metre	44,200.00
19.15.14	800mm	metre	49,400.00
19.15.15	900mm	metre	59,300.00
19.15.16	1000mm	metre	70,900.00
19.16	Providing, lowering, laying, aligning, fixing in position at all level/ depths CI Class - B double flanged specials as per IS : 7181 in trenches complete (excluding jointing) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.16.1	Standard specials	kg	105.50
19.16.2	Non-standard specials	kg	108.00
19.17	Fabrication, supply of flanged/ plain ended MS pipe made from MS sheet strips of relevant IS specification of approved thickness by welding, lowering, laying, aligning, fixing in position at all level/ depths in trenches complete (excluding flanged jointing wherever required) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.17.1	MS pipe upto 600mm dia (with minimum 5mm thickness sheet)	kg	141.00
19.17.2	MS pipe above 600mm dia (with minimum 6.3mm thickness sheet)	kg	144.00

Code No	Description	Unit	Rate Rs.
19.18	Fabrication, supply of flanged/ plain ended MS pipe made from MS sheet strips of relevant IS specification of approved thickness by welding, lowering, laying, aligning, fixing in position at all level/ depths in trenches complete (excluding flanged jointing wherever required) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.18.1	MS pipe specials upto 600mm dia (with minimum 5mm thickness sheet)	kg	144.00
19.18.2	MS pipe specials above 600mm dia(with minimum 6.3mm thickness sheet)	kg	147.00
19.19	Providing and applying following Coating to the External surface of MS pipes, including preparation of surface by cleaning as per ISO 8502-3/ SSPC-SP10/ NACE No.2 near white blast cleaning and abrasive blasting to a finish to SA 2.5 as per ISO: 8501-1 and surface profile / anchor profile of 50-75 / 75-100 microns as per ISO: 8503-2, including field joint coating at site complete as per Technical specifications and direction of Engineer –in-charge: 3 LPE (3 Layer Polyethylene) / DFBE (Dual Layer Fusion Bonded Epoxy)/ PU (Polyurethane)/ Polyolefin Tape coating .	SQM	1,143.00
19.20	Providing and applying Solvent free, two pack liquid epoxy lining to internal surface of M.S. Pipe as per BS 6920:2000 and AWWA C210 standard including preparation of internal surface of pipe by cleaning and abrasive blasting including field joints coating at site complete as per technical specification and direction of Engineer in charge. Liquid Epoxy shall be NSF/WARS approved for drinking water	SQM	568.00
19.21	Providing and applying 100% Solids, Rigid, DTM Polyurethane Coating to internal surface of M.S. Pipe as per AWWA C222 standard including preparation of internal surface of pipe by cleaning and abrasive blasting including field joints coating at site complete as per technical specification and direction of Engineer in charge. Polyurethane Coating shall be NSF/WARS/SS-375 approved for drinking water.	SQM	603.00
19.22	Providing and making inner cement mortar lining to M.S. Pipes with mechanical devices in cement mortar 1:1 proportion , including cost of all materials, labour, special sand required, machinery, power generation, all equipments, including carrying out "C" value performance test of pipeline, including field joints at site complete as per technical specification and direction of Engineer in charge.		
19.22.1	9 mm thick for pipes upto 700 mm dia	SQM	375.00
19.22.2	12 mm thick for pipes above 700 mm dia	SQM	410.50
19.23	Providing and making flanged joints to double flanged C.I./ D.I. pipes and specials such as tees, bends, tapers, caps etc. at all level/ depths within trenches complete including all material i.e. rubber insertions, bolts & nuts etc, labour, testing of joint, commissioning		

Code No	Description	Unit	Rate Rs.
	along with pipe line as per Technical Specifications and as per direction of Engineer.		
19.23.1	100mm	each	386.00
19.23.2	125mm	each	387.50
19.23.3	150mm	each	528.00
19.23.4	200mm	each	604.00
19.23.5	250mm	each	895.00
19.23.6	300mm	each	906.00
19.23.7	350 mm	each	1,307.00
19.23.8	400 mm	each	2,120.00
19.23.9	450 mm	each	2,640.00
19.23.10	500 mm	each	2,935.00
19.23.11	600mm	each	3,925.00
19.23.12	700mm	each	5,100.00
19.23.13	800mm	each	5,170.00
19.23.14	900mm	each	5,950.00
19.23.15	1000mm	each	5,970.00
19.23.16	1100mm	each	6,970.00
19.24	Providing and making house service connections from water supply distribution HDPE pipe line upto water meter chamber inside the property using HDPE (Class-PE 80) PN 6 composite pipes for upto 5 metre length. The item consisting of composite pipes of HDPE pipe below the ground level and GI class B pipe above the ground level including supply and fixing of ferrules, electro fusion saddle, clamps, rubber sheets, tapping, compression fittings etc, complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.24.1	20 mm Diameter HDPE below the ground & 15 mm GI pipe class B above the ground	each	1,366.00
19.24.2	25 mm Diameter HDPE below the ground & 20 mm GI pipe class B above the ground	each	1,482.00
19.24.3	32 mm Diameter HDPE below the ground & 25 mm GI pipe class B above the ground	each	1,668.00
19.25	Providing and making house service connections from water supply distribution uPVC/ DI/ CI pipe line upto water meter chamber inside the property using MDPE/ HDPE (Class-PE 80) PN 6 composite pipes for upto 5 metre length. The item consisting of composite pipes of MDPE/ HDPE pipe below the ground level and GI class B pipe above the ground level including supply and fixing of ferrules, clamps, rubber sheets, tapping, compression fittings etc, complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		

Code No	Description	Unit	Rate Rs.
19.25.1	With MDPE pipe		
19.25.1.1	20 mm Diameter MDPE below the ground & 15 mm GI pipe class B above the ground	each	755.00
19.25.1.2	25 mm Diameter MDPE below the ground & 20 mm GI pipe class B above the ground	each	942.00
19.25.1.3	32 mm Diameter MDPE below the ground & 25 mm GI pipe class B above the ground	each	1,203.00
19.25.2	With HDPE pipe		
19.25.2.1	20 mm Diameter HDPE below the ground & 15 mm GI pipe class B above the ground	each	771.00
19.25.2.2	25 mm Diameter HDPE below the ground & 20 mm GI pipe class B above the ground	each	963.00
19.25.2.3	32 mm Diameter HDPE below the ground & 25 mm GI pipe class B above the ground	each	1,243.00
19.26	Providing, lowering, laying & jointing MDPE/ HDPE pipes (Class-PE 80) PN 12.5 composite pipes for extra length for house service connections as per drawing and specifications complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.26.1	With MDPE pipe		
19.26.1.1	20 mm dia service pipe	metre	43.80
19.26.1.2	25 mm dia service pipe	metre	59.80
19.26.1.3	32 mm dia service pipe	metre	91.50
19.26.2	With HDPE pipe		
19.26.2.1	20 mm dia service pipe	metre	50.00
19.26.2.2	25 mm dia service pipe	metre	67.50
19.26.2.3	32 mm dia service pipe	metre	106.00
19.27	Providing, lowering, laying, aligning, fixing in position in pipe line, manually operated CI D/F Sluice valves of approved make (IS: 14846 amended upto date) PN 1.0 class of following dia complete (including jointing and jointing material) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer.		
19.27.1	80 mm dia	each	4,720.00
19.27.2	100 mm dia	each	6,280.00
19.27.3	125 mm dia	each	8,450.00
19.27.4	150 mm dia	each	10,100.00
19.27.5	200 mm dia	each	16,700.00
19.27.6	250 mm dia	each	25,800.00

Code No	Description	Unit	Rate Rs.
19.27.7	300 mm dia	each	32,300.00
19.27.8	350 mm dia	each	49,100.00
19.27.9	400 mm dia	each	62,700.00
19.27.10	450 mm dia	each	77,200.00
19.27.11	500 mm dia	each	96,600.00
19.27.12	600 mm dia	each	1,42,300.00
19.27.13	700 mm dia	each	2,65,800.00
19.27.14	750 mm dia	each	2,95,700.00
19.27.15	800 mm dia	each	3,59,600.00
19.27.16	900 mm dia	each	4,70,500.00
19.27.17	1000 mm dia	each	7,22,200.00
19.28	Providing, lowering, laying, aligning, fixing in position in pipe line, manually operated DI D/F Sluice valves of approved make PN 1.0 class of following dia complete (including jointing and jointing material) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer.		
19.28.1	80 mm dia	each	6,710.00
19.28.2	100 mm dia	each	8,600.00
19.28.3	125 mm dia	each	10,150.00
19.28.4	150 mm dia	each	11,800.00
19.28.5	200 mm dia	each	18,350.00
19.28.6	250 mm dia	each	31,900.00
19.28.7	300 mm dia	each	42,300.00
19.28.8	350 mm dia	each	56,900.00
19.28.9	400 mm dia	each	62,800.00
19.28.10	450 mm dia	each	1,10,200.00
19.28.11	500 mm dia	each	1,12,200.00
19.28.12	600 mm dia	each	1,58,900.00
19.28.13	700 mm dia	each	3,30,600.00
19.28.14	750 mm dia	each	3,99,800.00
19.28.15	800 mm dia	each	4,17,400.00
19.28.16	900 mm dia	each	7,16,400.00
19.28.17	1000 mm dia	each	7,62,100.00
19.29	Providing, lowering, laying, aligning, fixing in position in pipe line, Resilient Seated D/F DI Sluice valves of approved make & design standard of following dia complete (including jointing & jointing		

Code No	Description	Unit	Rate Rs.
	material) including all material, labour, testing and commissioning along with pipe line as per Technical Specification & as per direction of Engineer.		
19.29.1	Manually operated class PN 1.0		
19.29.1.1	80 mm dia	each	6,800.00
19.29.1.2	100 mm dia	each	8,790.00
19.29.1.3	125 mm dia	each	13,700.00
19.29.1.4	150 mm dia	each	14,250.00
19.29.1.5	200 mm dia	each	21,100.00
19.29.1.6	250 mm dia	each	32,200.00
19.29.1.7	300 mm dia	each	40,000.00
19.29.1.8	350 mm dia	each	60,700.00
19.29.1.9	400 mm dia	each	78,400.00
19.29.1.10	450 mm dia	each	98,600.00
19.29.1.11	500 mm dia	each	1,28,100.00
19.29.1.12	600 mm dia	each	1,85,400.00
19.29.2	Manually Operated Class PN 1.6		
19.29.2.1	80 mm dia	metre	7,890.00
19.29.2.2	100 mm dia	metre	9,990.00
19.29.2.3	125 mm dia	metre	14,350.00
19.29.2.4	150 mm dia	metre	15,750.00
19.29.2.5	200 mm dia	metre	23,300.00
19.29.2.6	250 mm dia	metre	35,700.00
19.29.2.7	300 mm dia	metre	44,900.00
19.29.2.8	350 mm dia	metre	72,500.00
19.29.2.9	400 mm dia	metre	93,500.00
19.29.2.10	450 mm dia	metre	1,19,800.00
19.29.2.11	500 mm dia	metre	1,57,000.00
19.29.2.12	600 mm dia.	metre	2,30,600.00
19.29.3	Manually Operated with gear Class PN 1.6		
19.29.3.1	700 mm dia.	metre	6,54,300.00
19.29.3.2	800 mm dia.	metre	9,08,900.00
19.29.3.3	900 mm dia.	metre	12,43,300.00
19.29.3.4	1000 mm dia.	metre	16,41,600.00
19.29.4	Electrically Operated & SCADA Compatible class PN 1.0		

Code No	Description	Unit	Rate Rs.
19.29.4.1	80 mm dia	each	63,200.00
19.29.4.2	100 mm dia	each	65,200.00
19.29.4.3	125 mm dia	each	70,100.00
19.29.4.4	150 mm dia	each	70,600.00
19.29.4.5	200 mm dia	each	96,500.00
19.29.4.6	250 mm dia	each	1,07,700.00
19.29.4.7	300 mm dia	each	1,15,400.00
19.29.4.8	350 mm dia	each	1,69,800.00
19.29.4.9	400 mm dia	each	1,87,500.00
19.29.4.10	450 mm dia	each	2,07,700.00
19.29.4.11	500 mm dia	each	2,37,200.00
19.29.4.12	600 mm dia	each	2,94,500.00
19.29.5	Electrically Operated & SCADA Compatible class PN 1.6		
19.29.5.1	80 mm dia	each	64,300.00
19.29.5.2	100 mm dia	each	66,400.00
19.29.5.3	125 mm dia	each	71,200.00
19.29.5.4	150 mm dia	each	72,900.00
19.29.5.5	200 mm dia	each	1,00,800.00
19.29.5.6	250 mm dia	each	1,17,500.00
19.29.5.7	300 mm dia	each	1,29,000.00
19.29.5.8	350 mm dia	each	2,09,500.00
19.29.5.9	400 mm dia	each	2,40,800.00
19.29.5.10	450 mm dia	each	2,84,700.00
19.29.5.11	500 mm dia	each	3,35,100.00
19.29.5.12	600 mm dia	each	4,41,200.00
19.30	Providing, lowering, aligning, fixing in position in pipe line, DI D/F resilient seated (soft seated) short body pattern type double eccentric Butterfly valves of approved make of following class & dia complete confirming to BS EN 593/ BS 5155/ IS 13095/1991 amended up to date and of following specifications: Body, disc and end cover of Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865 or equivalent grade as per IS :3896-part2-1985 and subsequent revisions, Face to face dimensions as per DIN 3202 F4/ IS 13095 Drilled as per IS:1538. Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on both body and disc inside and outside. Disc seal ring of EPDM/ Neoprene (food grade quality) and disc seal		

Code No	Description	Unit	Rate Rs.
	retaining ring of SS/CS. Shaft of SS- AISI- 304/316 & shaft bearings-bronze/ PTET or Teflon with EPDM/NBR "O "ring seal, Nut-Bolt confirming to IS:1363 and IS: 1367 (Galvenised steel) Insertion rubber of black EPDM 6mm thick. Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge. Note: Rates are exclusive of tail piece/ dismantling joints and earth work.		
19.30.1	Class PN 1.6, Manually Operated without Gear		
19.30.1.1	100 mm dia	each	15,100.00
19.30.1.2	150 mm dia	each	29,500.00
19.30.1.3	200 mm dia	each	43,900.00
19.30.1.4	250 mm dia	each	58,200.00
19.30.1.5	300 mm dia	each	72,800.00
19.30.1.6	350 mm dia	each	87,600.00
19.30.1.7	400 mm dia	each	1,02,700.00
19.30.1.8	450 mm dia	each	1,17,500.00
19.30.1.9	500 mm dia	each	1,32,200.00
19.30.1.10	600 mm dia	each	1,47,500.00
19.30.1.11	700 mm dia	each	1,61,800.00
19.30.1.12	800 mm dia.	each	1,76,100.00
19.30.1.13	900 mm dia.	each	1,90,400.00
19.30.1.14	1000 mm dia.	each	2,04,700.00
19.30.2	Class PN 1.6 Manually Operated With Gear		
19.30.2.1	100 mm dia	each	28,000.00
19.30.2.2	150 mm dia	each	42,400.00
19.30.2.3	200 mm dia	each	61,900.00
19.30.2.4	250 mm dia	each	76,100.00
19.30.2.5	300 mm dia	each	92,100.00
19.30.2.6	350 mm dia	each	1,18,000.00
19.30.2.7	400 mm dia	each	1,33,100.00
19.30.2.8	450 mm dia	each	1,47,900.00
19.30.2.9	500 mm dia	each	1,62,700.00
19.30.2.10	600 mm dia	each	1,79,400.00
19.30.2.11	700 mm dia.	each	2,03,500.00
19.30.2.12	800 mm dia.	each	2,17,800.00
19.30.2.13	900 mm dia.	each	2,32,100.00

Code No	Description	Unit	Rate Rs.
19.30.2.14	1000 mm dia.	each	2,70,700.00
19.30.3	Class PN 1.0, Motorised Operated		
19.30.3.1	700 mm dia	each	1,61,800.00
19.30.3.2	800 mm dia.	each	1,76,100.00
19.30.3.3	900 mm dia.	each	1,90,400.00
19.30.3.4	1000 mm dia.	each	2,04,700.00
19.30.4	Class PN 1.6, Motorised Operated		
19.30.4.1	700 mm dia.	each	1,61,800.00
19.30.4.2	800 mm dia.	each	1,76,100.00
19.30.4.3	900 mm dia.	each	1,90,400.00
19.30.4.4	1000 mm dia.	each	2,04,700.00
19.31	Providing, lowering, aligning, fixing in position in pipe line, DI resilient seated (soft seated) Concentric Wafer type, Butterfly valves of approved make of following Pressure rating & dia complete confirming to BS EN 593/ BS 5155/ IS 13095/1991 amended up to date and of following specifications: Body- Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865 or equivalent grade as per IS :3896-part2-1985 and subsequent revisions, Disc - DI (same as body material) / CS, Face to face dimensions as per DIN 3202 F4/ IS 13095 , Flanges Drilled as per IS:1538 ,Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on both body and disc inside and outside . Liner & Disc seal - EPDM/ Neoprene (food grade quality) ,Shaft of SS- AISI- 410/420 & shaft bearings- bronze/ PTET or Teflon with EPDM/NBR "O "ring seal , Nut-Bolt confirming to IS:1363 and IS: 1367/ Galvenised steel, Insertion rubber of black EPDM 6mm thick ,Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge. Note: Rates are exclusive of tail piece/ dismantling joints and earth work.		
19.31.1	Class PN 1.6		
19.31.1.1	80 mm (Lever Operated)	each	9,140.00
19.31.1.2	100 mm (Lever Operated)	each	11,100.00
19.31.1.3	125 mm (Lever Operated)	each	18,600.00
19.31.1.4	150 mm (Lever Operated)	each	20,200.00
19.31.1.5	200 mm (with Gear)	each	30,500.00
19.31.1.6	250 mm (with Gear)	each	39,300.00
19.31.1.7	300 mm (with Gear)	each	43,700.00

Code No	Description	Unit	Rate Rs.
19.32	Providing, lowering, laying, aligning, fixing in position C.I. D/F manually operated long body butterfly valves (IS: 13095) PN-1.0 class of following dia complete (including jointing and jointing material) including all material, labour, testing along with pipe line and commissioning as per Technical Specifications and as per direction of Engineer		
19.32.1	80 mm dia	each	4,460.00
19.32.2	100 mm dia	each	5,360.00
19.32.3	125 mm dia	each	7,220.00
19.32.4	150 mm dia	each	8,290.00
19.32.5	200 mm dia	each	14,550.00
19.32.6	250 mm dia	each	19,750.00
19.32.7	300 mm dia	each	24,100.00
19.32.8	350 mm dia	each	36,900.00
19.32.9	400 mm dia	each	49,100.00
19.32.10	450 mm dia	each	53,000.00
19.32.11	500 mm dia	each	55,200.00
19.32.12	600 mm dia	each	88,900.00
19.32.13	700 mm dia	each	1,43,000.00
19.32.14	750 mm dia	each	1,68,400.00
19.32.15	800 mm dia	each	1,79,100.00
19.32.16	900 mm dia	each	2,29,300.00
19.32.17	1000 mm dia	each	2,94,000.00
19.33	Providing, lowering, laying, aligning, fixing in position D.I. D/F manually operated long body butterfly valves PN-1.0 class of following dia complete (including jointing and jointing material) including all material, labour, testing along with pipe line and commissioning as per Technical Specifications and as per direction of Engineer		
19.33.1	80 mm dia	each	5,510.00
19.33.2	100 mm dia	each	6,600.00
19.33.3	125 mm dia	each	8,920.00
19.33.4	150 mm dia	each	10,200.00
19.33.5	200 mm dia	each	18,050.00
19.33.6	250 mm dia	each	24,500.00
19.33.7	300 mm dia	each	29,900.00
19.33.8	350 mm dia	each	45,800.00
19.33.9	400 mm dia	each	60,900.00

Code No	Description	Unit	Rate Rs.
19.33.10	450 mm dia	each	65,600.00
19.33.11	500 mm dia	each	68,300.00
19.33.12	600 mm dia	each	1,10,200.00
19.33.13	700 mm dia	each	1,89,000.00
19.33.14	750 mm dia	each	2,19,200.00
19.33.15	800 mm dia	each	2,31,300.00
19.33.16	900 mm dia	each	3,00,900.00
19.33.17	1000 mm dia	each	3,95,900.00
19.34	Providing, lowering, laying, aligning, fixing in position in pipe line, Resilient Seated D/F DI Butterfly valves of approved make & design standard of following dia. complete (including jointing & jointing material) including all material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer.		
19.34.1	Manually operated (PN 1.0 class)		
19.34.1.1	80 mm dia	each	8,340.00
19.34.1.2	100 mm dia	each	10,100.00
19.34.1.3	125 mm dia	each	13,000.00
19.34.1.4	150 mm dia	each	15,450.00
19.34.1.5	200 mm dia	each	24,700.00
19.34.1.6	250 mm dia	each	31,300.00
19.34.1.7	300 mm dia	each	43,900.00
19.34.1.8	350 mm dia	each	49,100.00
19.34.1.9	400 mm dia	each	68,900.00
19.34.1.10	450 mm dia	each	86,300.00
19.34.1.11	500 mm dia	each	98,100.00
19.34.1.12	600 mm dia	each	1,20,100.00
19.34.2	Electrically Operated & SCADA Compatible (PN 1.0 class)		
19.34.2.1	80 mm dia	each	64,700.00
19.34.2.2	100 mm dia	each	66,500.00
19.34.2.3	125 mm dia	each	69,400.00
19.34.2.4	150 mm dia	each	71,800.00
19.34.2.5	200 mm dia	each	1,00,100.00
19.34.2.6	250 mm dia	each	1,06,700.00
19.34.2.7	300 mm dia	each	1,19,400.00
19.34.2.8	350 mm dia	each	1,58,200.00

Code No	Description	Unit	Rate Rs.
19.34.2.9	400 mm dia	each	1,77,900.00
19.34.2.10	450 mm dia	each	1,95,300.00
19.34.2.11	500 mm dia	each	2,07,100.00
19.34.2.12	600 mm dia	each	2,29,200.00
19.34.3	Manually operated (PN 1.6 class)		
19.34.3.1	80 mm dia	each	11,100.00
19.34.3.2	100 mm dia	each	15,000.00
19.34.3.3	125 mm dia	each	18,650.00
19.34.3.4	150 mm dia	each	21,300.00
19.34.3.5	200 mm dia	each	26,900.00
19.34.3.6	250 mm dia	each	34,400.00
19.34.3.7	300 mm dia	each	46,200.00
19.34.3.8	350 mm dia	each	65,200.00
19.34.3.9	400 mm dia	each	91,100.00
19.34.3.10	450 mm dia	each	1,12,000.00
19.34.3.11	500 mm dia	each	1,57,400.00
19.34.3.12	600 mm dia	each	2,01,900.00
19.34.4	Electrically Operated & SCADA Compatible (PN 1.6 class)		
19.34.4.1	80 mm dia	each	67,500.00
19.34.4.2	100 mm dia	each	71,400.00
19.34.4.3	125 mm dia	each	75,000.00
19.34.4.4	150 mm dia	each	77,700.00
19.34.4.5	200 mm dia	each	1,02,300.00
19.34.4.6	250 mm dia	each	1,09,800.00
19.34.4.7	300 mm dia	each	1,21,700.00
19.34.4.8	350 mm dia	each	1,74,200.00
19.34.4.9	400 mm dia	each	2,00,200.00
19.34.4.10	450 mm dia	each	2,21,100.00
19.34.4.11	500 mm dia	each	2,66,500.00
19.34.4.12	600 mm dia	each	3,11,000.00
19.35	Providing, lowering, laying, aligning, fixing in position jointing in pipeline following dia D/F DI Plunger valve (Flow Control Valve) PN 1.6 class with electrical actuator suitable for SCADA compatibility complete (including jointing & jointing material) including all material, labour, testing and commissioning as per Technical Specification & as per direction of Engineer.		

Code No	Description	Unit	Rate Rs.
19.35.1	80mm diameter	each	2,98,800.00
19.35.2	100mm diameter	each	3,28,500.00
19.35.3	125mm diameter	each	3,65,600.00
19.35.4	150mm diameter	each	4,04,300.00
19.35.5	200mm diameter	each	4,82,100.00
19.35.6	250mm diameter	each	5,81,300.00
19.35.7	300mm diameter	each	7,04,100.00
19.35.8	350mm diameter	each	7,87,100.00
19.35.9	400mm diameter	each	9,88,500.00
19.35.10	450mm diameter	each	10,41,800.00
19.35.11	500mm diameter	each	13,66,400.00
19.35.12	600mm diameter	each	17,40,500.00
19.35.13	700mm diameter	each	28,11,400.00
19.35.14	800mm diameter	each	36,06,700.00
19.35.15	900mm diameter	each	49,58,200.00
19.35.16	1000mm diameter	each	51,44,700.00
19.36	Providing, Supplying and fixing of D/F DI Pressure Reducing Valve in pipe line including jointing etc. complete as per standard/ technical specification and direction of Engineer-in-Charge.		
19.36.1	100mm diameter	each	57,200.00
19.36.2	150mm diameter	each	76,700.00
19.36.3	200mm diameter	each	1,08,600.00
19.36.4	250mm diameter	each	1,55,500.00
19.36.5	300mm diameter	each	2,03,300.00
19.36.6	350mm diameter	each	3,34,500.00
19.36.7	400mm diameter	each	4,28,100.00
19.37	Supply, installation, testing & commissioning of self-powered multifunction network controller for dynamically reconfigurable DMAs including an energy harvester (e-Power), a vortex flow meter (e-Flow) and a modulating type actuator for position control, an InfraSense TS for continuous high-speed (128 S/s) time-synchronized (5 ms) sampling, and retrofitted with a PRV with the developed multifunction network controller.	each	35,00,000.00
19.38	Supply, installation, testing & commissioning of Artificial Intelligence platform to monitor and modulate the instruments in real time for dynamically reconfigurable DMAs.	each	1,15,00,000.00
19.39	Providing, lowering, laying, aligning, fixing in position jointing in pipeline following dia D/F DI diaphragm type (Flow Control Valve)		

Code No	Description	Unit	Rate Rs.
	PN 1.6 class with Electrical actuator valve, suitable for SCADA compatibility complete (including jointing & jointing material) including all material, labour, testing and commissioning as per Technical Specification & as per direction of Engineer.		
19.39.1	40mm diameter	each	1,69,400.00
19.39.2	50mm diameter	each	1,72,300.00
19.39.3	65mm diameter	each	1,82,000.00
19.39.4	80mm diameter	each	1,93,800.00
19.39.5	100mm diameter	each	2,01,800.00
19.39.6	125mm diameter	each	2,04,300.00
19.39.7	150mm diameter	each	2,31,600.00
19.39.8	200mm diameter	each	2,66,900.00
19.39.9	250mm diameter	each	3,54,100.00
19.39.10	300mm diameter	each	4,84,400.00
19.39.11	350mm diameter	each	6,39,800.00
19.39.12	400mm diameter	each	7,44,700.00
19.39.13	450mm diameter	each	10,44,200.00
19.39.14	500mm diameter	each	12,10,200.00
19.39.15	600mm diameter	each	16,66,700.00
19.40	Providing, lowering, laying, aligning, fixing in position jointing in pipeline following dia D/F DI solenoid operated diaphragm type (Flow Control Valve) PN 1.6 class valve, suitable for SCADA compatibility complete (including jointing & jointing material) including all material, labour, testing and commissioning as per Technical Specification & as per direction of Engineer		
19.40.1	40mm diameter	each	1,04,600.00
19.40.2	50mm diameter	each	1,04,600.00
19.40.3	65mm diameter	each	1,17,000.00
19.40.4	80mm diameter	each	1,25,600.00
19.40.5	100mm diameter	each	1,34,300.00
19.40.6	125mm diameter	each	1,39,300.00
19.40.7	150mm diameter	each	1,47,000.00
19.40.8	200mm diameter	each	1,76,000.00
19.40.9	250mm diameter	each	2,73,500.00
19.40.10	300mm diameter	each	3,62,300.00
19.40.11	350mm diameter	each	4,93,800.00
19.40.12	400mm diameter	each	6,01,000.00

Code No	Description	Unit	Rate Rs.
19.40.13	450mm diameter	each	7,46,500.00
19.40.14	500mm diameter	each	10,62,900.00
19.40.15	600mm diameter	each	14,69,100.00
19.41	Providing, lowering, aligning and fixing in position DI D/F Diaphragm type Pressure Reducing / Flow Control Valve of approved make of following Pressure rating & dia complete and of following specifications: Body & Bonnet - Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or ASTM A 536, Diaphragm and Resilient seal disc - Flexible, non-wicking nylon fabric reinforced synthetic elastomer -Buna-N / EPDM (FDA / WRAS approved), Body Seat Ring - Cast stainless steel ASTM- A 351 GR. CF8M / AISI- 316, raised, replaceable inline & onsite Stem - Stainless Steel, AISI-316, raised, replaceable inline & onsite Spring & Bearing bush- Stainless Steel, AISI-316 ,Disc guide, disc retainer & diaphragm washer - Stainless Steel, AISI-304/ 316/Bronze ,Seal- EPDM/ NBR ,Pilot Body- Stainless Steel, AISI-304/ CF8 or Brass Tubing - Stainless Steel, AISI-304 / Copper ,Solenoid Valve- Stainless Steel, AISI-316 ,Throttling plug - Stainless Steel, AISI-304, Nut- Bolts - SS Face to Face- as per ANSI B 16.1/ EN 558-1 and Flange ends should be as per ANSI B-16.5, Class 150 and Class 300/ EN-1092-2. Rubber insertion of black EPDM 6mm thick Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied both inside and outside. Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning as per Technical Specification & as per direction of Engineer-In- Charge. (Note: Rates are exclusive of tail piece/ dismantling joints and earth work.)		
19.41.1	Pilot operated SCADA Compatible (Class PN 1.6)		
19.41.1.1	80 mm dia	each	93,500.00
19.41.1.2	100 mm dia	each	1,03,500.00
19.41.1.3	125 mm dia	each	1,22,900.00
19.41.1.4	150 mm dia	each	1,33,700.00
19.41.1.5	200 mm dia	each	1,56,500.00
19.41.1.6	250 mm dia	each	2,25,000.00
19.41.1.7	300 mm dia	each	3,12,600.00
19.41.1.8	350 mm dia	each	4,27,400.00
19.41.1.9	400 mm dia	each	7,58,200.00
19.41.1.10	450 mm dia	each	10,47,000.00
19.41.1.11	500 mm dia	each	12,59,000.00
19.41.1.12	600 mm dia	each	18,43,200.00

Code No	Description	Unit	Rate Rs.
19.42	Supply, installation, testing & commissioning of modulating type electric actuator resistant to high pressure and robust design, torque 7-2000 Nm, motion range 0-360°, voltage 24V DC, applicable for actuating multi-turn valves, with Case Body, Opening Mete, Inlet Wire Lock, Rubber Cover of Handle Shaft, No-Bracket Installation, Gear Box Cover, Electric Cover, Wiring Cover, Handle Shaft Cover, Output Shaft & Adapter.		
19.42.1	Size 80 mm to 150 mm	each	50,000.00
19.42.2	Size 200 mm to 300 mm	each	66,000.00
19.42.3	Size 350 mm to 600 mm	each	95,000.00
19.42.4	Size 700 mm to 900 mm	each	1,49,000.00
19.42.5	Size 1000 mm	each	2,11,500.00
19.43	Providing, lowering, laying, aligning, fixing in position and jointing in pipe line CI Kinetic Double Air Valves as per IS:14845 of following dia (including jointing and jointing material), including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.43.1	50 mm dia	each	8,980.00
19.43.2	80 mm dia	each	9,960.00
19.43.3	100 mm dia	each	14,750.00
19.43.4	150 mm dia	each	32,200.00
19.43.5	200 mm dia	each	50,600.00
19.44	Providing, lowering, laying, aligning, fixing in position and jointing in pipe line DI Kinetic Double Air Valves of following dia (including jointing and jointing material), including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.44.1	50 mm dia	each	8,980.00
19.44.2	80 mm dia	each	9,960.00
19.44.3	100 mm dia	each	14,750.00
19.44.4	150 mm dia	each	31,900.00
19.44.5	200 mm dia	each	34,400.00
19.45	Providing, lowering, aligning, fixing in position and Jointing in pipe line, DI Body Flanged End Tamper proof Kinetic Air Valve class PN 1.6 of approved makes of following pressure rating and dia and as per following specifications: Governing standard - AWWA C512/ IS:14845:2000(amended up to date) Body, High pressure cover , Low pressure cover, Cowl and Joint support ring - Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865, Float- LP ball & HP ball : AISI 304 stainless Steel, Seat ring & Gasket - EPDM/NBR ,HP Orifice & HP orifice plug : Bronze/ SS ,Bush: Bronze ,Flanges as per IS/ BS, Drilled as per IS:1538.		

Code No	Description	Unit	Rate Rs.
	Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on body & cover inside and outside fasteners - CS/ Galvenised steel, Outlet of big orifice will have a screen to prevent Tamper of float, with DI metal seated D/F Non rising stem Sluice Valves as per (IS: 14846 amended upto date) PN 1.6 ratings Valves including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer in charge. Note: Rates are exclusive of connecting tee, pipe piece and earth work.		
19.45.1	40 mm dia	each	11,350.00
19.45.2	50 mm dia	each	11,700.00
19.45.3	80 mm dia	each	13,600.00
19.45.4	100 mm dia	each	20,200.00
19.45.5	150 mm dia	each	34,700.00
19.45.6	200 mm dia	each	47,500.00
19.46	Providing, lowering, aligning, fixing in position and Jointing in pipe line, combination Air Release Valve Kinetic type class PN 1.6 with single chamber housed Double orifice and have 3 functions, large Air exhaust, small Air venting and large air intake during vacuum of pipeline of approved makes of following pressure rating and dia and as per following specifications: Governing standard - AWWA C512 ,Body and bonnet of Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865,Float & internal trim: AISI 304 stainless Steel, Seat ring & Gasket - EPDM/NBR Drilled as per IS:1538. Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on body & cover inside and outside Fasteners - CS/ Galvenised steel ,Outlet of big orifice will have a screen to prevent Tamper of float, Big orifice size should be equal or larger than the inlet flange bore, for fully comply with AWWA C512.), Valve including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer in charge. Note: Rates are exclusive of connecting tee, pipe piece and earth work.		
19.46.1	50 mm dia	each	15,600.00
19.46.2	80 mm dia	each	20,000.00
19.46.3	100 mm dia	each	26,800.00
19.46.4	150 mm dia	each	42,800.00
19.46.5	200 mm dia	each	53,600.00
19.47	Providing, lowering, laying, aligning, fixing in position and jointing in pipe line, CI screwed Air valves class PN-1.0 single ball of approved make, including screw down isolation valve of following dia including cost of all labour, jointing material i.e. bolts, nuts, rubber		

Code No	Description	Unit	Rate Rs.
	insertions etc. complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.47.1	25mm dia screwed end.	each	1,682.00
19.47.2	50 mm dia screwed end.	each	2,740.00
19.48	Providing, lowering, laying, aligning, fixing in position CI Flanged ends single ball air valves in pipe line suitable for potable water as per API:602/ API:598 at all level/ depth including all material, labour, hydraulic testing and commissioning as per technical specifications and as per direction of Engineer for following sizes:		
19.48.1	80 mm dia	each	5,370.00
19.48.2	100 mm dia	each	7,450.00
19.48.3	150 mm dia	each	11,250.00
19.49	Providing, lowering, laying, aligning, fixing in position and jointing in pipe line, C.I. dual plate check valves as per API:594 and API:598 of PN 1.0 rating of following dia (including jointing and jointing material), including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.49.1	CI PN 1.0		
19.49.1.1	80 mm dia	each	4,860.00
19.49.1.2	100 mm dia	each	5,760.00
19.49.1.3	125 mm dia	each	6,730.00
19.49.1.4	150 mm dia	each	8,670.00
19.49.1.5	200 mm dia	each	15,000.00
19.49.1.6	250 mm dia	each	20,300.00
19.49.1.7	300 mm dia	each	24,600.00
19.49.1.8	350 mm dia	each	37,500.00
19.49.1.9	400 mm dia	each	49,800.00
19.49.1.10	450 mm dia	each	53,700.00
19.49.1.11	500 mm dia	each	56,000.00
19.49.1.12	600 mm dia	each	89,800.00
19.49.1.13	700 mm dia	each	1,55,400.00
19.49.1.14	750 mm dia	each	1,78,100.00
19.49.1.15	800 mm dia	each	2,04,200.00
19.49.1.16	900 mm dia	each	2,84,000.00
19.49.1.17	1000 mm dia	each	3,67,500.00
19.50	Providing, lowering, laying, aligning, fixing in position and jointing in pipe line, DI dual plate check valves of PN 1.0 rating of following dia		

Code No	Description	Unit	Rate Rs.
	(including jointing and jointing material), including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.50.1	DI PN 1.0		
19.50.1.1	80 mm dia	each	5,690.00
19.50.1.2	100 mm dia	each	7,000.00
19.50.1.3	125 mm dia	each	8,590.00
19.50.1.4	150 mm dia	each	10,600.00
19.50.1.5	200 mm dia	each	18,500.00
19.50.1.6	250 mm dia	each	25,000.00
19.50.1.7	300 mm dia	each	30,400.00
19.50.1.8	350 mm dia	each	46,400.00
19.50.1.9	400 mm dia	each	61,500.00
19.50.1.10	450 mm dia	each	66,300.00
19.50.1.11	500 mm dia	each	69,100.00
19.50.1.12	600 mm dia	each	1,11,100.00
19.50.1.13	700 mm dia	each	2,89,100.00
19.50.1.14	750 mm dia	each	3,35,500.00
19.50.1.15	800 mm dia	each	3,54,300.00
19.50.1.16	900 mm dia	each	4,61,100.00
19.50.1.17	1000 mm dia	each	5,64,400.00
19.51	Providing, lowering, laying, aligning, fixing in position and jointing in pipe line, DI Resilient Seated Dual Plate Check Valves in accordance with BS EN 12334 of following dia (including jointing and jointing material), including material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.51.1	Class PN 1.0		
19.51.1.1	100mm diameter	each	5,900.00
19.51.1.2	150mm diameter	each	9,210.00
19.51.1.3	200mm diameter	each	14,000.00
19.51.1.4	250mm diameter	each	22,300.00
19.51.2	Class PN 1.6		
19.51.2.1	100mm diameter	each	6,410.00
19.51.2.2	150mm diameter	each	10,050.00
19.51.2.3	200mm diameter	each	15,250.00
19.51.2.4	250mm diameter	each	24,500.00

Code No	Description	Unit	Rate Rs.
19.52	Providing, lowering, aligning, fixing in position in pipe line, DI D/F resilient seated (soft seated) Swing type Non Return Valve of approved make of following Pressure rating & dia complete, generally confirming to IS: 5312 (part -1)/ 2004 (amended up to date) and of following specifications: Body, Bonnet & disc of Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865 or equivalent grade as per IS :3896-part2-1985 and subsequent revisions, Face to face dimensions as per IS 5312 (part -1):2004 Drilled as per IS:1538. Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on body, cover and disc inside and outside . Disc seal ring of EPDM/ Neoprene (food grade quality) and disc seal retaining ring of SS/CS. Shaft of SS- AISI- 410, Hinge SS AISI 316/410 ,Bonnet Gasket EPDM ,Bush- Brass with EPDM/NBR "O "ring seal Nut-Bolt confirming to IS:1363 and IS: 1367 (galvanised steel) Insertion rubber of black EPDM 6mm thick. Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge. Note: Rates are exclusive of tail piece/ dismantling joints and earth work.		
19.52.1	Class PN 1.6		
19.52.1.1	80 mm dia	each	8,210.00
19.52.1.2	100 mm dia	each	10,900.00
19.52.1.3	125 mm dia	each	15,350.00
19.52.1.4	150 mm dia	each	18,900.00
19.52.1.5	200 mm dia	each	32,000.00
19.52.1.6	250 mm dia	each	48,400.00
19.52.1.7	300 mm dia	each	68,700.00
19.52.1.8	350 mm dia	each	1,10,700.00
19.52.1.9	400 mm dia	each	1,14,300.00
19.52.1.10	450 mm dia	each	1,85,100.00
19.52.1.11	500 mm dia	each	2,20,800.00
19.52.1.12	600 mm dia	each	2,91,400.00
19.53	Providing, lowering, aligning, fixing in position in pipe line, DI double flanged resilient seated Dual plate check valve of approved make of following Pressure rating & dia complete, as per API: 594/ API: 598 and of following specifications: Body & Bonnet of Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865 or equivalent grade as per IS :3896-part2-1985 and subsequent revisions, Disc / plates - SG-400/12 or CF-8M,Face to face dimensions as per API: 594 , Flanges Drilled as per IS:1538. Electrostatic Epoxy Powder(EP-P) / Fusion Bonded Epoxy (Non-		

Code No	Description	Unit	Rate Rs.
	Toxic & suitable for drinking water) coated with minimum thickness of 250 micron applied on body and cover inside and outside . Disc seal ring of EPDM/ Neoprene (food grade quality) and disc seal retaining ring of SS/CS. Shaft of SS- AISI- 304/410 , Hinge SS AISI 316/304, Spring SS AISI 316/304, Bonnet Gasket EPDM , Bush- Brass with EPDM/NBR "O "ring seal, Nut-Bolt confirming to IS:1363 and IS: 1367 (galvanised steel) , Insertion rubber of black EPDM 6mm thick .Suitable support structure as per directions of EIC including jointing & jointing material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer-in-charge. Note: Rates are exclusive of tail piece/ dismantling joints and earth work.		
19.53.1	Class PN 1.6		
19.53.1.1	80 mm dia	each	11,100.00
19.53.1.2	100 mm dia	each	11,300.00
19.53.1.3	125 mm dia	each	18,650.00
19.53.1.4	150 mm dia	each	18,650.00
19.53.1.5	200 mm dia	each	28,200.00
19.53.1.6	250 mm dia	each	43,100.00
19.53.1.7	300 mm dia	each	46,200.00
19.53.1.8	350 mm dia	each	65,200.00
19.53.1.9	400 mm dia	each	91,100.00
19.53.1.10	450 mm dia	each	1,12,000.00
19.53.1.11	500 mm dia	each	1,57,400.00
19.53.1.12	600 mm dia	each	1,50,400.00
19.54	Providing, laying and fixing float valve system of following dia of C.I. with internal parts of auxiliary valve of copper float ball, gunmetal ball cap, brass lever, brass split pin, gunmetal piston & piston cap, washer of nitrile rubber with gunmetal body including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.54.1	150mm dia.	each	13,150.00
19.54.2	200mm dia.	each	17,600.00
19.54.3	250mm dia.	each	27,600.00
19.54.4	300mm dia.	each	40,500.00
19.54.5	350mm dia	each	63,700.00
19.54.6	400mm dia	each	1,07,600.00
19.55	Providing, lowering, laying, aligning, fixing in position and jointing CI Transition Coupling Joints for making connection between AC pipes and CI/DI pipes to match the outside diameter of following proposed pipe sizes for potable water including all jointing material as per		

Code No	Description	Unit	Rate Rs.
	manufacturer's specification, cost of all labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.55.1	80 mm dia	each	1,506.00
19.55.2	100 mm dia	each	1,726.00
19.55.3	125 mm dia	each	2,002.00
19.55.4	150 mm dia	each	2,110.00
19.55.5	200 mm dia	each	2,620.00
19.55.6	250 mm dia	each	3,165.00
19.55.7	300 mm dia	each	3,650.00
19.55.8	350 mm dia	each	5,580.00
19.55.9	400 mm dia	each	6,330.00
19.55.10	450 mm dia	each	7,710.00
19.55.11	500 mm dia	each	9,180.00
19.56	Providing, lowering, laying, aligning, fixing in position and jointing CI dismantling joint (suitable for sluice valves etc.) as per IS specifications complete of the following sizes including all jointing material, cost of all labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.56.1	80 mm dia PN-1.0	each	2,396.00
19.56.2	100 mm dia PN-1.0	each	2,635.00
19.56.3	125 mm dia PN-1.0	each	2,820.00
19.56.4	150 mm dia PN-1.0	each	4,145.00
19.56.5	200 mm dia PN-1.0	each	6,220.00
19.56.6	250 mm dia PN-1.0	each	8,630.00
19.56.7	300 mm dia PN-1.0	each	10,950.00
19.56.8	350 mm dia PN-1.0	each	13,300.00
19.56.9	400 mm dia PN-1.0	each	16,950.00
19.56.10	450 mm dia PN-1.0	each	18,750.00
19.56.11	500 mm dia PN-1.0	each	23,100.00
19.56.12	600 mm dia PN-1.0	each	34,600.00
19.56.13	700 mm dia PN-1.0	each	51,200.00
19.57	Providing, lowering, laying, aligning, fixing in position and jointing CI D- joint class-10 as per IS specifications complete of the following sizes including all jointing material, cost of all labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.57.1	80 mm dia	each	694.00

Code No	Description	Unit	Rate Rs.
19.57.2	100 mm dia	each	771.00
19.57.3	125 mm dia	each	859.00
19.57.4	150 mm dia	each	1,036.00
19.57.5	200 mm dia	each	1,360.00
19.57.6	250 mm dia	each	1,587.00
19.57.7	300 mm dia	each	1,928.00
19.57.8	350 mm dia	each	2,920.00
19.57.9	400 mm dia	each	3,515.00
19.57.10	450 mm dia	each	4,855.00
19.57.11	500 mm dia	each	6,150.00
19.57.12	600 mm dia	each	7,930.00
19.58	Providing, lowering, laying, aligning, fixing in position and jointing CI D- joint class-15 as per IS specifications complete of the following sizes including all jointing material, cost of all labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.58.1	80 mm dia	each	724.00
19.58.2	100 mm dia	each	809.00
19.58.3	125 mm dia	each	859.00
19.58.4	150 mm dia	each	1,100.00
19.58.5	200 mm dia	each	1,449.00
19.58.6	250 mm dia	each	1,699.00
19.58.7	300 mm dia	each	2,074.00
19.58.8	350 mm dia	each	3,145.00
19.58.9	400 mm dia	each	3,800.00
19.58.10	450 mm dia	each	5,280.00
19.58.11	500 mm dia	each	6,680.00
19.58.12	600 mm dia	each	8,640.00
19.59	Providing, lowering, laying, aligning, fixing in position CI Duckfoot bend in pipe line as per IS:1538 (amended up to date) suitable for potable water at all level/ depth including all material, labour hydraulic testing and commissioning as per technical specifications and as per direction of Engineer for following sizes:		
19.59.1	80 mm dia	each	2,423.00
19.59.2	100 mm dia	each	2,965.00
19.59.3	125 mm dia	each	3,795.00
19.59.4	150 mm dia	each	4,850.00

Code No	Description	Unit	Rate Rs.
19.59.5	200 mm dia	each	7,280.00
19.59.6	250 mm dia	each	10,650.00
19.59.7	300 mm dia	each	14,450.00
19.59.8	350 mm dia	each	20,900.00
19.59.9	400 mm dia	each	26,800.00
19.60	Providing, lowering, laying, aligning, fixing in position DI Duckfoot bend in pipe line as per IS:1538 (amended up to date) suitable for potable water at all level/ depth including all material, labour hydraulic testing and commissioning as per technical specifications and as per direction of Engineer for following sizes:		
19.60.1	80 mm dia	each	2,423.00
19.60.2	100 mm dia	each	2,950.00
19.60.3	125 mm dia	each	3,755.00
19.60.4	150 mm dia	each	4,835.00
19.60.5	200 mm dia	each	7,240.00
19.60.6	250 mm dia	each	12,100.00
19.60.7	300 mm dia	each	15,000.00
19.60.8	350 mm dia	each	23,900.00
19.60.9	400 mm dia	each	32,200.00
19.61	Providing, lowering, laying, aligning, fixing in position CI Foot valves in pipe line as per IS:4038-1986 (amended upto date) suitable for potable water at all level/ depth including all material, labour hydraulic testing and commissioning as per technical specifications and as per direction of Engineer for following sizes:		
19.61.1	80 mm dia	each	2,376.00
19.61.2	100 mm dia	each	3,025.00
19.61.3	125 mm dia	each	4,330.00
19.61.4	150 mm dia	each	7,200.00
19.61.5	200 mm dia	each	13,500.00
19.61.6	250 mm dia	each	19,800.00
19.61.7	300 mm dia	each	22,300.00
19.61.8	350 mm dia	each	42,200.00
19.61.9	400 mm dia	each	54,700.00
19.61.10	450 mm dia	each	59,900.00
19.61.11	500 mm dia	each	84,200.00
19.62	Providing and fixing Stain less steel AISI 304 Strainer Cylindrical type for out let, drain pipes of following sizes including all material		

Code No	Description	Unit	Rate Rs.
	labour as per Technical Specifications and as per direction of Engineer.		
19.62.1	150 mm dia	each	9,440.00
19.62.2	200 mm dia	each	15,150.00
19.62.3	250 mm dia	each	25,500.00
19.62.4	350 mm dia	each	35,000.00
19.62.5	400 mm dia	each	64,800.00
19.62.6	450 mm dia	each	70,000.00
19.62.7	500 mm dia	each	93,700.00
19.62.8	600 mm dia	each	1,10,900.00
19.63	Providing and fixing in position CI Puddle collar (approx. 1m length) inside the wall including all material labour as per Technical Specifications and as per direction of Engineer.		
19.63.1	80mm dia	each	4,210.00
19.63.2	100mm dia	each	4,810.00
19.63.3	125mm dia	each	5,770.00
19.63.4	150mm dia	each	6,920.00
19.63.5	200mm dia	each	9,760.00
19.63.6	250mm dia	each	12,600.00
19.63.7	300mm dia	each	16,000.00
19.63.8	350mm dia	each	20,700.00
19.63.9	400mm dia	each	24,800.00
19.63.10	450mm dia	each	30,100.00
19.63.11	500mm dia	each	36,600.00
19.64	Providing and fixing angle iron frame 25 x 25 x 3mm for ventilators fixed with 24 gauge square mesh of 14 gauge stainless steel wire including 10 mm square bars at interval of 100 mm welded to frame with metal beading of 20 x 3mm complete in all respect as per technical specifications and drawings as per technical specification and as per direction of Engineer.	sqm	114.00
19.65	Providing, installation, testing and commissioning of following Stain less steel AISI 304 Expansion bellows of 10/16 bar rating with tie rods as per technical specifications and layout drawings including jointing material like nuts, bolts, rubber gaskets etc. complete in all respect as per technical specification and as per direction of Engineer.		
19.65.1	80 mm dia	each	6,540.00
19.65.2	100 mm dia	each	7,200.00
19.65.3	125 mm dia	each	8,240.00

Code No	Description	Unit	Rate Rs.
19.65.4	150 mm dia	each	9,770.00
19.65.5	200 mm dia	each	12,450.00
19.65.6	250 mm dia	each	15,550.00
19.65.7	300 mm dia	each	17,100.00
19.65.8	350 mm dia	each	21,200.00
19.65.9	400 mm dia	each	31,000.00
19.65.10	450 mm dia	each	32,700.00
19.65.11	500 mm dia	each	44,700.00
19.65.12	600 mm dia	each	58,200.00
19.65.13	700 mm dia	each	83,300.00
19.65.14	800 mm dia	each	1,04,700.00
19.65.15	900 mm dia	each	1,25,900.00
19.65.16	1000 mm dia	each	1,59,200.00
19.66	Supply, fixing, testing and commissioning of Multi jet magnetic type domestic water meter Class-B confirming to IS:779-1996 / EEC/ MDIL with end coupling as per relevant technical specification and the direction of the Engineer		
19.66.1	15 mm size	each	1,564.00
19.66.2	20 mm size	each	2,317.00
19.66.3	25 mm size	each	3,475.00
19.66.4	32 mm size	each	8,330.00
19.66.5	50 mm size	each	10,750.00
19.67	Supplying and Replacing, testing and commissioning of existing Multi jet magnetic type domestic water meter Class-B confirming to IS:779-1996 / EEC/ MDIL with end coupling as per relevant technical specification and the direction of the Engineer.		
19.67.1	15 mm size	each	1,793.00
19.67.2	20 mm size	each	2,545.00
19.67.3	25 mm size	each	3,705.00
19.67.4	32 mm size	each	8,600.00
19.67.5	50 mm size	each	8,670.00
19.68	Supply, fixing, testing and commissioning of Orifice flow equalizer (Brass) for 15 mm domestic water meter with seal wire & seal complete set as per drawing. Weight of Orifice flow equalizer (Brass) complete set must be in 110 gm +/- 5% tolerance complete as per specification complete.		
19.68.1	To be fixed on new domestic water meter by replacing with nut and tail piece at delivery end	each	412.50

Code No	Description	Unit	Rate Rs.
19.68.2	To be fixed on old existing domestic water meter	each	565.00
19.69	Supplying and Fixing water METER BOX- with Weather resistant PE/ GRP box, press fitted Lid fixing & locking and locked with built-in or external lock.	each	750.00
19.70	Providing, installation, testing and commissioning of Electromagnetic Flow Meter etc. including all materials (excluding CI/DI fittings) and making connection with existing pipeline required for Electromagnetic Flow Meter including cutting the existing pipe line etc. complete in all respect as per technical specification and as per direction of Engineer.		
19.70.1	EMF80 for DN 80 mm	each	1,12,100.00
19.70.2	EMF100 for DN 100 mm	each	1,19,600.00
19.70.3	EMF150 for DN 150 mm	each	1,40,200.00
19.70.4	EMF200 for DN 200 mm	each	1,54,900.00
19.70.5	EMF250 for DN 250 mm	each	2,27,300.00
19.70.6	EMF300 for DN 300 mm	each	2,55,600.00
19.70.7	EMF400 for DN 400 mm	each	5,66,600.00
19.70.8	EMF450 for DN 450 mm	each	5,91,500.00
19.70.9	EMF500 for DN 500 mm	each	7,09,500.00
19.70.10	EMF600 for DN 600 mm	each	7,48,700.00
19.71	Providing, installation, testing and commissioning of Bulk Flow Meter with removable mechanism class "B" confirming to ISO: 4064/1 including all materials (excluding CI/DI fittings) and making connection with existing pipeline required for Bulk Flow Meter including cutting the existing pipe line etc complete in all respect as per technical specification and as per direction of Engineer.		
19.71.1	BFM80 for DN 80 mm	each	12,800.00
19.71.2	BFM100 for DN 100 mm	each	17,400.00
19.71.3	BFM125 for DN 125 mm	each	23,500.00
19.71.4	BFM150 for DN 150 mm	each	24,800.00
19.71.5	BFM200 for DN 200 mm	each	35,100.00
19.71.6	BFM250 for DN 250 mm	each	57,800.00
19.71.7	BFM300 for DN 300 mm	each	99,500.00
19.71.8	BFM400 for DN 400 mm	each	1,41,100.00
19.71.9	BFM500 for DN 500 mm	each	1,76,400.00
19.71.10	BFM600 for DN 600 mm	each	2,11,500.00
19.72	Construction of RCC valve chamber for different types of valves including earthwork excavation, 100 mm PCC M10 (1:3:6 i.e 1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal		

Code No	Description	Unit	Rate Rs.
	size) as levelling course, RCC M20 grade (1:1½:3 i.e. 1 Cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal) size for base slab, side wall & cover slab all 125 mm thick with C.I. surface box with hinged cover 100x100x75 mm (deep), including cost of steel reinforcement not less than 80 kg per cum CC, form work, proper curing of concrete work, complete in all respect as per standard specifications and drawings and as directed by Engineer-in-charge.		
19.72.1	1200 x 1200 x 1300 mm (depth) for 80/100/125/150 mm dia valve	each	9,850.00
19.72.2	1300 x 1300 x 1450 mm (depth) for 200/250/300 mm dia valve	each	16,650.00
19.72.3	1400 x 1600 x 1750 mm (depth) for 350/400/450/500/600 mm dia valve	each	22,700.00
19.73	Construction of brick masonry valve chamber for different type of valves with 75 class designation brick work in cement mortar 1:4 (1 cement : 4 coarse sand), wall 230 mm thick, top cover slab 150mm thick RCC M20 grade (1:1½:3 i.e. 1 Cement : 1½ coarse sand : 3 graded stone aggregate 20mm nominal size) with C.I. surface box with hinged cover 100x100x75mm (deep) including earthwork excavation, 100mm thick levelling course of PCC M10 (1:3:6 i.e. 1 Cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) including cost of steel reinforcement not less than 80kg per cum CC, form work, proper curing complete in all respect as per standard specifications and drawings and as directed by Engineer.		
19.73.1	60cm x 60cm x 75cm (depth) for 80/100/125/150 mm dia valve	each	7,340.00
19.73.2	90cm x 90cm x 100cm (depth) for 200/250/300 mm dia valve	each	12,750.00
19.73.3	120cm x 120cm x 100cm (depth) for 350/400/450/500/600 mm dia valve	each	17,600.00
19.74	Disinfecting water mains by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory :		
19.74.1	80 mm dia	metre	14.00
19.74.2	100 mm dia	metre	18.60
19.74.3	125 mm dia	metre	23.90
19.74.4	150 mm dia	metre	31.40
19.74.5	200 mm dia	metre	43.60
19.74.6	250 mm dia	metre	58.40
19.74.7	300 mm dia	metre	74.10
19.74.8	350 mm dia	metre	91.30
19.74.9	400 mm dia	metre	110.00
19.74.10	450 mm dia	metre	130.00

Code No	Description	Unit	Rate Rs.
19.74.11	500 mm dia	metre	152.00
19.74.12	600 mm dia	metre	199.50
19.74.13	700 mm dia	metre	256.50
19.74.14	750 mm dia	metre	323.50
19.74.15	800 mm dia	metre	396.50
19.74.16	900 mm dia	metre	479.50
19.74.17	1000 mm dia	metre	572.00
19.75	Extra for every operation of disinfecting the water main by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, including getting the samples of water tested in the municipal laboratory :		
19.75.1	80 mm dia	metre	5.35
19.75.2	100 mm dia	metre	6.85
19.75.3	125 mm dia	metre	8.85
19.75.4	150 mm dia	metre	11.50
19.75.5	200 mm dia	metre	15.50
19.75.6	250 mm dia	metre	21.10
19.75.7	300 mm dia	metre	25.10
19.75.8	350 mm dia	metre	30.40
19.75.9	400 mm dia	metre	35.40
19.75.10	450 mm dia	metre	44.70
19.75.11	500 mm dia	metre	50.60
19.75.12	600 mm dia	metre	67.80
19.75.13	700 mm dia	metre	86.90
19.75.14	750 mm dia	metre	108.00
19.75.15	800 mm dia	metre	131.00
19.75.16	900 mm dia	metre	160.00
19.75.17	1000 mm dia	metre	187.00
19.76	Supply of Chlorine Safety Equipment set comprising of the items Chlorine leak detector with two sensors, self contained compressed air breathing apparatus, safety shower with eye wash, emergency tonner repair kit, protective clothing such as PVC overall, gloves and rubber boots; complete as per detailed specifications & the directed of the Engineer.	set	2,83,300.00
19.77	Supply, fabricating & fixing of anodised (20 to 25 micron) Aluminium ladder of 450mm wide with 2 nos rectangular section of 65 x 35 mm (3 mm thick) as vertical post and 25 mm bars steps at 300 mm c/c complete in all respect as per the specification and the direction of	metre	1,730.00

Code No	Description	Unit	Rate Rs.
	the Engineer.		
19.78	Providing, fabricating and erecting MS ladder of 450mm wide made of 65 x 65 x 6mm angle iron and 20mm MS bars for walkway to top of the OHSR including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer complete in all respect as per specifications and the direction of the Engineer.	metre	1,877.00
19.79	Providing, fabricating and erecting MS ladder (with MS cage) of 450mm wide made of 65 x 65 x 6mm angle iron, 20mm MS bars for walk way to top of the OHSR and for cage flat 3 Nos-75 x 8 as vertical member and flat 40 x 5 as horizontal member 300 c/c including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete as per specification and the direction of the Engineer.	metre	4,640.00
19.80	Providing, fabricating and erecting hand railing for walkway, top dome slab, balcony, staircase and landing consist of two rows (one at top and other at middle level) of 20 mm GI pipe class-B and 900 mm high vertical angle 65X65X6 mm at spacing 1.50 m c/c including welding, threading, applying a priming coat of approved steel primer and embedding in cement concrete floor complete in all respect as per specification and the direction of the Engineer.	metre	1,000.00
19.81	Providing, installation, testing and commissioning of vacuum Feed Gas Chlorinator system with all accessories and making connection with existing pipeline required including supply & installation of ejector unit, Vacuum chlorination unit, trunnion roller support, auxiliary container valve, flexible copper connector, manifold valve, tonner manifold pipes, chlorine Pressure gauge, Isolation valve, gas filter, pressure reducing valve, chlorine gas pipe with fittings, diffuser, lifting beam, load indicator, 25 NB PP diaphragm Valve on injector inlet & outlet, 32 OD uPVC pipe for chlorine solution, 25 NB GI pipe for pump suction & delivery, 25 NB GM gate valve on pump suction & delivery, 25 NB GM 'Y' type strainer on pump suction, 25 NB GM Check valve on pump delivery, pressure gauge with Isolated valve on pump delivery and chlorine booster pump with motor of required capacity including safety equipment complete in all respect as per specification and the direction of the Engineer.		
19.81.1	1 kg/hr capacity	each	5,19,400.00
19.81.2	2 kg/hr capacity	each	5,29,700.00
19.81.3	3 kg/hr capacity	each	5,34,800.00
19.82	Supply of Chlorine Tonner as per specifications with rollers complete in all respect as per the direction of Engineer.	each	1,39,900.00
19.83	Providing, installation, testing and commissioning of Fiber Reinforced Plastic made hoods for each chlorine tonner along with necessary leak proof piping connected to air blowers for forced ventilation during probable chlorine tonner leakage completely interlocked with Chlorine Gas leak detector to main PLC. The scope includes FRP hood for all connected tonners, interconnecting piping,		

Code No	Description	Unit	Rate Rs.
	air blower of adequate capacity (working and stand by) and ancillary electrical works capacity complete in all respect as per specification and the direction of the Engineer.		
19.83.1	1 kg/hr capacity	each	1,21,250.00
19.83.2	2 kg/hr capacity	each	1,34,500.00
19.83.3	3 kg/hr capacity	each	1,42,400.00
19.84	Providing bedding/ hunching for pipe with clean sand passing through IS sieve 2.36 mm and retained on 180 micron sieve in layers including ramming ,consolidation complete in all respect as per specification and the direction of the Engineer with all lead and lift.	cum	1,382.00
19.85	Providing, lowering, laying, aligning, fixing in position in pipe line Zero Velocity Valves of 600 mm dia as per IS:14845 of following dia (including jointing and jointing material), including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer etc, complete in all respect.	each	3,12,700.00
19.86	Providing, lowering, laying, aligning, fixing in position in pipe line Air Cushion Valves 150 mm dia as per IS:14845 of following dia (including jointing and jointing material), including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer etc, complete in all respect.	each	1,29,600.00
19.87	Labour Charges for making connection with proposed pipe line to existing pipe line of AC/ DI/ CI including dewatering etc. complete but excluding the cost of pipes, specials, joints etc as directed by site engineer for following dia. (Earthwork to be measured and paid separately)		
19.87.1	80-200 mm dia	each	3,155.00
19.87.2	250-500 mm dia	each	4,230.00
19.88	Labour Charges for making connection with proposed pipe line to existing pipe line of PVC/ HDPE/ GRP including dewatering etc. complete but excluding the cost of pipes, specials, joints etc as directed by site engineer for following dia. (Earthwork to be measured and paid separately)		
19.88.1	75-200 mm dia	each	2,620.00
19.88.2	250-500 mm dia	each	3,695.00
19.89	Labour Charges for leakage repair in existing pipe line of AC/ DI/ CI including dewatering etc. complete but excluding the cost of pipes, specials, joints etc as directed by site engineer for following dia. (Earthwork to be measured and paid separately)		
19.89.1	80-200 mm dia	each	2,835.00
19.89.2	250-500 mm dia	each	3,910.00

Code No	Description	Unit	Rate Rs.
19.90	Labour Charges for leakage repair in existing pipe line of PVC/ HDPE/ GRP including dewatering etc. complete but excluding the cost of pipes, specials, joints etc as directed by site engineer for following dia. (Earthwork to be measured and paid separately)		
19.90.1	75-200 mm dia	each	2,405.00
19.90.2	250-500 mm dia	each	3,480.00
19.91	Leakage repair in existing pipe line of HDPE including the cost of pipe, electrofusion coupler joints, dewatering etc. complete as directed by site engineer for following dia. (Earthwork to be measured and paid separately)		
19.91.1	75-200 mm dia	each	2885.00
19.91.2	250-500 mm dia	each	4175.00
19.92	Leakage repair in existing pipe line of GRP excluding cost of pipes, specials, joint, dewatering etc. as directed by site engineer for following dia. (Earthwork to be measured and paid separately)		
19.92.1	75-200 mm dia	each	1,934.00
19.92.2	250-500 mm dia	each	3,010.00
19.93	Making disconnection of existing pipeline of AC/ DI/ CI/ PVC/ GI etc including dewatering, cost of clamps, plates, specials, joints etc. complete as directed by site engineer for following dia. (Earthwork to be measured and paid separately)		
19.93.1	75-200 mm dia	each	3,525.00
19.93.2	250-500 mm dia	each	5,050.00
19.94	Operation, maintenance and management of water supply system through regular water supply in DMAs/Zones from service reservoirs to consumer water meter points as per specifications including consumables & excluding power charges as directed by Engineer In charge.	consumer month	46.00
19.95	Operation, maintenance and management of entire water supply system through regular water supply up to consumer water meter points as per specifications including consumables & excluding power charges as directed by Engineer In charge.	consumer month	69.50
19.96	De-jointing and removing of already laid CI/DI/MS/AC pipes of following diameters in excavated trenches with care, without damaging pipes, CID joints, valves, specials etc. and other materials and then refilling of soil after de-laying and de-jointing of pipelines with proper compaction and disposing of all surplus soil as directed within a lead of 50 mtr. This also include stacking the pipes with care and transporting the same to div./sub div. store or as directed by EIC with in the division. (Rates are Exclusive of Earth Work)		
19.96.1	80 mm	metre	53.70
19.96.2	100 mm	metre	64.50

Code No	Description	Unit	Rate Rs.
19.96.3	125 mm	metre	75.20
19.96.4	150 mm	metre	86.00
19.96.5	200 mm	metre	96.70
19.96.6	250 mm	metre	107.50
19.96.7	300 mm	metre	120.50
19.96.8	350 mm	metre	133.50
19.96.9	400 mm	metre	155.00
19.96.10	450 mm	metre	189.50
19.96.11	500 mm	metre	234.50
19.96.12	600 mm	metre	279.50
19.97	Providing and fixing in position lightening arrester set complete with 600mm x 600mm x 6mm thick G.I. earthing plate embedded below ground in earthing pit at 3.5 metre depth, G.I. strip of size 25mmx5mm thick from earthing plate to top of Over head tank, G.I. Finial made of GI bar 25mm dia and 2m long fixed on top of OH tank and connected to GI strip. The earthing set shall comply of IS:3043 complete in all respect as per specification and the direction of the Engineer.	set	15,450.00
19.98	Supply, delivery at site with necessary packing, receiving, unloading, shifting, storing, installation, testing and commissioning of Horizontal Centrifugal Split Casting pumps with motor as per IS 12615-2011 or amended up to date, CI casing and casing ring, SS 316 impeller, SS 410 Shaft and shaft sleeve, coupling guard, common base plate, foundation bolts etc. complete with all respect as per the specification		
19.98.1	Discharge 20 to 30 LPS and head 20 to 30 M	Each	1,43,600.00
19.98.2	Discharge 20 to 30 LPS and head 31 to 40 M	Each	2,08,900.00
19.98.3	Discharge 20 to 30 LPS and head 41 to 50 M	Each	2,46,300.00
19.98.4	Discharge 20 to 30 LPS and head 51 to 60 M	Each	2,81,900.00
19.98.5	Discharge 20 to 30 LPS and head 61 to 70 M	Each	3,59,800.00
19.98.6	Discharge 20 to 30 LPS and head 71 to 80 M	Each	3,60,400.00
19.98.7	Discharge 20 to 30 LPS and head 81 to 90 M	Each	3,60,000.00
19.98.8	Discharge 31 to 40 LPS and head 20 to 30 M	Each	2,08,900.00
19.98.9	Discharge 31 to 40 LPS and head 31 to 40 M	Each	2,46,300.00
19.98.10	Discharge 31 to 40 LPS and head 41 to 50 M	Each	2,81,900.00
19.98.11	Discharge 121 to 140 LPS and head 61 to 70 M	Each	3,60,000.00
19.98.12	Discharge 121 to 140 LPS and head 71 to 80 M	Each	4,24,400.00
19.98.13	Discharge 121 to 140 LPS and head 81 to 90 M	Each	4,24,400.00

Code No	Description	Unit	Rate Rs.
19.98.14	Discharge 141 to 160 LPS and head 20 to 30 M	Each	4,95,000.00
19.98.15	Discharge 141 to 160 LPS and head 31 to 40 M	Each	2,46,300.00
19.98.16	Discharge 141 to 160 LPS and head 41 to 50 M	Each	3,60,000.00
19.98.17	Discharge 141 to 160 LPS and head 51 to 60 M	Each	3,60,400.00
19.98.18	Discharge 141 to 160 LPS and head 61 to 70 M	Each	4,24,400.00
19.98.19	Discharge 141 to 160 LPS and head 71 to 80 M	Each	4,95,000.00
19.98.20	Discharge 141 to 160 LPS and head 81 to 90 M	Each	5,79,700.00
19.98.21	Discharge 221 to 240 LPS and head 51 to 60 M	Each	5,79,500.00
19.98.22	Discharge 161 to 180 LPS and head 20 to 30 M	Each	2,81,900.00
19.98.23	Discharge 161 to 180 LPS and head 31 to 40 M	Each	3,60,000.00
19.98.24	Discharge 161 to 180 LPS and head 41 to 50 M	Each	4,24,400.00
19.98.25	Discharge 161 to 180 LPS and head 51 to 60 M	Each	4,95,000.00
19.98.26	Discharge 161 to 180 LPS and head 61 to 70 M	Each	5,79,500.00
19.98.27	Discharge 161 to 180 LPS and head 71 to 80 M	Each	7,39,600.00
19.98.28	Discharge 161 to 180 LPS and head 81 to 90 M	Each	7,39,700.00
19.98.29	Discharge 181 to 200 LPS and head 20 to 30 M	Each	2,81,900.00
19.98.30	Discharge 181 to 200 LPS and head 31 to 40 M	Each	3,60,000.00
19.98.31	Discharge 181 to 200 LPS and head 41 to 50 M	Each	4,95,000.00
19.98.32	Discharge 221 to 240 LPS and head 61 to 70 M	Each	5,79,500.00
19.98.33	Discharge 181 to 200 LPS and head 51 to 60 M	Each	7,39,600.00
19.98.34	Discharge 181 to 200 LPS and head 61 to 70 M	Each	7,39,700.00
19.98.35	Discharge 181 to 200 LPS and head 71 to 80 M	Each	8,53,600.00
19.98.36	Discharge 181 to 200 LPS and head 81 to 90 M	Each	3,60,000.00
19.98.37	Discharge 201 to 220 LPS and head 20 to 30 M	Each	4,24,400.00
19.98.38	Discharge 201 to 220 LPS and head 31 to 40 M	Each	5,79,500.00
19.98.39	Discharge 201 to 220 LPS and head 41 to 50 M	Each	7,39,600.00
19.98.40	Discharge 201 to 220 LPS and head 51 to 60 M	Each	7,39,700.00
19.98.41	Discharge 201 to 220 LPS and head 61 to 70 M	Each	8,53,600.00
19.98.42	Discharge 221 to 240 LPS and head 20 to 30 M	Each	9,99,500.00
19.98.43	Discharge 241 to 260 LPS and head 20 to 30 M	Each	3,60,000.00
19.98.44	Discharge 221 to 240 LPS and head 31 to 40 M	Each	4,95,000.00
19.98.45	Discharge 221 to 240 LPS and head 41 to 50 M	Each	5,79,500.00
19.98.46	Discharge 241 to 260 LPS and head 31 to 40 M	Each	7,39,600.00
19.98.47	Discharge 241 to 260 LPS and head 41 to 50 M	Each	7,39,700.00

Code No	Description	Unit	Rate Rs.
19.98.48	Discharge 241 to 260 LPS and head 51 to 60 M	Each	9,99,500.00
19.98.49	Discharge 241 to 260 LPS and head 61 to 70 M	Each	9,99,700.00
19.98.50	Discharge 261 to 280 LPS and head 20 to 30 M	Each	4,24,400.00
19.98.51	Discharge 261 to 280 LPS and head 31 to 40 M	Each	5,79,500.00
19.98.52	Discharge 261 to 280 LPS and head 41 to 50 M	Each	7,39,600.00
19.98.53	Discharge 31 to 40 LPS and head 51 to 60 M	Each	7,39,700.00
19.98.54	Discharge 261 to 280 LPS and head 51 to 60 M	Each	8,53,600.00
19.98.55	Discharge 261 to 280 LPS and head 61 to 70 M	Each	9,99,500.00
19.98.56	Discharge 281 to 300 LPS and head 20 to 30 M	Each	11,05,200.00
19.98.57	Discharge 281 to 300 LPS and head 31 to 40 M	Each	4,24,400.00
19.98.58	Discharge 281 to 300 LPS and head 41 to 50 M	Each	5,79,500.00
19.98.59	Discharge 281 to 300 LPS and head 51 to 60 M	Each	7,39,600.00
19.98.60	Discharge 281 to 300 LPS and head 61 to 70 M	Each	8,53,600.00
19.98.61	Discharge 301 to 325 LPS and head 20 to 30 M	Each	9,99,500.00
19.98.62	Discharge 301 to 325 LPS and head 31 to 40 M	Each	9,99,500.00
19.98.63	Discharge 301 to 325 LPS and head 41 to 50 M	Each	13,41,900.00
19.98.64	Discharge 31 to 40 LPS and head 61 to 70 M	Each	4,95,000.00
19.98.65	Discharge 301 to 325 LPS and head 51 to 60 M	Each	7,39,600.00
19.98.66	Discharge 301 to 325 LPS and head 61 to 70 M	Each	8,53,600.00
19.98.67	Discharge 326 to 350 LPS and head 20 to 30 M	Each	9,99,500.00
19.98.68	Discharge 326 to 350 LPS and head 31 to 40 M	Each	9,99,700.00
19.98.69	Discharge 326 to 350 LPS and head 41 to 50 M	Each	11,53,600.00
19.98.70	Discharge 326 to 350 LPS and head 51 to 60 M	Each	13,41,900.00
19.98.71	Discharge 326 to 350 LPS and head 61 to 70 M	Each	5,79,500.00
19.98.72	Discharge 351 to 400 LPS and head 20 to 30 M	Each	7,39,600.00
19.98.73	Discharge 351 to 400 LPS and head 31 to 40 M	Each	9,99,500.00
19.98.74	Discharge 351 to 400 LPS and head 41 to 50 M	Each	11,05,200.00
19.98.75	Discharge 31 to 40 LPS and head 71 to 80 M	Each	13,41,900.00
19.98.76	Discharge 351 to 400 LPS and head 51 to 60 M	Each	13,42,800.00
19.98.77	Discharge 351 to 400 LPS and head 61 to 70 M	Each	15,99,200.00
19.98.78	Discharge 31 to 40 LPS and head 81 to 90 M	Each	7,39,600.00
19.98.79	Discharge 41 to 50 LPS and head 20 to 30 M	Each	8,53,600.00
19.98.80	Discharge 41 to 50 LPS and head 31 to 40 M	Each	9,99,500.00
19.98.81	Discharge 41 to 50 LPS and head 41 to 50 M	Each	11,53,600.00

Code No	Description	Unit	Rate Rs.
19.98.82	Discharge 41 to 50 LPS and head 51 to 60 M	Each	13,41,900.00
19.98.83	Discharge 41 to 50 LPS and head 61 to 70 M	Each	14,72,400.00
19.98.84	Discharge 41 to 50 LPS and head 71 to 80 M	Each	15,99,200.00
19.98.85	Discharge 41 to 50 LPS and head 81 to 90 M	Each	7,39,600.00
19.98.86	Discharge 51 to 60 LPS and head 20 to 30 M	Each	9,99,500.00
19.98.87	Discharge 51 to 60 LPS and head 31 to 40 M	Each	11,05,200.00
19.98.88	Discharge 51 to 60 LPS and head 41 to 50 M	Each	13,41,900.00
19.98.89	Discharge 51 to 60 LPS and head 51 to 60 M	Each	14,72,400.00
19.98.90	Discharge 51 to 60 LPS and head 61 to 70 M	Each	17,23,600.00
19.98.91	Discharge 51 to 60 LPS and head 71 to 80 M	Each	19,05,900.00
19.98.92	Discharge 51 to 60 LPS and head 81 to 90 M	Each	7,39,600.00
19.98.93	Discharge 61 to 70 LPS and head 20 to 30 M	Each	9,99,500.00
19.98.94	Discharge 61 to 70 LPS and head 31 to 40 M	Each	13,41,900.00
19.98.95	Discharge 61 to 70 LPS and head 41 to 50 M	Each	14,72,400.00
19.98.96	Discharge 61 to 70 LPS and head 51 to 60 M	Each	15,99,200.00
19.98.97	Discharge 61 to 70 LPS and head 61 to 70 M	Each	8,53,600.00
19.98.98	Discharge 61 to 70 LPS and head 71 to 80 M	Each	11,05,200.00
19.98.99	Discharge 61 to 70 LPS and head 81 to 90 M	Each	13,41,900.00
19.98.100	Discharge 71 to 80 LPS and head 20 to 30 M	Each	15,99,200.00
19.98.101	Discharge 71 to 80 LPS and head 31 to 40 M	Each	17,23,600.00
19.98.102	Discharge 71 to 80 LPS and head 41 to 50 M	Each	8,53,600.00
19.98.103	Discharge 71 to 80 LPS and head 51 to 60 M	Each	11,53,600.00
19.98.104	Discharge 71 to 80 LPS and head 61 to 70 M	Each	13,41,900.00
19.98.105	Discharge 71 to 80 LPS and head 71 to 80 M	Each	15,99,200.00
19.98.106	Discharge 71 to 80 LPS and head 81 to 90 M	Each	19,05,900.00
19.98.107	Discharge 81 to 90 LPS and head 20 to 30 M	Each	9,99,500.00
19.98.108	Discharge 81 to 90 LPS and head 31 to 40 M	Each	13,41,900.00
19.98.109	Discharge 81 to 90 LPS and head 41 to 50 M	Each	14,72,400.00
19.98.110	Discharge 81 to 90 LPS and head 51 to 60 M	Each	17,23,600.00
19.98.111	Discharge 81 to 90 LPS and head 61 to 70 M	Each	20,54,300.00
19.98.112	Discharge 81 to 90 LPS and head 71 to 80 M	Each	9,99,500.00
19.98.113	Discharge 81 to 90 LPS and head 81 to 90 M	Each	13,41,900.00
19.98.114	Discharge 91 to 100 LPS and head 20 to 30 M	Each	15,99,200.00
19.98.115	Discharge 91 to 100 LPS and head 31 to 40 M	Each	17,23,600.00

Code No	Description	Unit	Rate Rs.
19.98.116	Discharge 91 to 100 LPS and head 41 to 50 M	Each	20,54,300.00
19.98.117	Discharge 91 to 100 LPS and head 51 to 60 M	Each	11,05,200.00
19.98.118	Discharge 91 to 100 LPS and head 61 to 70 M	Each	13,41,900.00
19.98.119	Discharge 91 to 100 LPS and head 71 to 80 M	Each	17,23,600.00
19.98.120	Discharge 91 to 100 LPS and head 81 to 90 M	Each	19,05,900.00
19.98.121	Discharge 101 to 120 LPS and head 20 to 30 M	Each	22,85,500.00
19.98.122	Discharge 101 to 120 LPS and head 31 to 40 M	Each	11,05,200.00
19.98.123	Discharge 101 to 120 LPS and head 41 to 50 M	Each	14,72,400.00
19.98.124	Discharge 101 to 120 LPS and head 51 to 60 M	Each	17,23,600.00
19.98.125	Discharge 101 to 120 LPS and head 61 to 70 M	Each	20,54,300.00
19.98.126	Discharge 101to 120 LPS and head 71 to 80 M	Each	22,85,500.00
19.98.127	Discharge 101to 120 LPS and head 81 to 90 M	Each	13,41,900.00
19.98.128	Discharge 121 to 140 LPS and head 20 to 30 M	Each	15,99,200.00
19.98.129	Discharge 121 to 140 LPS and head 31 to 40 M	Each	19,05,900.00
19.98.130	Discharge 121 to 140 LPS and head 41 to 50 M	Each	22,85,500.00
19.98.131	Discharge 121 to 140 LPS and head 51 to 60 M	Each	25,10,700.00
19.99	Providing, installation, testing and commissioning of Centrifugal Monoblock pump set conforming to IS 9079 , 2 pole motor operating at synchronised speed of 3000 RPM with requisite MOC impeller, priming funnel, cock, suitable flanges at suction and delivery side. Pump shall have common shaft for pump and motor. Motor shall be suitable for working on 415 V $\pm$ 10%, 3 Ph, 50 Hz A.C. Supply. Motor shall be TEFC type and Pump set shall be suitable for working at various discharge and head requirements as per scope of work. Pump shall be erected on C.C. foundation / cross channels / RSJ frame block with suitable foundation bolts grouted in C.C. foundation block etc. complete in all respect as per specification, scope of work and direction of Engineer in Charge of following power rating, suitable for prescribed duty conditions mentioned in TD.		
19.99.1	Centrifugal Monoblock Pump set (Single Stage)		
19.99.1.1	2.2 KW (3.0 HP)	each	29,400.00
19.99.1.2	3.7 KW (5.0 HP)	each	37,900.00
19.99.1.3	5.5 KW (7.5 HP)	each	47,600.00
19.99.1.4	7.5 KW (10 HP)	each	58,300.00
19.99.1.5	9.3 KW (12.5 HP)	each	68,000.00
19.99.1.6	11.0 KW (15 HP)	each	71,700.00
19.99.1.7	15.0 KW (20.0 HP)	each	93,900.00
19.99.1.8	18.5 KW (25.0 HP)	each	1,23,900.00

Code No	Description	Unit	Rate Rs.
19.99.2	Centrifugal Monoblock Pump set (Double Stage)		
19.99.2.1	3.7 KW (5.0 HP)	each	43,500.00
19.99.2.2	5.5 KW (7.5 HP)	each	52,900.00
19.99.2.3	7.5 KW (10.0 HP)	each	63,500.00
19.99.2.4	9.3 KW (12.5 HP)	each	70,200.00
19.99.2.5	11.0 KW (15.0 HP)	each	77,600.00
19.99.2.6	15.0 KW (20.0 HP)	each	1,01,500.00
19.100	Providing, installation, testing and commissioning of Mono block Vacuum pump set with base plate including C.C. foundation / cross channels / RSJ frame and foundation bolts etc complete in all respect as per specification, scope of work and direction of Engineer in Charge.		
19.100.1	0.75 KW (1 HP), single Ph	each	26,900.00
19.100.2	2.2 KW (3 HP), three Ph	each	49,000.00
19.101	Providing, installation, testing and commissioning of Vacuum pump set with horizontal foot mounted TEFC squirrel cage motor working on three phase 50 Hz, 415 Volts +/- 10% with base plate including cost of flexible couplings, coupling guard etc complete in all respect as per specification, scope of work and direction of Engineer in Charge.		
19.101.1	3.7 KW (5.0 HP)	each	1,04,300.00
19.101.2	7.5 KW (10.0 HP)	each	1,28,500.00
19.102	Providing, installation, testing and commissioning of Submerged Centrifugal Pump sets with motor 4 pole synchronised speed of 1500 rpm (water immersed, dry air filled, class "F" insulated TEWC motor integrally mounted on volute casing pump sets for drinking water) 3 phase, 415 volt +/- 10%, along with suitable foundation/ installation device and with 10 mtr cable, material of construction of impeller SS, casing (volute) CI, wearing ring SS, etc. complete in all respect as per specification, scope of work and direction of Engineer in Charge of following power rating, suitable for prescribed duty conditions mentioned in TD.		
19.102.1	15 KW	each	2,10,300.00
19.102.2	18.5 KW	each	2,59,100.00
19.102.3	22 KW	each	3,08,300.00
19.102.4	30 KW	each	4,20,100.00
19.102.5	37 KW	each	5,15,700.00
19.102.6	45 KW	each	5,45,800.00
19.102.7	55 KW	each	7,00,900.00
19.102.8	75 KW	each	7,78,200.00

Code No	Description	Unit	Rate Rs.
19.102.9	90 KW	each	10,53,100.00
19.102.10	110 KW	each	12,95,700.00
19.102.11	125 KW	each	14,21,400.00
19.102.12	132 KW	each	14,99,100.00
19.102.13	160 KW	each	17,26,100.00
19.102.14	180 KW	each	18,33,700.00
19.102.15	200 KW	each	22,00,400.00
19.103	Providing, installation, testing and commissioning of submersible Monoblock pump set conforming to IS 8034 and 2 pole motor operating at synchronised speed of speed 3000 RPM, with water proof winding. Pump shall be suitable for various delivery head and discharge with stainless steel shaft. Motor suitable for working on 415 V $\pm$ 10%, 3 Ph, 50 Hz AC and with water lubricated bearing to accept entire hydraulic thrust. Supply, with cable guard, thrust carbon/fibre bearing to withstand entire hydraulic thrust. The pump set shall be suitable for direct coupling, with suitable suction strainer. Pump should have suitable discharge out let as per manufacturer's design. Antithrust stream lined non return valve shall be provided with the pump and minimum 6 m submersible copper conductor cable in single / double run and 2 pairs of suitable size erection clamp 10 mm thick shall be provided with each pump etc. complete in all respect as per specification, scope of work and direction of Engineer in Charge of following power rating, suitable for prescribed duty conditions mentioned in TD.		
19.103.1	2.2 KW (3.0 HP)	each	30,900.00
19.103.2	3.7 KW (5.0 HP)	each	34,600.00
19.103.3	5.5 KW (7.5 HP)	each	46,300.00
19.103.4	7.5 KW (10 HP)	each	52,300.00
19.103.5	9.3 KW (12.5 HP)	each	66,000.00
19.103.6	11.0 KW (15 HP)	each	73,800.00
19.103.7	15.0 KW (20.0 HP)	each	87,800.00
19.104	Providing, installation, testing and commissioning of submersible dewatering pump set conforming to relevant IS codes and as per scope of work and Technical Specifications, with water proof winding. Pump shall be suitable for various delivery head and discharge with stainless steel shaft, impeller, pump and motor body. Motor suitable for working on 415 V $\pm$ 10%, 3 Ph, 50 Hz A.C. Supply, with cable guard. The pump set shall be suitable for direct coupling, with suitable suction strainer etc. complete in all respect as per specification, scope of work and direction of Engineer in Charge of following power rating, suitable for prescribed duty conditions mentioned in TD.		
19.104.1	0.75 KW (1.0 HP)	each	35,000.00

Code No	Description	Unit	Rate Rs.
19.104.2	1.5 KW (2.0 HP)	each	40,200.00
19.104.3	2.2 KW (3.0 HP)	each	69,100.00
19.104.4	3.7 KW (5.0 HP)	each	92,700.00
19.105	Providing, Fixing and maintaining barricading of active site such as at tanks etc to keep it safe entry from trespassers and unauthorized persons with using 80 - 100 mm dia Wooden Ballies as vertical post, at least 1.80 m above ground level and at least 60 cm below ground level at a spacing of 2 m and 0.63mm thick GI corrugated sheets for 1.8 m height above ground level for covering the barricading in rows one above another with providing suitable gate arrangement and painting in red and white stripes as per the specifications and directions of the Engineer In charge with proper fixing arrangements with GI limpet washers nuts and bolts complete in all respect and maintaining it till completion of the work at active site.	metre	332.50
19.106	Design, construction, (including topographical survey, geotechnical investigation and other surveys as required) for specified capacity of WTP based on 22 Hrs. operation including inlet chamber, aeration fountain / cascade, inlet channels including mechanical/manual fine/coarse screens, flash mixer, mixing channel with Parshall flume and flow measuring arrangement, clariflocculator with conventional, filter house and filter plant including back wash tank and back wash pumps with 100% standby, chemical house, coagulant feed tank with feed mechanism, poly aluminium chloride (PAC) or other coagulant tank of specified capacity and nos. with mixing and dosing arrangement complete, vacuum feed gas chlorinator with 100% standby, sludge handling unit and recycling of collected water from sludge, clear water reservoir of specified capacity, clear water pumping station including specified number and capacity of pumps, motors, panels, starters, cables, transformers, etc. complete, external and internal electrification, laboratory building with all specified lab equipment, admin building, Quarter (One no.), sanitary block with necessary water supply and drainage arrangement, campus roads, landscaping and other campus development works, rain water harvesting etc. all required works complete as per the direction of Engineer-in-Charge.		
19.106.1	5 MLD	LS	3,00,00,000.00
19.106.2	Above 5 MLD upto 7.5 MLD	MLD	57,00,000.00
19.106.3	Above 7.5 MLD upto 10.0 MLD	MLD	55,00,000.00
19.106.4	Above 10 MLD upto 15 MLD	MLD	53,00,000.00
19.106.5	Above 15 MLD upto 20 MLD	MLD	51,00,000.00
19.106.6	Above 20 MLD upto 25 MLD	MLD	49,00,000.00
19.106.7	Above 25 MLD upto 30 MLD	MLD	47,50,000.00
19.106.8	Above 30 MLD upto 40 MLD	MLD	46,00,000.00
19.106.9	Above 40 MLD upto 50 MLD	MLD	45,00,000.00

20.0 TUBE WELL

Code No	Description	Unit	Rate Rs.
20.1	Construction of Tube-well upto 100 Meter depth and above in all type of rocks by DTH system and over burden to accommodate casing pipe of following sizes in all types of soils and over burden including lowering of casing pipes but excluding cost of casing pipes as per IS : 2800 (Part I & II) 1979 specifications. The work would be completed after obtaining sand free water. The tube well should have a throughout bore as per nominal dia of casing pipe:		
20.1.1	100 mm dia Nominal bore	metre	493.00
20.1.2	125 mm dia Nominal bore	metre	563.00
20.1.3	150 mm dia Nominal bore	metre	789.00
20.1.4	200 mm dia Nominal bore	metre	1,315.00
20.2	Construction of tube-well from ground levels to accommodate housing and assembly pipe of following sizes in all types of alluvium strata by percussion/ rotary drilling method and with gravel as per IS:4097-1967 and packing as per IS:2800 (Part I -& II) 1979 as amended upto date (the work includes the cost of gravel & its primary packing and packing during development, lowering of housing & strainer assembly pipes, with supply and wrapping of coir-rope, wherever necessary for arresting fine sand particles. The work will not include cost of housing pipe and strainer pipe assembly and development work, but work would be completed after obtaining sand free water).		
20.2.1	Upto 100 Meter depth		
20.2.1.1	Nominal bore 150mm dia	Metre	1,325.00
20.2.1.2	Nominal bore 200 mm dia	Metre	1,656.00
20.2.1.3	Nominal bore 250 mm dia	Metre	2,208.00
20.2.2	Above 100 Metre and upto 200 Meter depth		
20.2.2.1	Nominal bore 150mm dia	Metre	1,523.00
20.2.2.2	Nominal bore 200 mm dia	Metre	1,731.00
20.2.2.3	Nominal bore 250 mm dia	Metre	2,539.00
20.2.3	Above 200 Metre and upto 300 Meter depth		
20.2.3.1	Nominal bore 150mm dia	Metre	1,854.00
20.2.3.2	Nominal bore 200 mm dia	Metre	2,107.00
20.2.3.3	Nominal bore 250 mm dia	Metre	3,091.00
20.3	Development of tube well as per IS specification using suitable compressor to give sand free water for required yield of the gravel packed tube well.	hour	568.00

Code No	Description	Unit	Rate Rs.
20.4	Supply of ERW M.S. black casing pipe ISI marked (IS: 4270/1992) of grade Fe410 of following nominal bore sizes at site of work.		
20.4.1	100 mm dia	metre	1,016.00
20.4.2	125 mm dia	metre	1,212.00
20.4.3	150 mm dia	metre	1,396.00
20.4.4	200 mm dia	metre	1,693.00
20.4.5	250 mm dia	metre	1,954.00
20.5	Supply of strainer pipes made of ERW M.S. black pipe ISI mark of following sizes at the site of work including required size of slotting as per IS:8110-1985 of following nominal bore sizes at site of work.		
20.5.1	150 mm dia	metre	1,410.00
20.5.2	200 mm dia	metre	1,706.00
20.5.3	250 mm dia	metre	1,993.00
20.6	Testing verticality of tube-well by plumbing system and yield test and draw down test by pumping system as per IS: 2800 (Part II) 1979.	each	8,924.00
20.7	Supply and fixing of tube well cover of M.S. sheet (6mm thick) with nuts and bolts complete for casing size:		
20.7.1	100 mm dia	each	223.00
20.7.2	125 mm dia	each	243.00
20.7.3	150 mm dia	each	261.00
20.7.4	200 mm dia	each	277.00
20.7.5	250mm dia	each	353.00
20.8	Supply and fixing of M.S. clamp set of 50 ×6mm flat iron with nuts and bolts etc. for holding the riser pipe assembly of submersible pump set.	Each set	287.00
20.9	Installation of submersible motor pump set in tube-well/open well complete (labour charges only) including transportation of tripod, chain pulley block & any other material required for lowering purpose.	each	5,012.00
20.10	Providing & lowering of G.I. flange pipe B Class including rubber washer and nuts of 8 mm dia complete in all respect.		
20.10.1	50 mm dia	metre	603.00
20.10.2	75 mm dia	metre	798.00
20.10.3	100 mm dia	metre	1,059.00

21.0 CONCRETE WORK

Code No	Description	Unit	Rate Rs.
21.1	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level :		
21.1.1	1:1:2 (1 Cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size) (As per design mix)	cum	5,880.00
21.1.2	1:1½:3 (1 Cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size).	cum	5,810.00
21.1.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	5,360.00
21.1.4	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 40 mm nominal size).	cum	5,260.00
21.1.5	1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	cum	4,785.00
21.1.6	1:3:6 (1 Cement : 3 fine/ coarse sand : 6 graded stone aggregate 40 mm nominal size).	cum	4,675.00
21.1.7	1:4:8 (1 Cement : 4 fine/ coarse sand : 8 graded stone aggregate 40 mm nominal size).	cum	4,340.00
21.1.8	1:5:10 (1 cement : 5 fine/ coarse sand : 10 graded stone aggregate 40 mm nominal size)	cum	4,075.00
21.1.9	1:2:3½:9 (1 ordinary Portland cement : 2 Fly ash : 3½ coarse sand : 9 graded stone aggregate 40 mm nominal size).	cum	4,200.00
21.1.10	1:2½:4:11 (1 ordinary Portland cement : 2½ fly ash : 4 coarse sand : 11 graded stone aggregate 40 mm nominal size)	cum	3,890.00
21.2	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc. upto two stories, excluding the cost of centring, shuttering and finishing :		
21.2.1	1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size) (As per design mix)	cum	6,350.00
21.2.2	1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size).	cum	6,270.00
21.2.3	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	5,820.00
21.2.4	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 40 mm nominal size).	cum	5,720.00
21.2.5	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm	cum	5,250.00

Code No	Description	Unit	Rate Rs.
	nominal size).		
21.2.6	1:3:6 (1 cement : 3 fine/ coarse sand : 6 graded stone aggregate 40 mm nominal size).	cum	5,140.00
21.3	Providing and laying cement concrete in kerbs, steps and the like at or near ground level excluding the cost of centring, shuttering and finishing.		
21.3.1	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	cum	5,360.00
21.4	Providing and fixing upto two stories precast cement concrete string or lacing courses, copings, bed plates, anchor blocks, plain window sills, shelves, louvers, steps, stair cases, etc. including hoisting and setting in position with cement mortar 1:3 (1 Cement : 3 coarse sand), cost of required centring, shuttering and finishing smooth with 6mm thick cement plaster 1:3 (1 Cement : 3 fine sand) on exposed surfaces complete.		
21.4.1	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size).	cum	8,960.00
21.4.2	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size).	cum	8,390.00
21.5	Providing and fixing at or near ground level precast cement concrete in kerbs, edgings etc. as per approved pattern and setting in position with cement mortar 1:3 (1 Cement : 3 coarse sand) including the cost of required centring, shuttering and finishing smooth with 6mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete.		
21.5.1	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size).	cum	7,550.00
21.6	Providing and fixing upto two stories precast cement concrete solid block including hoisting and setting in position with cement mortar 1:3 (1 cement : 3 coarse sand), including cost of required centring, shuttering and finishing smooth with 6mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete :		
21.6.1	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size).	cum	12,900.00
21.6.2	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size).	cum	12,300.00
21.7	Providing and laying damp-proof course with cement concrete grade M-15 (1 : 2 : 4) mortar prepared with 1% solution of water-proof compound complete as per specification .		
21.7.1	50mm thick.	Sqm	405.50
21.7.2	75mm thick.	Sqm	591.00
21.8	Extra for providing and mixing water proofing material in cement concrete work @ 1 kg per 50kg of cement.	per 50 kg cement bag	43.70

Code No	Description	Unit	Rate Rs.
21.9	Applying a coat of residual petroleum bitumen of penetration 80/100 of approved quality using 1.7kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.	sqm	120.00
21.10	Extra for concrete work in superstructure above two stories for every two stories or part thereof.	cum	407.00
21.11	Extra for laying concrete in or under water and/or liquid mud including cost of pumping or bailing out water and removing slush etc. complete.	cum/mtr	655.00
21.12	Extra for laying concrete in or under foul positions.	cum	269.00
21.13	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm bed by dry brick ballast 40mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth.	sqm	471.00

22.0 FORM WORK

Code No	Description	Unit	Rate Rs.
22.1	Centring and shuttering with plywood or steel sheet upto two stories or height upto 7.5 metre above plinth level including strutting, propping etc. and removal of form for :		
22.1.1	Foundations, footings, bases of columns, etc. for mass concrete.	sqm	220.00
22.1.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	sqm	337.00
22.1.3	Suspended floors, roofs, landings, balconies and access platform.	sqm	403.50
22.1.4	Shelves (Cast in situ)	sqm	403.50
22.1.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	sqm	374.00
22.1.6	Columns, Pillars, Piers, Abutments, Posts and Struts.	sqm	345.00
22.1.7	Stairs, (excluding landings) except spiral-staircases.	sqm	401.00
22.1.8	Spiral staircases (including landing).	sqm	362.00
22.1.9	Arches, domes, vaults upto 6 m span	sqm	1,037.00
22.1.10	Extra for arches, domes, vaults exceeding 6 m span	sqm	498.00
22.1.11	Chimneys and shafts	sqm	283.00
22.1.12	Vertical and horizontal fins individually or Grid roofing forming box louvers band, facias and eaves boards.	sqm	558.00
22.1.13	Extra for shuttering in circular work (20% of respective centring and shuttering items).	sqm	20.00
22.1.14	Small lintels not exceeding 1.5m clear span, moulding as in cornices, window sills, string courses, bands, copings, bed plates, anchor blocks and the like.	sqm	144.00
22.1.15	Edges of slabs and breaks in floors and walls.		
22.1.15.1	Under 20 cm wide	metre	117.50
22.1.15.2	Above 20 cm wide	sqm	534.00
22.1.16	Cornices and mouldings	sqm	601.00
22.1.17	Small surfaces such as cantilever ends, brackets and ends of steps, caps and bases to pilasters and columns and the like.	sqm	474.00
22.1.18	Weather shade, Chajjas, corbels etc., including edges.	sqm	486.50
22.1.19	Suspended floors, roofs, landings, balconies and access platform. with water proof ply 12mm thick.	sqm	421.00
22.1.20	Lintels, beams, plinth beams, girders, bressumers and cantilevers with water proof ply 12mm thick.	sqm	372.00
22.1.21	Lintels of sewer and manhole work	sqm	340.50

Code No	Description	Unit	Rate Rs.
22.2	Add extra for doing centering and shuttering work for each subsequent storey above two storey.	sqm	30.80
22.3	Add extra for doing centering and shuttering work for every additional height of 1 metre or part thereof beyond initial 7.5 metre height from plinth level.	sqm	9.70

23.0 REINFORCED CEMENT CONCRETE

Code No	Description	Unit	Rate Rs.
23.1	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement - All work upto plinth level :		
23.1.1	1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size). (As per design mix)	cum	6,270.00
23.1.2	1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size)	cum	6,200.00
23.1.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	5,750.00
23.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. upto two stories excluding cost of centring, shuttering, finishing and reinforcement :		
23.2.1	1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size) (As per design mix)	cum	6,850.00
23.2.2	1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size)	cum	6,780.00
23.2.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	cum	6,330.00
23.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope upto 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases upto two stories excluding the cost of centring, shuttering, finishing and reinforcement:		
23.3.1	M-15 Grade Concrete (1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) -As per design mix)	cum	6,580.00
23.3.2	M-20 Grade Concrete (1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size) -As per design mix)	cum	7,030.00
23.3.3	M-25 Grade Concrete (1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size) -As per design mix)	cum	7,100.00
23.3.4	M-30 Grade Concrete	cum	7,140.00
23.3.5	M-35 Grade Concrete	cum	7,170.00
23.4	Providing and laying upto two stories reinforced cement concrete in kerbs, steps and the like excluding the cost of centring, shuttering, finishing and reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	cum	5,930.00

Code No	Description	Unit	Rate Rs.
23.5	Reinforced cement concrete work in arches, arch ribs, domes, vaults, shells, folded plate and roofs having slope more than 15° upto two stories excluding the cost of centring, shuttering, finishing and reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	cum	5,840.00
23.6	Reinforced cement concrete work in vertical and horizontal fins individually or forming box louvers, facias and eaves boards upto two stories excluding the cost of centring, shuttering, finishing and reinforcement with 1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20mm nominal size).	cum	6,670.00
23.7	Providing and fixing tie bolt, spring coil and plastic cone in wall shuttering complete as per the direction of Engineer-in-charge		
23.7.1	12 mm dia. & 100 mm length.	each set	133.00
23.7.2	12 mm dia. & 150 mm length.	each set	147.00
23.7.3	20 mm dia. & 150 mm length.	each set	163.00
23.7.4	20 mm dia.& 225 mm length.	each set	180.00
23.8	Add extra for laying reinforced cement concrete above two stories (or 7.50 mtr height above plinth level) for every one storey or 3.00 m height or part thereof.	cum	208.00
23.9	Providing, hoisting and fixing upto two stories precast reinforced cement concrete work in string courses, bands, copings, bed plates, anchor blocks, plain window sills and the like including the cost of required centring, shuttering, finishing smooth with 6 mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete but excluding cost of reinforcement with 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20mm nominal size).	cum	9,220.00
23.10	Providing, hoisting and fixing upto two stories precast reinforced cement concrete in small lintels not exceeding 1.5m clear span upto two stories including the cost of required centring, shuttering and finishing smooth with 6 mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces but excluding the cost of reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size).	cum	11,350.00
23.11	Providing, hoisting and fixing upto two stories precast reinforced cement concrete in mouldings as in cornices, windows sills etc. including setting in cement mortar 1:3 (1 cement : 3 coarse sand) cost of required centring, shuttering and finishing smooth with 6 mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete but excluding the cost of reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	cum	13,550.00
23.12	Providing, hoisting and fixing upto two stories precast reinforced cement concrete in lintels, beams and bressumers including setting in cement mortar 1:3 (1 cement : 3 coarse sand), cost of required centring and shuttering and finishing smooth with 6 mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces but excluding the cost of reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	cum	9,620.00

Code No	Description	Unit	Rate Rs.
23.13	Providing, hoisting and fixing upto two stories precast reinforced cement concrete in shelves including setting in cement mortar 1:3 (1 cement : 3 coarse sand), cost of required centring, shuttering and finishing with neat cement punning on exposed surfaces but excluding the cost of reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size).	cum	12,450.00
23.14	Providing, hoisting and fixing upto two stories precast reinforced cement concrete in vertical & horizontal fins individually or forming box louvers setting in cement mortar 1:2 (1 cement : 2 coarse sand) including the cost of required centring, shuttering and finishing smooth with 6mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete but excluding the cost of reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	cum	14,350.00
23.15	Providing precast cement concrete Jali 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6mm nominal size) reinforced with 1.6 mm dia mild steel wire including centring and shuttering, roughening cleaning, fixing and finishing in cement mortar 1:3 (1 cement: 3 fine sand) etc. complete excluding plastering of the jambs, sills and soffits.		
23.15.1	50 mm thick	sqm	1,113.00
23.15.2	40 mm thick	sqm	916.00
23.15.3	25 mm thick	sqm	873.00
23.16	Encasing rolled steel sections, in beams and columns, with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size) including centring and shuttering complete but excluding cost of reinforcement.	cum	9,310.00
23.17	Encasing rolled steel section in grillages with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size) including centring and shuttering but excluding cost of expanded metal and hangers.	cum	6,050.00
23.18	Extra for providing and fixing expanded metal mesh of size 20x60mm and strands 3.25mm wide 1.6mm thick weighing 3.64 kg. per sqm. for encasing of rolled steel sections in beams, columns and grillages excluding cost of hangers.	sqm	422.00
23.19	Reinforcement for R.C.C. work at all levels including straightening, cutting, bending, placing in position and binding all complete.		
23.19.1	Mild steel and Medium Tensile steel bars.	kg	60.30
23.19.2	Hard drawn steel wire	kg	72.70
23.19.3	Cold twisted bars	kg	64.20
23.19.4	Hot rolled deformed bars	kg	64.20
23.19.5	Hard drawn steel wire fabric	kg	85.80
23.19.6	Thermo-Mechanically Treated bars.	kg	64.20

Code No	Description	Unit	Rate Rs.
23.20	In Situ Anti Corrosive treatment by applying inhibitor admixture and sealed cement slurry for corrosion protection of mild steel reinforcement / HYSD bars in accordance with MORT&H Appendix 1000-1 (Fourth Revision) including surface preparation and surface pre-treatment.	kg	7.05
23.21	Deduct for omitting in R.C.C. work smooth finishing of the exposed surface with 6mm thick cement mortar 1:3 (1 Cement : 3 fine sand)	sqm	169.00
23.22	Extra for rendering smooth the top of suspended floors, landings and staircases (treads and risers) with cement mortar 1:2 (1 cement : 2 coarse sand) including a floating coat of neat cement and protecting the surface with a layer of 7.5 cm of earth laid over 15 mm of fine sand in case of suspended floor and bricks laid in mud mortar in case of landings and steps including subsequent removal and cleaning of the same.	sqm	106.50
23.23	Providing and fixing in position copper plate as per design for expansion joints.	kg	460.00
23.24	Providing and filling in position, blown bitumen in expansion joints.	mtr/cmD ep/cmWi dth	5.95
23.25	Providing and filling in position bitumen mix filler of Proportion 80 kg. of hot bitumen, 1 kg. of cement and 0.25 cubic metre of coarse sand for expansion joints.	mtr/cmD ep/cmWi dth	2.20
23.26	Providing and fixing in position 12mm thick bitumen impregnated fibre board conforming to IS:1838 including cost of primer, sealing compound in expansion joints.	sqm	692.00
23.27	Providing and fixing sheet covering over expansion joints with iron screws as per design to match the colour / shade of wall treatment.		
23.27.1	Non-asbestos fibre cement board 6 mm thick as per IS:14862.		
23.27.1.1	150mm wide.	metre	163.00
23.27.1.2	200mm wide.	metre	219.00
23.27.2	Aluminium fluted strips 3.15mm thick.		
23.27.2.1	150 mm wide.	metre	434.00
23.27.2.2	200 mm wide.	metre	599.00
23.28	Add or deduct for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	metre	46.40
23.29	Extra for laying reinforced cement concrete in or under water and/ or liquid mud including cost of pumping or bailing out water and removing slush etc., complete.	cum	655.00
23.30	Extra for laying reinforced cement concrete in or under foul positions.	cum	269.00

24.0 BRICK WORK

Code No	Description	Unit	Rate Rs.
24.1	Brick work with FPS bricks of class designation 75 in foundation and plinth in:		
24.1.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	5,160.00
24.1.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	4,940.00
24.2	Brick work with sewer-bricks of in foundation and plinth in:		
24.2.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	5,520.00
24.3	Brick work with modular bricks of class designation 75 in foundation and plinth in:		
24.3.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	4,625.00
24.3.2	Cement Mortar 1:6 (1 cement : 6 coarse sand).	cum	4,435.00
24.4	Brick work with machine moulded perforated bricks of class designation 125 conforming to IS: 2222 -1991 in superstructure above plinth level upto two stories in cement mortar 1:6 (1 cement : 6 coarse sand) :		
24.4.1	With FPS bricks.	cum	6,330.00
24.4.2	With Modular bricks.	cum	5,580.00
24.5	Brick work with FPS bricks of class designation 75 in superstructure above plinth level upto two stories in all shapes and sizes in :		
24.5.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	5,970.00
24.5.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	5,750.00
24.6	Extra for brick work in superstructure above two stories for each two stories or part thereof by mechanical means by lifting material using mobile crane .	cum	203.50
24.7	Brick work 7 cm thick with FPS brick of class designation 75 in cement mortar 1:3 (1 cement : 3 coarse sand) in superstructure.	sqm	528.00
24.8	Brick work in plain arches in superstructure including centring and shuttering complete for span upto 6 metres with brick of class designation 75 in cement mortar 1:3 (1 cement : 3 coarse sand).	cum	8,510.00
24.9	Brick work in gauged arches in superstructure in cement mortar 1:3 (1 cement : 3 coarse sand) including centring and shuttering complete, for span upto 6 meters with brick of class designation 75.	cum	10,850.00
24.10	Extra for additional cost of centring for arches exceeding 6m span including all shuttering, bolting, wedging and removal (Area of the soffit to be measured).	sqm	1,064.00
24.11	Half brick masonry with FPS brick of class designation 75 in foundations and plinth in :		

Code No	Description	Unit	Rate Rs.
24.11.1	Cement mortar 1:3 (1 cement : 3 coarse sand)	sqm	644.00
24.11.2	cement mortar 1:4 (1 cement : 4 coarse sand)	sqm	620.00
24.12	Half brick masonry with FPS bricks of class designation 75 in superstructure above plinth level upto two stories.		
24.12.1	Cement mortar 1:3 (1 cement :3 coarse sand)	sqm	728.00
24.12.2	Cement mortar 1:4 (1 cement :4 coarse sand)	sqm	704.00
24.13	Extra for half brick masonry in superstructure, above two stories for every two stories or part thereof by mechanical means by lifting material using mobile crane.	sqm	18.00
24.14	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry.	sqm	69.70
24.15	Tile brick masonry with tile bricks of class designation 100 in foundation and plinth in:		
24.15.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	8,200.00
24.15.2	Cement mortar 1:6 (1 cement : 6 coarse sand).	cum	7,850.00
24.16	Tile brick masonry with machine moulded tile bricks of class designation 125 conforming to IS : 2690 (Part I) - 1993 in foundation and plinth in cement mortar 1:6 (1 cement : 6 coarse sand).	cum	7,810.00
24.17	Tile brick masonry with machine moulded tile bricks of class designation 125 conforming to IS : 2690 (Part I) - 1993 in superstructure above plinth level upto two stories in Cement mortar 1:6 (1 cement : 6 coarse sand).	cum	8,650.00
24.18	Extra for tile brick masonry with tile bricks of class designation 100 in superstructure above two stories for every two stories or part thereof.	cum	407.00
24.19	Tile brick masonry with tile bricks of class designation 100 in plain arch work in superstructure in cement mortar 1:4 (1 cement : 4 coarse sand) including centring and shuttering complete.	cum	11,400.00
24.20	Tile brick masonry with tile bricks of class designation 100 in gauged arch work in superstructure in cement mortar 1:4 (1 cement : 4 coarse sand) including centring and shuttering complete.	cum	13,750.00
24.21	Tile brick masonry work 5 cm thick with tile bricks of class designation 100 in cement mortar 1:3 (1 cement : 3 coarse sand) in superstructure.	sqm	563.00
24.22	Honey-comb brick work 10/11.4 cm thick with FPS bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand).	sqm	385.50
24.23	Extra for laying brick work in or under water and/or liquid mud including cost of pumping or bailing out water and removing slush etc. complete.	cum	655.00
24.24	Extra for laying brick work in or under foul position.	cum	269.00

Code No	Description	Unit	Rate Rs.
24.25	Brick work with selected FPS bricks of class designation 75 in exposed brick work including making horizontal and vertical grooves 10mm wide 12mm deep complete from ground level upto plinth level in cement mortar 1:6 (1 cement : 6 coarse sand)	cum	5,090.00
24.26	Brick work with modular bricks of class designation 75 in exposed brick work including making horizontal and vertical grooves 10mm wide 12mm deep complete from ground level upto plinth level in cement mortar 1:6 (1 cement : 6 coarse sand).	cum	4,455.00
24.27	Brick work with machine moulded modular bricks of class designation 125 in exposed brick work including making horizontal and vertical grooves 10mm wide 12mm deep complete from ground level upto plinth level in cement mortar 1:6 (1 cement : 6 coarse sand).	cum	4,795.00
24.28	Brick work with machine moulded F.P.S. bricks of class designation 125 in exposed brick work including making horizontal and vertical grooves 10 mm wide 12mm deep complete from ground level upto plinth level in cement mortar 1:6 (1 cement : 6 coarse sand)	cum	5,260.00
24.29	Brick work with machine moulded perforated F.P.S. bricks of class designation 125 conforming IS : 2222-1991 in exposed brick work including making horizontal and vertical grooves 10mm wide 12 mm deep complete from ground level upto plinth level in cement mortar 1:6 (1 cement : 6 coarse sand).	cum	5,290.00
24.30	Brick work with machine moulded perforated modular bricks of class designation 125 conforming to IS : 2222 -1991 in exposed brick work including making horizontal and vertical grooves 10 mm wide 12mm deep complete from ground level upto plinth level in cement mortar 1:6 (1 cement : 6 coarse sand).	cum	4,865.00
24.31	Brick work with clay flyash brick of class designation 75 in superstructure above plinth level upto two stories in :		
24.31.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	5,970.00
24.31.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	5,750.00
24.32	Extra for exposed brick work/ clay flyash brick work in superstructure above two stories, for each two stories or part thereof.	cum	407.00
24.33	Brick work with modular fly ash lime bricks (FALG Bricks) conforming to IS:12894-2002, class designation 100 average compressive strength in super structure above plinth level upto two stories in :		
24.33.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	5,090.00
24.33.2	Cement mortar 1:6 (1 cement : 6 Coarse sand)	cum	4,900.00
24.34	Brick work with modular calcium silicate bricks machine moulded conforming to IS:4139-1989, class designation 100 average compressive strength in super structure above plinth level upto two stories in :		
24.34.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	6,140.00

Code No	Description	Unit	Rate Rs.
24.34.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	5,950.00
24.35	Brick work with modular extruded brunt fly ash clay sewer bricks (Conforming to IS: 4885 - 1988) in foundation and plinth :		
24.35.1	Cement Mortar 1:4 (1 cement : 4 coarse sand)	cum	5,080.00
24.36	Brick work with modular extruded brunt fly ash clay sewer bricks (conforming to IS : 4885-1988) in arches in foundation and plinth in cement mortar 1:3 (1 cement : 3 fine sand).	cum	8,350.00
24.37	Providing and laying Gypsum panel partitions 100mm thick with water proof Gypsum panels of size 666x500x100mm, made of calcite phosphor Gypsum fixed with tongue and groove, jointed with bonding plaster as per manufacturers specifications in superstructure above plinth level upto two stories. Gypsum blocks will have a minimum compressive strength of 9.3 kg/cm2	sqm	962.00
24.38	Extra for Gypsum panel Partitions in superstructure above two stories for every two stories or part thereof.	sqm	46.70
24.39	Brick work with mechanised autoclaved flyash lime bricks conforming to IS: 12894 :2002 of class designation 100 in superstructure above plinth level upto two stories in.		
24.39.1	Cement mortar 1:4 (1 cement :4 coarse sand)	cum	5,390.00
24.39.2	Cement mortar 1:6 (1 cement :6 coarse sand).	cum	5,170.00
24.40	Extra for mechanised autoclave flyash lime bricks conforming to IS: 12894- 1990 of class designation 100 in superstructure above two stories for every two stories or part thereof.	cum	407.00
24.41	Brick edging 7cm wide 11.4cm deep to plinth protection with FPS bricks of class designation 75 including grouting with cement mortar 1:4 (1 cement : 4 fine sand).	metre	40.90
24.42	Providing and laying autoclaved aerated cement blocks masonry with 150mm/230mm/300 mm thick AAC blocks in super structure above plinth level up to floor V level with RCC band at sill level and lintel level with approved block laying polymer modified adhesive mortar all complete as per direction of Engineer-in-Charge. (The payment of RCC band and reinforcement shall be made for separately).	cum	6,300.00

25.0 STONE WORK (Masonry)

Code No	Description	Unit	Rate Rs.
25.1	Random rubble masonry with hard stone in foundation and plinth :		
25.1.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	4,245.00
25.1.2	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	4,530.00
25.1.3	Cement mortar 1:3 (1 cement : 3 coarse sand)	cum	4,820.00
25.2	Extra for random rubble masonry with hard stone in superstructure above plinth level and upto two stories.	cum	890.00
25.3	Extra for random rubble masonry with hard stone in superstructure above two stories for every two stories or part thereof	cum	621.00
25.4	Extra for random rubble masonry with hard stone in :		
25.4.1	Square or rectangular pillars	cum	660.00
25.4.2	Circular pillars.	cum	1,683.00
25.5	Extra for random rubble masonry with hard stone curved on plan for a mean radius not exceeding 6 m.	cum	608.00
25.6	Coursed rubble masonry (first sort) with hard stone in foundation and plinth with :		
25.6.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	5,340.00
25.7	Coursed rubble masonry (second sort) with hard stone in foundation & plinth with :		
25.7.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	4,930.00
25.8	Extra for coursed rubble masonry with hard stone (first or second sort) in superstructure above plinth level and upto two stories.	cum	889.00
25.9	Extra for coursed rubble masonry with hard stone (first or second sort) in superstructure above two stories for every two stories or part thereof.	cum	621.00
25.10	Extra for coursed rubble masonry with hard stone (first or second sort) in :		
25.10.1	Square or rectangular pillars	cum	740.00
25.10.2	Circular pillars.	cum	1,929.00
25.11	Extra for coursed rubble masonry with hard stone (first or second sort) curved on plan for a mean radius not exceeding 6 m.	cum	669.00
25.12	Stone work in plain ashlar in super structure upto floor five level in cement mortar 1:6 (1 cement : 6 coarse sand) including pointing with cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade :		
25.12.1	One face dressed.		

Code No	Description	Unit	Rate Rs.
25.12.1.1	Red sand stone	cum	37,800.00
25.12.1.2	White sand stone	cum	44,400.00
25.12.2	Both face dressed.		
25.12.2.1	Red sand stone.	cum	52,400.00
25.12.2.2	White sand stone.	cum	59,100.00
25.13	Providing and fixing up to floor five level of cement concrete solid blocks (M-20 Grade) of different sizes (Manufactured with fully mechanised dry cast process with forced action mixer whose arms revolve along the main axis and rotate about its own axis also, having humidity sensor for moisture control of w/c ratio in concrete mix. Manufactured with steel moulds (Milled and manufactured in CSI diamond or CSI Nitro process for accuracy) on steel base plate of min 16 mm thick; Having Vibration and pressing action both together with the help of multiple synchronised vibrators. Power of hydraulic station should be minimum 50KW for compaction and cured in controlled chambers having humidity control and automated air circulation system) including hoisting and setting in position with cement mortar 1:3 (1 Cement : 3 Coarse Sand), cost of required centering, shuttering complete.	Cum	8,850.00
25.14	Providing and fixing up to floor five level of cement concrete Hollow Rectangular blocks of different sizes (Manufactured with fully mechanised dry cast process with forced action mixer whose arms revolve along the main axis and rotate about its own axis also, having humidity sensor for moisture control of w/c ratio in concrete mix. Manufactured with steel moulds (Milled and manufactured in CSI diamond or CSI Nitro process for accuracy) on steel base plate of min 16 mm thick; Having Vibration and pressing action both together with the help of multiple synchronised vibrators. Power of hydraulic station should be minimum 50KW for compaction and cured in controlled chambers having humidity control and automated air circulation system) including hoisting and setting in position with cement mortar 1:3 (1 Cement : 3 Coarse Sand), cost of required centering, shuttering complete.	Cum	7,200.00
25.15	Deduct for fixing 75x25 mm hard drawn steel wire fabric of weight not less than 7.75 Kg. per sqm in panelled and glazed door and window shutter instead of glass sheet 4 mm thick.	sqm	143.00

26.0 STONE WORK (Slabs)

Code No	Description	Unit	Rate Rs.
26.1	Stone work (machine cut edges) for wall lining etc. (veneer work) backing filled with a grout of 12mm thick cement mortar 1:3 (1 cement : 3 coarse sand) including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade : (To be secured to the backing by means of cramps which shall be paid for separately) :		
26.1.1	Red sand stone - exposed face fine dressed with rough backing.		
26.1.1.1	70 mm thick.	sqm	2,174.00
26.1.1.2	60 mm thick.	sqm	2,060.00
26.1.1.3	50 mm thick.	sqm	1,946.00
26.1.1.4	40 mm thick.	sqm	1,831.00
26.1.1.5	30 mm thick.	sqm	1,717.00
26.1.2	Red sand stone - Exposed face machine cut and table rubbed with rough backing.		
26.1.2.1	70 mm thick	sqm	2,174.00
26.1.2.2	60 mm thick	sqm	2,060.00
26.1.2.3	50 mm thick	sqm	1,946.00
26.1.2.4	40 mm thick	sqm	1,831.00
26.1.2.5	30 mm thick	sqm	1,717.00
26.1.3	White sand stone - exposed face fine dressed with rough backing .		
26.1.3.1	70 mm thick.	sqm	2,640.00
26.1.3.2	60 mm thick.	sqm	2,460.00
26.1.3.3	50 mm thick.	sqm	2,279.00
26.1.3.4	40 mm thick.	sqm	2,098.00
26.1.3.5	30 mm thick.	sqm	1,917.00
26.1.4	White sand stone - Exposed face machine cut and table rubbed with rough backing.		
26.1.4.1	70 mm thick.	sqm	2,640.00
26.1.4.2	60 mm thick.	sqm	2,460.00
26.1.4.3	50 mm thick.	sqm	2,279.00
26.1.4.4	40 mm thick.	sqm	2,155.00
26.1.4.5	30 mm thick.	sqm	1,917.00
26.2	Extra for stone work (veneer work) curved on plan with a mean radius not exceeding 6 m.	cum	1,281.00

Code No	Description	Unit	Rate Rs.
26.3	Providing and fixing stainless steel cramps of required size and shape for anchoring stone wall lining to the backing or securing adjacent stones in stone wall lining in cement mortar 1:2 (1 cement : 2 coarse sand) including making the necessary chases in stone and holes in walls wherever required.	kg	666.00
26.4	Providing and fixing stone dowels 10x5x2.50 cm cut to double wedge shape as per design in cement mortar 1:2 (1 cement : 2 coarse sand) including making the necessary chases.	each	27.00
26.5	Providing and fixing copper pins 7.5 cm long 6 mm diameter for securing adjacent stones in stone wall lining in cement mortar 1:2 (1 cement : 2 coarse sand) including making the necessary chases.	each	29.10
26.6	Providing and fixing sloping chajja of stone 40 mm thick and upto 80 cm wide beyond the wall as measured along the slope in cement mortar 1:4 (1 cement : 4 coarse sand) with 12mm diameter anchoring steel bar 45 cm long fixed in each stone and supported on and including with bricks cove of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) including pointing in cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade:		
26.6.1	Red sand stone:		
26.6.1.1	With bricks	sqm	2,029.00
26.6.2	White sand stone:		
26.6.2.1	With bricks	sqm	2,098.00
26.7	Providing and fixing horizontal chajja of stone 40 mm thick and upto 80 cm projection in cement mortar 1:4 (1 cement : 4 coarse sand) including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade:		
26.7.1	Red sand stone	sqm	1,377.00
26.7.2	White sand stone	sqm	1,437.00
26.8	30mm red sand stone sun-shade (chisel-dressed) supported on red sand stone brackets, fixed in walls with cement mortar 1:4 (1 cement : 4 coarse sand) including finishing complete.	sqm	1,409.00
26.9	Providing and fixing red sand stone brackets 55x22.5x45cm sunk and moulded including providing and fixing with 4 Nos. gun metal cramp 25x6mm 30 cm long and dowel bars 7.5 cm long 6 mm dia as per design.	each	4,550.00
26.10	Stone work, plain in copings, cornices, string courses and plinth courses, upto 75 mm thick in Cement mortar 1:6 (1 cement : 6 coarse sand) including pointing with white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade.		
26.10.1	Red sand stone	cum	54,500.00
26.10.2	White sand stone	cum	61,100.00

Code No	Description	Unit	Rate Rs.
26.11	Providing and fixing stone jali 40mm thick throughout in cement mortar 1:3 (1 cement : 3 coarse sand) including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment, matching the stone shade, jali slab without any chamfers etc.		
26.11.1	Red sand stone	sqm	17,100.00
26.11.2	White sand stone	sqm	17,150.00
26.12	Extra for laying stone work in or under water and/or liquid mud including cost of pumping or bailing out water and removing slush etc. complete.	cum/ mtr depth	655.00
26.13	Extra for laying stone work in or under foul position.	cum	269.00
26.14	Wall lining butch work upto 10m height with red/ white sand stone 40 mm thick rough facing on the exposed surface with stone strips of minimum length 300 mm and required width including embedding every tenth layer and bottom most layer in masonry or concrete after making necessary chases of size 75x75mm and by providing layer of 75mm thick strips i/c 12mm thick bed of cement mortar 1:3 (1 Cement : 3 coarse sand) i/c ruled pointing in cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment to match the shade of stone complete as per direction of Engineer-in-charge.	sqm	2,286.00
26.15	Stone work (machine cut edges) for wall lining upto 10 m height etc. (Veneer work) backing filled with a grout of 12mm thick cement mortar 1:3 (1 Cement : 3 coarse sand) and jointed with Cement mortar 1:2 (1 cement : 2 stone dust) including rubbing and polishing complete. (To be secured to the backing by means of cramps which shall be paid for separately)		
26.15.1	Kota stone slabs exposed face dressed and rubbed.		
26.15.1.1	25 mm thick.	sqm	2,453.00
26.16	Stone tile work for wall lining upto 10 m height with special adhesive over 12mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) including pointing in white cement with an admixture of pigment to match the stone shade.		
26.16.1	8mm thick (mirror polished and machine cut edge)		
26.16.1.1	Granite stone of any colour and shade.	sqm	2,220.00
26.16.1.2	Raj Nagar plain white marble/ Udaipur green marble/ Zebra black marble.	sqm	2,000.00
26.17	Extra for stone work for wall lining on exterior walls of height more than 10 m from ground level for every additional height of 3 m or part there of.	sqm	84.30
26.18	Providing and fixing dry cladding upto 10 metre heights with 30mm thick gang saw cut stone with (machine cut edges) of uniform colour and size upto 1mx1m, fixed to structural steel frame work and/ or with the help of cramps, pins etc. and sealing the joints with approved weather sealant as per Architectural drawing and direction		

Code No	Description	Unit	Rate Rs.
	of Engineer-in-charge. (The steel frame work, stainless steel cramps and pins etc. shall be paid for separately.)		
26.18.1	Red sand stone.	sqm	3,015.00
26.18.2	White sand stone	sqm	3,340.00
26.19	Providing and fixing structural steel frame (for dry cladding with 30 mm thick gang saw cut with machine cut edges sand stone) on walls at all heights using M.S. square/ rectangular tube in the required pattern as per architectural drawing including cost of cutting, bending, welding etc. The frame work shall be supported in wall with the help of MS brackets/ lugs of angle iron/ flats etc. which shall be welded to the frame and embedded in brick wall with cement concrete block 1:2:4 (1 cement :2 coarse sand :4 graded stone aggregate 20mm nominal size) of size 300x230x300mm including cost of necessary centring and shuttering and with approved expansion hold fasteners on CC/RCC surface including drilling necessary holes. Approved cramps/ pins etc. shall be welded to the frame work to support stone cladding the steel work will be given a priming coat of "ZINC" primer as approved by Engineer-in-charge and painted with two or more coats of epoxy paint (Shop drawings shall be submitted by the contractor to the Engineer-in-charge for approval before execution). The frame work shall be fixed in true horizontal & vertical lines/planes. (Only structural steel frame work shall be measured for the purpose of payment, stainless steel cramps shall be paid for separately and nothing extra shall be paid.)	kg	163.50
26.20	Providing and fixing adjustable stainless steel cramps of approved quality and of required shape and size adjustable with stainless steel nuts bolts and washer (total weight not less than 260 gms) for dry stone cladding fixed on frame work at suitable location including making necessary recesses in stone slab, drilling required holes etc complete as per direction of the Engineer-in-charge.	each	337.00
26.21	Providing and fixing single paitam (rebated) stone doors windows and ventilator frames of approved quarry in cement sand mortar 1:4:		
26.21.1	size 75x75 mm	metre	143.00
26.21.2	size 100x60 mm	metre	157.50
26.21.3	size 100x75 mm	metre	178.50
26.21.4	size 125x100 mm	metre	186.00
26.22	Providing and fixing double paitam (rebated) stone doors windows and ventilator frames of approved quality in cement sand mortar 1:4:		
26.22.1	size 100x75 mm	metre	173.00
26.22.2	size 125x100 mm	metre	200.00
26.23	Providing & fixing precast cement concrete coping 1 : 2 :4 mix 50mm thick complete as per specification	Sqm	399.50

Code No	Description	Unit	Rate Rs.
26.24	Supplying and fixing in walls machine cut and polished stone shelves, tands and in CM 1:3 with machine cut edges :		
26.24.1	Sand or other approved stone 25mm thick.	sqm	540.00
26.24.2	Sand or other approved stone 50mm thick.	sqm	690.00
26.24.3	Kota stone minimum 30mm thick.	sqm	599.00
26.25	Supplying and fixing machine cut fine dressed Red/Pink sand stone dasa or coping, with full moulding if required laid on cement mortar 1:4 including pointing with admixture of pigment matching with the stone shade.		
26.25.1	25 mm thick	Sqm	1,243.00
26.25.2	50 mm thick	Sqm	1,457.50
26.25.3	75 mm thick	Sqm	1,664.30
26.26	Supplying and fixing machine cut dressed 75 mm Pink sand stone (Bansi Paharpur) dasa/ coping with ornamental shape having moulding and "PAN Shape" engraving as per required pattern with engraving depth of 5 mm (average) in single piece of length 90 cm to be laid on cement mortar 1:4 (12 to 20mm thick) including pointing with admixture of pigment matching with the stone shade.	Sqm	5,308.60
26.27	Providing and fixing Stone jali 40mm thick Red/Pink sand stone throughout in cement mortar 1:3 (1 cement : 3 coarse sand) including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment, matching the stone shade, jali patterns to be cut square to jali slab without any chamfers etc:	Sqm	7,850.70
26.28	Providing and fixing Stone jali 50mm thick Red/Pink sand stone as per ornamental design to fixed with white cement/epoxy mortar including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment, matching the stone shade.	Sqm	8,813.20
26.29	Providing and fixing Red/Pink sand stone post (Mataga) having size 100x100mm heights 600 to 750 mm as per ornamental design such as like flower octagonal head border etc. to fixed with white cement/epoxy mortar including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment, matching the stone shade.	Sqm	799.70

27.0 MARBLE WORK

Code No	Description	Unit	Rate Rs.
27.1	Providing and fixing Marble stone flooring table rubbed, 15-18 mm thick over 20mm (Av.) thick base of CM 1:4 (1 cement : 4 coarse sand) or slab in wall, steps, pillars, counters, jambs, shelves, sills etc laid over 12mm (Av.) thick base of CM 1:3 (1 cement : 3 coarse sand), jointing with white cement mortar 1:2 (1 white cement : 2 marble dust) with pigment to match the shade of the marble slab including grinding, rubbing and polishing complete.		
27.1.1	Makrana 'Adanga'.		
27.1.1.1	Upto to 1500 Cm2 Tiles	sqm	1,762.00
27.1.1.2	1501 Cm2 to 3600 Cm2 Tiles	sqm	1,919.00
27.1.1.3	Above 3601 Cm2 Slabs	sqm	2,474.00
27.1.2	Rajnagar 1st quality/Ageria with light spots.		
27.1.2.1	Upto to 1500 Cm2 Tiles	sqm	1,581.00
27.1.2.2	1501 Cm2 to 3600 Cm2 Tiles	sqm	1,722.00
27.1.2.3	Above 3601 Cm2 Slabs	sqm	2,144.00
27.1.3	Keseriaji/ Abu Ambaji (Green Marble)		
27.1.3.1	Upto to 1500 Cm2 Tiles	sqm	1,762.00
27.1.3.2	1501 Cm2 to 3600 Cm2 Tiles	sqm	1,911.00
27.1.3.3	Above 3601 Cm2 Slabs	sqm	2,474.00
27.1.4	Bhaislana, Abu, Kishangarh Zebra (Black Marble)		
27.1.4.1	Upto to 1500 Cm2 Tiles	sqm	1,581.00
27.1.4.2	1501 Cm2 to 3600 Cm2 Tiles	sqm	1,683.00
27.1.4.3	Above 3601 Cm2 Slabs	sqm	2,199.00
27.2	Providing and fixing Granite stone slab mirror polished and machine edge cut in walls, pillars, steps, Shelves, Sills Counters, Floors etc. laid on 12mm (Av.) thick base of cement mortar 1:3 (1 cement : 3 coarse sand) jointing with white cement mortar 1:2 (1 white cement : 2 marble dust) with pigment to match the shade of the marble slab including grinding, rubbing and polishing complete.		
27.2.1	Jhunjhunu / Jalore (Red / Chocolate Colour)		
27.2.1.1	Upto to 1500 Cm2 Tiles	sqm	2,890.00
27.2.1.2	1501 Cm2 to 3600 Cm2 Tiles	sqm	3,510.00
27.2.1.3	Above 3601 Cm2 Slabs	sqm	4,265.00
27.2.2	South (Red)		
27.2.2.1	Upto to 1500 Cm2 Tiles	sqm	2,880.00

Code No	Description	Unit	Rate Rs.
27.2.2.2	1501 Cm2 to 3600 Cm2 Tiles	sqm	3,610.00
27.2.2.3	Above 3601 Cm2 Slabs	sqm	5,810.00
27.2.3	Green / Black		
27.2.3.1	Upto to 1500 Cm2 Tiles	sqm	2,770.00
27.2.3.2	1501 Cm2 to 3600 Cm2 Tiles	sqm	3,895.00
27.2.3.3	Above 3601 Cm2 Slabs	sqm	6,480.00
27.3	Extra for providing edge moulding to 15-18mm thick marble/ Granite stone counters, Vanities etc. including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge.		
27.3.1	Marble work	metre	165.50
27.3.2	Granite Work	metre	284.00
27.4	Extra for fixing marble /granite stone over and above corresponding basic item, in facia and drops of width upto 150 mm with epoxy resin based adhesive including cleaning etc. complete	metre	33.90
27.5	Extra for providing opening of required size & shape for wash basins/ kitchen sink in kitchen platform, vanity counters and similar location in marble/Granite/stone work including necessary holes for pillar taps etc. including rubbing and polishing of cut edges etc. complete	each	285.50
27.6	Extra for Mirror polishing on marble work where ever required to give high gloss finish complete.	sqm	137.00
27.7	Extra in marble flooring work for upto 50 mm wide strip of Green/White/ Jaisalmer stone in flooring work as per direction of Engineer in Charge	metre	59.50
27.8	Providing and fixing cramps of required size & shape in RCC/ CC backing with cement mortar 1:2 (1 cement :2 coarse sand) including drilling necessary hole in stones and embedding the cramp in the hole .		
27.8.1	Gun Metal cramp	kg	635.00
27.8.2	Stainless steel cramps	kg	666.00
27.9	Providing and fixing expansion hold fasteners on C.C. /R.C.C. surface backing including drilling necessary holes and the cost of bolt etc complete.		
27.9.1	Wedge expansion type		
27.9.1.1	Fastener with threaded dia 6 mm.	each	32.80
27.9.1.2	Fastener with threaded dia 10 mm.	each	33.30
27.9.1.3	Fastener with threaded dia 12 mm.	each	56.60
27.10	Providing and fixing stone slab table rubbed, edges rounded and polished of size 75x50 cm deep and 1.8 cm thick fixed in urinal		

Code No	Description	Unit	Rate Rs.
	partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in-charge and finished smooth.		
27.10.1	White Agaria Marble Stone.	sqm	1,653.00
27.10.2	Granite Stone of approved shade.	sqm	3,255.00
27.11	Providing and fixing 1st quality standard white, grey, ivory, fume red brown, light green, light blue and other light shades glazed tiles confirming to IS : 13753 & IS :15622 of size 200mm x 300mm in walls, floors, steps, pillars etc. laid on a bed of neat cement slurry finished with flush pointing in the white cement mixed with pigment to match the shade of the tile complete (excluding the cost of cement plaster on walls and pillar).	sqm	837.00
27.12	Providing and fixing 1st quality MAT finished ceramic tile size 300x300mm confirming to IS : 13755 and IS : 15622 colour such as white, grey, ivory, fume red brown, light green, light blue and other light shades in floors, steps, pillars etc. laid on a bed of neat cement slurry finished with flush pointing in the white cement mixed with pigment to match the shade of the tile complete (including the cost of cement mortar bed 1:4).	sqm	814.00
27.13	Extra for using Marble printed / Granite shade or dark shade tiles instead of white, grey, ivory, fume red brown, light green, light blue and other light shades in glazed tiles and MAT finished tiles.	percent	10.00
27.14	Extra for using size above 200x300mm in glazed tiles and for using 400mm x 400mm MAT finished tiles in place of 300mm x 300mm size.	percent	10.00
27.15	Providing and fixing 75 mm wide Decorative Border in different shades and in all colours in glazed tiles laid over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm including pointing in white mixed with pigment of matching shade complete.	metre	311.50
27.16	Providing and fixing Motive pieces all colours for glazed tiles laid over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm including pointing in white mixed with pigment of matching shade complete..		
27.16.1	Size 200 x 200mm	each	171.50
27.16.2	Size 200 x 300mm	each	200.50
27.17	P & F 1st quality Vitrified Porcelain Polished tiles on floor, skirting and steps etc.in different sizes (thickness to be specified by manufacture) with water absorption less than 0.08% and conforming to IS 15622 of approved make in all colour and shade, laid with 20 mm thick CM 1 : 4 including grouting the joints with white cement and matching pigment etc complete.		

Code No	Description	Unit	Rate Rs.
27.17.1	Size 450 mm X 450 mm	sqm	1,435.00
27.17.2	Size 600 mm X 600 mm	sqm	1,464.00
27.17.3	Size 800mm X 800 mm	sqm	1,682.00
27.18	Providing and fixing 1st quality ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades with water absorption less than or equal to 0.08% confirming to IS : 13753 & IS : 15622 in floor, steps etc laid on bed on neat cement slurry finished with flush pointing in the white cement mixed with pigment to match the shade of the tile complete (excluding the cost of cement plaster on wall and pillar)		
27.18.1	Size 600mm x 600mm	sqm	1,529.00
27.18.2	Size 800mm x 800mm	sqm	1,558.00
27.18.3	Size 600mm x 1200mm	sqm	1,844.00
27.18.4	Size 800mm x 1200mm	sqm	2,297.00
27.18.5	Size 896mm x 1215mm	sqm	2,297.00
27.18.6	Size 1000mm x 2000mm	sqm	4,755.00
27.19	Providing and fixing 1st quality MAT & GLOSSY finished ceramic tiles colour such as standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades with water absorption less than or equal to 0.08% confirming to IS : 13753 & IS : 15622 in floor, steps etc laid on bed on neat cement slurry finished with flush pointing in the white cement mixed with pigment to match the shade of the tile complete (including the cost of cement mortar bed 1:4)		
27.19.1	Size 250mm x 375mm	sqm	937.00
27.19.2	Size 300mm x 450mm	sqm	1,040.00
27.19.3	Size 200mm x 600mm	sqm	1,105.00
27.19.4	Size 300mm x 600mm	sqm	1,142.00
27.19.5	Size 250mm x 1000mm	sqm	1,376.00
27.20	Providing and fixing 1st quality Vitrified Polished tiles in all colours and shades with water absorption less than or equal to 0.08% confirming to IS : 15622 on floor, skirting, steps etc laid with 20mm thick CM 1:4 including grouting the joints with white cement mixed with pigment to match the shade of the tile complete (excluding the cost of cement mortar bed 1:4)		
27.20.1	Size 800mm x 800mm	sqm	1,668.00
27.20.2	Size 800mm x 1200mm	sqm	2,407.00
27.21	Providing and fixing 1st quality Heavy duty Vitrified Polished Digital tiles in all colours and shades with water absorption less than or equal to 0.08% confirming to IS : 15622 on floor, skirting, steps etc laid with 20mm thick CM 1:4 including grouting the joints with white cement mixed with pigment to match the shade of the tile complete		

Code No	Description	Unit	Rate Rs.
	(excluding the cost of cement mortar bed 1:4)		
27.21.1	Size 298mm x 298mm	sqm	911.00
27.21.2	Size 300mm x 450mm	Sqm	913.00
27.21.3	Size 600mm x 600mm	Sqm	1,347.00
27.21.4	Size 600mm x 1200mm	Sqm	1,800.00
27.22	Extra for Fixing glazed/ Ceramic/ Vitrified floor tiles with cement based high polymer modified quick-set tile adhesive (Water based) conforming to IS: 15477 , using 5kg. adhesive per cum of tile area, in average 3mm thickness instead of cement mortar.	sqm	288.50
27.23	Providing non slip grooves to granite/ kota stone flooring, counters, vanities etc. using groove cutter V type machine etc. complete as per design approved by engineer in charge	metre	71.80
27.24	P & F 1st quality Heavy Duty Vitrified Polished Digital tiles on floor, skirting and steps etc.in different sizes (thickness minimum 10mm) with water absorption less than or equal 0.08% and conforming to IS 15622 of approved make in all colour and shade, laid with 20 mm thick CM 1: 4 including grouting the joints with white cement and matching pigment etc complete.		
27.24.1	size 600 mm X 1200 mm	Sqm	1,656.00
27.25	P & F 1st quality Heavy Duty Vitrified glazed MAT tiles on floor, skirting and steps etc.in different sizes (thickness minimum 10mm) with water absorption less than or equal 0.08% and conforming to IS 15622 of approved make in all colour and shade, laid with 20 mm thick CM 1: 4 including grouting the joints with white cement and matching pigment etc complete.		
27.25.1	size 600 mm X 600 mm	Sqm	1,381.00
27.25.2	size 600 mm X 1200mm	Sqm	1,925.00
27.26	P & F 1st quality Heavy Duty Vitrified Double Charged tiles on floor, skirting and steps etc.in different sizes (thickness minimum 10mm) with water absorption less than or equal 0.08% and conforming to IS 15622 of approved make in all colour and shade, laid with 20 mm thick CM 1: 4 including grouting the joints with white cement and matching pigment etc complete.		
27.26.1	size 600 mm X 600mm	Sqm	1,107.00
27.26.2	size 800 mm X 800mm	Sqm	1,381.00
27.26.3	size 1000 mm X 1000mm	Sqm	1,561.00

28.0 WOOD AND PVC WORK

Code No	Description	Unit	Rate Rs.
28.1	Providing & fixing door, window, chowkhats and other frames, including antitermite treatment, M.S. flat, hold fasts of size 250 x 40 x 3mm fixed with M.S. bolt 5mm dia 50mm long duly embedded in cement concrete M-15 grade :		
28.1.1	Second class teak wood	cum	1,11,800.00
28.1.2	Sal wood	cum	84,700.00
28.1.3	Kiln seasoned and chemically treated Hollock wood.	cum	70,300.00
28.1.4	Sheesham wood Grade - I.	cum	1,15,500.00
28.1.5	Nigeria teak wood Grade - I.	cum	1,27,600.00
28.1.6	Ghana teak wood Grade - I.	cum	1,29,100.00
28.1.7	Ivory coast wood Grade I	cum	1,52,400.00
28.2	Providing laminated veneer lumber conforming to IS:14616 and TAD -15: 2001(Part B) in factory made frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position as per directions of Engineer-in-charge.	cum	1,02,600.00
28.3	Supplying and fixing wood work in frames of wall panelling, false ceiling partition wall etc. as per approved design and drawing including antitermite treatment.		
28.3.1	Sal wood	cum	75,600.00
28.3.2	Kiln seasoned and chemically treated Hollock wood.	cum	61,100.00
28.3.3	Chir wood	cum	56,600.00
28.4	Extra for additional labour in frames for circular members such as in fan lights, staircase railing etc.:		
28.4.1	Second class teak wood	cum	11,200.00
28.4.2	Sal wood	cum	8,470.00
28.4.3	Kiln seasoned and chemically treated Hollock wood.	cum	7,030.00
28.5	Providing and fixing fully panelled/partly panelled/ double leaf shutter frame for doors as per approved design and drawings with approved ordinary C.P./ oxidised steel fittings as per Annexure - 'A' and width of styles & top rails of 100mm and lock rails width of 150mm and bottom rails of 200mm width including teak wood beading of size 19mm x 12mm on both faces complete :		
28.5.1	35 mm thick		
28.5.1.1	Nigeria wood grade I	sqm	3,410.00
28.5.1.2	Ghana wood grade I	sqm	3,445.00

Code No	Description	Unit	Rate Rs.
28.5.1.3	Shesham wood grade I	sqm	3,145.00
28.5.1.4	Ivory coast wood grade I	sqm	3,970.00
28.5.2	30 mm thick		
28.5.2.1	Nigeria wood grade I	sqm	3,080.00
28.5.2.2	Ghana wood grade I	sqm	3,110.00
28.5.2.3	Shesham wood grade I	sqm	2,850.00
28.5.2.4	Ivory coast wood grade I	sqm	3,560.00
28.6	Providing and fixing fully panelled /partly panelled double leaf shutters frame for windows and ventilators as per approved design and drawings with approved steel fittings as per Annexure 'A' and width of styles, bottom and top rails 75mm including intermediate rails 50mm wide, beading of 25mm x 15mm size on both faces :		
28.6.1	35 mm thick		
28.6.1.1	Nigeria wood grade I	sqm	2,462.00
28.6.1.2	Ghana wood grade I	sqm	2,482.00
28.6.1.3	Shesham wood grade I	sqm	2,297.00
28.6.1.4	Ivory coast wood grade I	sqm	2,800.00
28.6.2	30 mm thick		
28.6.2.1	Nigeria wood grade I	sqm	2,277.00
28.6.2.2	Ghana wood grade I	sqm	2,295.00
28.6.2.3	Shesham wood grade I	sqm	2,134.00
28.6.2.4	Ivory coast wood grade I	sqm	2,575.00
28.6.3	25 mm thick		
28.6.3.1	Nigeria wood grade I	Sqm	2,098.00
28.6.3.2	Ghana wood grade I	Sqm	2,113.00
28.6.3.3	Shesham wood grade I	Sqm	1,974.00
28.6.3.4	Ivory coast wood grade I	Sqm	2,353.00
28.7	Providing and fixing wood panelling or panelling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (Area of opening for panel inserts excluding portion inside grooves or rebates to be measured). Panelling for panelled and glazed shutter 25 mm to 40 mm thick		
28.7.1	Wood panel		
28.7.1.1	Nigeria wood Grade I	Sqm	2,725.00
28.7.1.2	Ghana wood grade I	Sqm	2,750.00
28.7.1.3	Shesham wood grade I	Sqm	2,505.00
28.7.1.4	Ivory coast wood grade I	Sqm	3,180.00

Code No	Description	Unit	Rate Rs.
28.7.2	Ply wood IS : 710- 1976 marked		
28.7.2.1	9 mm thick commercial ply	Sqm	1,739.00
28.7.2.2	9 mm thick Teak ply BWR one side	Sqm	1,859.00
28.7.2.3	9 mm thick Teak ply BWR both side	Sqm	2,097.00
28.7.2.4	12 mm thick commercial ply	Sqm	1,475.00
28.7.2.5	12 mm thick Teak ply BWR one side	Sqm	2,080.00
28.7.2.6	12 mm thick Teak ply BWR both side	Sqm	2,362.00
28.7.2.7	12 mm thick Plain particle board flat pressed, 3 layer or graded wood particle board medium density Grade I, IS : 3087 marked.	sqm	1,192.00
28.7.2.8	12 mm thick Veneered flat pressed three layer or graded wood particle board with commercial veneering on both sides conforming to IS:3097, grade I.	sqm	1,552.00
28.7.2.9	12 mm thick Pre-laminated particle board with decorative lamination on one side and balancing lamination on other side, Grade I, Type II IS:12823 marked.	sqm	1,705.00
28.7.2.10	12 mm thick Pre-laminated particle board with decorative lamination on both sides, Grade I, Type II, IS:12823 marked.	sqm	1,765.00
28.7.3	Wire gauge		
28.7.3.1	GI wire gauge 24 gauge 14 mesh of IS 1568-1970 marked 85 gauge of dia 0.56 mm	Sqm	1,022.00
28.7.3.2	SS wire gauge 14 mesh x 24 gauge	Sqm	1,325.00
28.7.4	Float glass		
28.7.4.1	4 mm thick	Sqm	1,245.00
28.7.4.2	5 mm thick	Sqm	1,492.00
28.7.4.3	8 mm thick	Sqm	1,859.00
28.8	Providing and fixing wall panelling on existing wood frame as per specification and drawing using :		
28.8.1	6 mm teak ply one side BWR ISI marked	sqm	1,149.00
28.8.2	9 mm teak ply one side BWR ISI marked	sqm	1,443.00
28.8.3	12 mm thick Acoustical Board	sqm	1,176.00
28.8.4	12 mm thick one side laminated board Practical board (Phenol bonded)	sqm	1,443.00
28.9	Extra for providing movable/ fixed Nigeria / Ghana /Ivory Teak wood grade - I louvers instead of wooden panels in column No.4 for Nigeria / Ghana/Ivory Teak wood door shutters.	percent	10.00
28.10	Extra for Providing Single leaf shutter instead of double leaf.	percent	20.00
28.11	Add extra for etching work in glass work as per direction of engineer in charge (Area of opening for glass panes excluding portion inside rebate shall be measured)	percent	20.00

Code No	Description	Unit	Rate Rs.
28.12	Providing and fixing panelling or panelling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (area of opening for panel inserts excluding portion inside grooves or rebates to be measured). Panelling for panelled or panelled and glazed shutters 25 mm to 40 mm thick. Coir veneer board (conforming to IS : 14842-2000) :		
28.12.1	12 mm thick	sqm	1,867.00
28.13	Providing and fixing glazed shutters for doors, windows and clerestory windows using 4 mm thick float glass panes including black enamelled ISI marked M.S butt hinges with necessary screws.		
28.13.1	Second class teak wood		
28.13.1.1	35 mm thick	sqm	3,830.00
28.13.1.2	30 mm thick	sqm	3,490.00
28.13.2	Kiln seasoned and chemically treated Hollock wood		
28.13.2.1	35 mm thick	sqm	2,810.00
28.13.2.2	30 mm thick	sqm	2,610.00
28.14	Providing and fixing factory made laminated veneer lumber glazed shutter conforming to IS : 14616 and TADS 15:2001 (Part B) , using 4mm thick float glass panes for doors, windows and clerestory windows including ISI marked black enamelled M.S butt hinges with necessary screws as per directions of Engineer-in-charge		
28.14.1	30 mm thick shutters	sqm	2,352.00
28.15	Extra for providing heavy sheet float glass panes instead of ordinary float glass in glazed doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured)		
28.15.1	5.5 mm thick instead of 4 mm thick.	sqm	207.00
28.16	Extra for providing frosted glass panes 4 mm thick instead of ordinary float glass panes 4 mm thick in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).	sqm	78.50
28.17	Deduct for providing pin headed glass panes instead of ordinary float glass panes weighing 4 mm thick in doors, windows and clerestory windows, shutters (Area of opening for glass panes excluding portion inside rebate shall be measured).	sqm	85.70
28.18	Extra for providing ISI marked Stainless Steel butt hinges instead of black enamelled M.S. butt hinges with necessary screws. (Shutter area to be measured).	sqm	127.50
28.19	Deduct if fixed shutters (without hinges) are provided instead of openable shutters for doors, windows or clerestory windows with :		
28.19.1	Stainless steel butt hinges with stainless steel screws :		
28.19.1.1	For 2nd class teak wood and other inferior class of wood shutters.	sqm	185.00

Code No	Description	Unit	Rate Rs.
28.19.2	Black enamelled M.S. butt hinges with necessary screws.		
28.19.2.1	For 2nd class teak wood and other inferior class of wood shutters.	sqm	57.50
28.20	Providing and fixing 25 mm thick shutters for cup board etc. :		
28.20.1	Panelled or panelled & glazed shutters :		
28.20.1.1	Second class teak wood including ISI marked anodised aluminium butt hinges with necessary screws.	sqm	3,340.00
28.20.2	Glazed shutters :		
28.20.2.1	Second class teak wood including ISI marked SS butt hinges with necessary screws.	sqm	3,195.00
28.21	Providing and fixing flat pressed 3 layer particle board medium density exterior grade (Grade I) or graded wood particle board IS : 3087 marked to frame, backing or studding with screws etc. complete (Frames, backing or studding to be paid separately) :		
28.21.1	12 mm thick	sqm	580.00
28.21.2	18 mm thick	sqm	754.00
28.22	Providing and fixing Pre-laminated flat pressed 3 layer (medium density) particle board or graded wood particle board IS : 3087 marked with one side decorative and other side balancing lamination Grade I, Type II exterior grade IS : 12823 marked in shelves with screws and fittings wherever required, edges to be painted with polyurethane primer (fittings to be paid separately).		
28.22.1	18 mm thick	sqm	1,242.00
28.22.2	25 mm thick	sqm	1,542.00
28.23	Providing and fixing 25 mm thick shutters for cupboards etc. including ISI marked black enamelled M.S. butt hinges with necessary screws :		
28.23.1	Panelled or panelled and glazed shutters		
28.23.1.1	Second class teak wood	sqm	3,190.00
28.23.2	Glazed shutters		
28.23.2.1	Second class teak wood	sqm	3,185.00
28.24	Providing and fixing external grade board solid core single leaf flush door shutters ISI 2202-67 marked using Phenol formaldehyde resin in glue both sides including approved ISI marked Stainless Steel butt hinges fittings with necessary screws complete as per annexure 'A' :		
28.24.1	25 mm thick		
28.24.1.1	Commercial Veneer both side	sqm	1,804.00
28.24.1.2	Decorative teak veneer One side	sqm	2,033.00
28.24.1.3	Decorative teak veneer both side	sqm	2,525.00
28.24.2	30 mm thick		

Code No	Description	Unit	Rate Rs.
28.24.2.1	Commercial Veneer both side	sqm	1,793.00
28.24.2.2	Decorative teak veneer One side	sqm	2,115.00
28.24.2.3	Decorative teak veneer both side	sqm	2,815.00
28.24.3	35 mm thick		
28.24.3.1	Commercial Veneer both side	sqm	1,858.00
28.24.3.2	Decorative teak veneer One side	sqm	2,379.00
28.24.3.3	Decorative teak veneer both side	sqm	2,955.00
28.25	Extra for Providing and fixing flush doors with decorative veneering		
28.25.1	On one side	sqm	471.00
28.26	Extra for providing lipping with 2nd class teak wood battens 25 mm minimum depth on all edges of shutters (over all area of door shutter to be measured)	sqm	385.50
28.27	Extra for providing vision panel not exceeding 0.1 sqm in all type of flush doors (cost of glass excluded) (overall area of door shutter to be measured) :		
28.27.1	Rectangular or square.	sqm	193.00
28.27.2	Circular.	sqm	200.00
28.28	Extra if louvers (not exceeding 0.2 sqm) are provided in flush door shutters (overall area of door shutters to be measured).		
28.28.1	Decorative type door.	sqm of door area	428.50
28.29	Extra for cutting rebate in flush door shutters (Total area of the shutter to be measured).	sqm of door area	150.00
28.30	Providing and fixing 35mm thick wire gauze shutters using galvanised M.S. wire gauze of average width of aperture 1.4mm with wire of dia. 0.63 mm for doors, windows and clerestory windows including ISI marked bright finished or/and black enamelled M.S. butt hinges with necessary screws :		
28.30.1	Second class teak wood.	sqm	3,655.00
28.30.2	Kiln seasoned and chemically treated Hollock wood.	sqm	2,750.00
28.31	Providing and fixing 35mm thick wire gauze shutters using galvanised M.S. wire gauze of average width of aperture 1.4mm with wire of dia. 0.63 mm for doors, windows and clerestory windows including ISI marked stainless steel butt hinges with necessary screws :		
28.31.1	Second class teak wood.	sqm	3,785.00
28.31.2	Kiln seasoned and chemically treated Hollock wood.	sqm	2,880.00
28.32	Providing and fixing 30mm thick wire gauge shutters using galvanised M.S. wire gauge of average width of aperture 1.4mm with wire of dia. 0.63 mm for doors, windows and clerestory windows		

Code No	Description	Unit	Rate Rs.
	including ISI marked Stainless Steel butt hinges with necessary screws :		
28.32.1	Second class teak wood.	sqm	3,310.00
28.32.2	Kiln seasoned and chemically treated Hollock wood.	sqm	2,535.00
28.33	Providing and fixing 30mm thick wire gauze shutters using galvanised M.S. wire gauze of average width of aperture 1.4mm with wire of dia 0.63 mm for doors, windows and clerestory windows including ISI marked bright finished or /and black enamelled M.S. butt hinges with necessary screws :		
28.33.1	Second class teak wood.	sqm	3,240.00
28.33.2	Kiln seasoned and chemically treated Hollock wood.	sqm	2,470.00
28.34	Providing and fixing wire gauze laminated veneer lumber shutters conforming to IS : 14616, and as per TADS 15 :2001 (Part B) using galvanised wire gauze with average width of aperture 1.4mm in both directions with wire of dia 0.63mm as per IS :1568 for doors, windows and clerestory windows including ISI marked bright finished or/ and black enamelled M.S. butt hinges with necessary screws as per directions of Engineer-in-charge:		
28.34.1	35 mm thick shutters	sqm	2,395.00
28.34.2	30 mm thick shutters	sqm	2,131.00
28.35	Providing 50x50x50mm 2nd class teak wood plugs including cutting brick work and fixing in cement mortar 1:3 (1 cement : 3 fine sand) and making good the walls etc.	each	28.70
28.36	Providing and fixing expandable fasteners of specified size with necessary plastic sleeves and galvanised M.S. screws including drilling holes in masonry work /CC/ R.C.C. and making good etc. complete.		
28.36.1	25 mm long	each	15.80
28.36.2	32 mm long	each	18.00
28.36.3	40 mm long	each	20.80
28.36.4	50 mm long	each	22.30
28.37	Providing and fixing 2nd class teak wood plain lining tongued and grooved on and including wooden plugs complete with necessary screws and priming coat on unexposed surface.		
28.37.1	40 mm thick.	sqm	5,470.00
28.37.2	25 mm thick.	sqm	3,605.00
28.37.3	20 mm thick	sqm	2,815.00
28.37.4	12 mm thick	sqm	1,866.00
28.38	Providing and fixing in wall lining flat pressed three layer (medium density) particle board or graded wood Pre-laminated one side		

Code No	Description	Unit	Rate Rs.
	decorative lamination on other side balancing lamination Grade I, Type II, IS : 12823 marked including priming coat on unexposed surface, with necessary fixing arrangement and screws etc. complete :		
28.38.1	12 mm thick	sqm	1,184.00
28.38.2	18 mm thick	sqm	1,372.00
28.38.3	25 mm thick	sqm	1,687.00
28.39	Providing and fixing specified wood frame work consisting of battens 50x25mm fixed with rawl plug and drilling necessary holes for rawl plug etc. including priming coat complete.		
28.39.1	Hollock wood.	cum	1,21,300.00
28.40	Providing and fixing plywood 4 mm thick one side decorative veneer conforming to IS: 1328 (type-1) for plain lining / cladding with necessary screws, priming coat on unexposed surface with:		
28.40.1	Decorative veneer facings of approved manufacture.	sqm	1,429.00
28.41	Providing and fixing 4mm thick coir veneer board, ISI marked IS : 14842 - 2000, plain lining with necessary screws, priming coat on unexposed surface etc., complete.	sqm	1,369.00
28.42	Providing and fixing skirting of Pre-laminated with (one side decorative and other side balancing lamination) flat pressed, 3 layer or graded particle board (medium density) Grade I, Type II, IS :12823 marked, with necessary fixing arrangements and screws including drilling necessary holes for rawl plugs etc. and priming coat on unexposed surface complete :		
28.42.1	18 mm thick	sqm	1,561.00
28.42.2	25 mm thick	sqm	1,875.00
28.43	Providing and fixing wooden moulded beading to door and window frames with iron screws, plugs and priming coat on unexposed surface etc. complete :		
28.43.1	2nd class teak wood		
28.43.1.1	50x12 mm	metre	164.50
28.43.1.2	50 x 20 mm	metre	206.00
28.43.2	Hollock wood		
28.43.2.1	50x12 mm	metre	138.50
28.43.2.2	50x20 mm	metre	162.50
28.44	Providing and fixing plain jaffri of 35x10 mm laths placed 35 mm apart (frames to be paid separately) including fixing 50x12 mm beading complete with :		

Code No	Description	Unit	Rate Rs.
28.44.1	Second class teak wood.	sqm	2,206.00
28.45	Providing and fixing 18 mm thick, 150 mm wide pelmet of flat pressed 3 layer or graded wood particle board medium density grade I, IS : 3087 marked including top cover of 6 mm commercial ply wood conforming to IS: 303 BWR grade, nickel plated M.S. pipe 20 mm dia (heavy type) curtain rod with nickel plated brackets including fixing with 25x3 mm M.S. flat 10 cm long and rawl plugs 50 mm long (designation 10 no.) etc all complete	metre	431.00
28.46	Providing and fixing 18 mm thick, 150 mm wide pelmet of coir veneer board ISI marked IS : 14842 - 2000, including top cover of 6 mm coir veneer board, nickel plated M.S. Pipe 20 mm dia (heavy type) curtain rod with nickel plated brackets including fixing with 25x3 mm M.S. Flat 10 cm long and rawl plug 50 mm long (designation 10 No.) etc., all complete	metre	432.50
28.47	Extra for using veneered particle board conforming to IS 3097 Grade I, in item of pelmet 18mm thick 150mm wide.		
28.47.1	Non decorative veneer on both sides.	metre	28.60
28.47.2	Particle board with decorative veneering on both sides.	metre	95.90
28.48	Providing and fixing teak wood lipping of size 25x3 mm in pelmet.	metre	58.70
28.49	Providing and fixing curtain rods of 1.25 mm thick chromium plated brass plate, with two chromium plated brass brackets fixed with C.P. brass screws and wooden plugs, etc., wherever necessary complete:		
28.49.1	12 mm dia.	metre	270.50
28.49.2	20 mm dia.	metre	342.00
28.49.3	25 mm dia.	metre	513.00
28.50	Providing and fixing nickel plated M.S. pipe curtain rods with nickel plated brackets :		
28.50.1	20 mm dia (heavy type)	metre	83.90
28.50.2	25 mm dia (heavy type)	metre	101.00
28.51	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. all complete.		
28.51.1	Fixed to steel windows by welding.	kg	137.00
28.51.2	Fixed to openings /wooden frames with rawl plugs screws etc.	kg	144.50
28.52	Providing and fixing expanded metal 20x60mm strands 3.25mm wide and 1.6mm thick for windows etc. including 62x19mm beading of IInd class teak wood.	sqm	1,036.00
28.53	Providing and fixing hard drawn steel wire fabric 75x25 mm mesh of weight not less than 7.75 Kg per sqm to window frames etc. including 62x19 mm beading of second class teak wood.	sqm	1,240.00

Code No	Description	Unit	Rate Rs.
28.54	Providing and fixing fly proof galvanised M.S. wire gauze to windows and clerestory windows using galvanised M.S. wire gauge with average width of aperture 1.4 mm in both directions with wire of dia. 0.63 mm.		
28.54.1	With 2nd class teak wood beading 62X19 mm.	sqm	919.00
28.54.2	With 12 mm mild steel U beading.	sqm	613.00
28.55	Deduct for fixing 75x25 mm hard drawn steel wire fabric of weight not less than 7.75 Kg. per sqm in panelled and glazed door and window shutter instead of glass sheet 4 mm thick.	sqm	143.00
28.56	Providing 40x5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embeddings in cement concrete block 30x10x15cm 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size)	each	136.50
28.57	Providing beams including hoisting, fixing in position and applying wood preservative for the unexposed surfaces, etc. complete with :		
28.57.1	Sal wood.	cum	73,300.00
28.57.2	Hollock wood.	cum	58,000.00
28.58	Providing and fixing ISI marked M.S. pressed butt hinges bright finished with necessary screws etc. complete :		
28.58.1	125x65x2.12 mm	each	41.50
28.58.2	100x58x1.90 mm	each	34.80
28.58.3	75x47x1.70 mm	each	29.00
28.58.4	50x37x1.50 mm	each	15.10
28.59	Providing and fixing IS : 1341 marked M.S. heavy weight butt hinges with necessary screws etc. complete :		
28.59.1	125x90x4.00 mm	each	55.10
28.59.2	100x75x3.50 mm	each	42.70
28.59.3	75x60x3.10 mm	each	31.80
28.59.4	50x40x2.50 mm	each	17.90
28.60	Providing and fixing ISI marked oxidised M.S. pressed butt hinges with necessary screws etc. complete.		
28.60.1	125x65x2.12 mm	each	39.30
28.60.2	100x58x1.90 mm	each	33.80
28.60.3	75x47x1.70 mm	each	28.40
28.60.4	50x37x1.50 mm	each	14.10
28.61	Providing and fixing ISI marked oxidised M.S. pressed Parliamentary hinges with necessary screws etc. complete :		
28.61.1	150x125x27x2.50 mm	each	70.50

Code No	Description	Unit	Rate Rs.
28.61.2	125x125x27x2.50 mm	each	63.30
28.61.3	100x125x27x2.50 mm	each	54.00
28.61.4	75x100x20x2.24 mm	each	46.50
28.62	Providing and fixing ISI marked oxidised M.S. single acting spring hinges with necessary screws etc. complete :		
28.62.1	150 mm	each	186.50
28.62.2	125 mm	each	172.50
28.62.3	100 mm	each	149.50
28.63	Providing and fixing oxidised M.S. double acting spring hinges with necessary screws etc. complete.		
28.63.1	150 mm	each	193.50
28.63.2	125 mm	each	179.50
28.63.3	100 mm	each	164.00
28.64	Providing M.S. Piano hinges ISI marked IS : 3818 finished with nickel plating and fixing with necessary screws etc., complete.		
28.64.1	Overall width 35 mm.	metre	225.50
28.64.2	Overall width 50 mm.	metre	224.00
28.64.3	Overall width 65 mm.	metre	231.00
28.65	Providing and fixing ISI marked oxidised M.S. sliding door bolts with nuts and screws etc. complete :		
28.65.1	300x16 mm	each	154.50
28.65.2	250x16 mm	each	132.00
28.66	Providing and fixing ISI marked oxidised M.S. tower bolt black finish, (Barrel type) with necessary screws etc. complete :		
28.66.1	250x10 mm	each	58.50
28.66.2	200x10 mm	each	49.00
28.66.3	150x10 mm	each	43.80
28.66.4	100x10 mm	each	35.00
28.67	Providing and fixing ISI marked 85x42mm oxidised M.S. pull bolt lock conforming to IS : 7534 with necessary screws bolts, nut and washers etc. complete.	each	81.70
28.68	Providing and fixing ISI marked oxidised M.S. door latches conforming to IS:5930 with screws etc. complete :		
28.68.1	300x20x6 mm	each	65.60
28.68.2	250x20x6 mm	each	55.60
28.69	Providing and fixing ISI marked oxidised M.S. handles conforming to IS:4992 with necessary screws etc. complete :		

Code No	Description	Unit	Rate Rs.
28.69.1	125 mm	each	23.30
28.69.2	100 mm	each	19.00
28.69.3	75 mm	each	17.60
28.70	Providing and fixing oxidised M.S. hasp and staple (safety type) conforming to IS : 363 with necessary screws etc. complete :		
28.70.1	150 mm	each	23.40
28.70.2	115 mm	each	20.50
28.70.3	90 mm	each	17.50
28.71	Providing and fixing oxidised M.S. casement stays (straight peg type) with necessary screws etc. complete.		
28.71.1	300 mm weighing not less than 200 gms.	each	42.90
28.71.2	250 mm weighing not less than 150 gms.	each	36.60
28.71.3	200 mm weighing not less than 120 gms.	each	33.70
28.72	Providing and fixing oxidised M.S. Safety chain with necessary fixtures for doors. (Weighing not less than 450 gms.)	each	88.60
28.73	Providing and fixing IS : 12817 marked stainless steel butt hinges with stainless steel screws etc. complete :		
28.73.1	125x64x1.90 mm	each	79.00
28.73.2	100X58X1.90 mm	each	64.40
28.73.3	75x47x1.80 mm	each	49.30
28.73.4	50x37x1.50 mm	each	29.70
28.74	Providing and fixing IS : 12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :		
28.74.1	125x64x2.50 mm	each	92.20
28.74.2	100x60x2.50 mm	each	75.80
28.74.3	75x50x2.50 mm	each	59.30
28.75	Providing and fixing bright finished brass butt hinges with necessary screws etc. complete :		
28.75.1	125x85x5.5 mm (heavy type)	each	255.50
28.75.2	125x70x4 mm (ordinary type)	each	136.00
28.75.3	100x85x5.5 mm (heavy type)	each	207.00
28.75.4	100x70x4 mm (ordinary type)	each	99.20
28.75.5	75x65x4 mm (heavy type)	each	119.00
28.75.6	75x40x2.5 mm (ordinary type)	each	65.40
28.75.7	50x40x2.5 mm (ordinary type)	each	29.10
28.76	Providing and fixing bright finished brass parliamentary hinges with necessary screws etc. complete :		

Code No	Description	Unit	Rate Rs.
28.76.1	150x125x27x5 mm	each	331.00
28.76.2	125x125x27x5 mm	each	299.00
28.76.3	100x125x27x5 mm	each	260.00
28.76.4	75x100x20x3.2 mm	each	216.50
28.77	Providing and fixing bright finished brass tower bolts (barrel type) with necessary screws etc. complete :		
28.77.1	250x10 mm	each	279.50
28.77.2	200x10 mm	each	225.50
28.77.3	150x10 mm	each	182.50
28.77.4	100x10 mm	each	128.50
28.78	Providing and fixing bright finished brass door latch with necessary screws etc. complete :		
28.78.1	300x16x5 mm	each	203.50
28.78.2	250x16x5 mm	each	189.00
28.79	Providing and fixing bright finished brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles with necessary screws etc. complete (best make of approved quality).	each	735.00
28.80	Providing and fixing bright finished brass 100 mm mortice latch with one dead bolt and a pair of lever handles with necessary screws etc. complete (best make of approved quality).	each	699.00
28.81	Providing and fixing bright finished brass night latch including necessary screws etc. complete (best make of approved quality).	each	799.00
28.82	Providing and fixing special quality bright finished brass cupboard or wardrobe locks with four levers including necessary screws etc. complete (best make of approved quality) :		
28.82.1	40 mm	each	235.50
28.82.2	50 mm	each	264.00
28.82.3	65 mm	each	285.50
28.82.4	75 mm	each	307.00
28.83	Providing and fixing 50 mm bright finished brass cup board or wardrobe knob with necessary screws (best make of approved quality)	each	55.30
28.84	Providing and fixing bright finished brass handles with screws etc. complete :		
28.84.1	125 mm	each	183.00
28.84.2	100 mm	each	168.50
28.84.3	75 mm	each	126.00
28.85	Providing and fixing bright finished brass hanging type floor door stopper with necessary screws, etc. complete.	each	98.60

Code No	Description	Unit	Rate Rs.
28.86	Providing and fixing IS : 3564 marked Aluminium die cast body tubular type universal hydraulic door closer with necessary accessories and screws etc. complete.	each	715.00
28.87	Providing and fixing IS : 3564 marked aluminium extruded section body tubular type universal hydraulic door closer with double speed adjustment with necessary accessories and screws etc. complete.	each	1,236.00
28.88	Providing and fixing bright finished brass casement window fastener with necessary screws etc. complete.	each	66.60
28.89	Providing and fixing bright finished brass casement stays (straight peg type) with necessary screws etc. complete :		
28.89.1	300 mm weighing not less than 330 gms	each	147.00
28.89.2	250 mm weighing not less than 280 gms	each	119.50
28.89.3	200 mm weighing not less than 240 gms	each	108.00
28.90	Providing and fixing bright finished brass hasp and staple (safety type) with necessary screws etc. complete:		
28.90.1	150 mm	each	104.50
28.90.2	115 mm	each	88.50
28.90.3	90 mm	each	74.90
28.91	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles with necessary screws etc. complete (best make of approved quality).	each	757.00
28.92	Providing and fixing chromium plated brass night latch including necessary screws etc. complete (Best make of approved quality).	each	871.00
28.93	Providing and fixing special quality chromium plated brass cupboard locks with six levers including necessary screws etc. complete (Best make of approved quality) of :		
28.93.1	Size 40 mm	each	231.00
28.93.2	Size 50 mm	each	249.50
28.93.3	Size 65 mm	each	278.50
28.93.4	Size 75 mm	each	307.00
28.94	Providing and fixing chromium plated brass 50 mm cupboard or wardrobe knobs with nuts complete.	each	126.50
28.95	Providing and fixing chromium plated brass handles with necessary screws etc. complete:		
28.95.1	125 mm	each	190.00
28.95.2	100 mm	each	158.50
28.95.3	75 mm	each	147.50
28.96	Providing and fixing chromium plated brass casement window fastener with necessary screws etc. complete.	each	125.50

Code No	Description	Unit	Rate Rs.
28.97	Providing and fixing chromium plated brass casement stays (straight peg type) with necessary screws etc. complete :		
28.97.1	300 mm weighing not less than 330 gms	each	161.50
28.97.2	250 mm weighing not less than 280 gms	each	150.00
28.97.3	200 mm weighing not less than 240 gms	each	128.50
28.98	Providing and fixing ISI marked aluminium butt hinges ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete:		
28.98.1	125x75x4 mm	each	138.50
28.98.2	125x63x4 mm	each	121.50
28.98.3	100x75x4 mm	each	106.00
28.98.4	100x63x4 mm	each	97.60
28.98.5	100x63x3.2 mm	each	98.30
28.98.6	75x63x4 mm	each	75.30
28.98.7	75x63x3.2 mm	each	68.90
28.98.8	75x45x3.2 mm	each	58.90
28.99	Providing and fixing aluminium sliding door bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with nuts and screws etc. complete :		
28.99.1	300x16 mm	each	261.50
28.99.2	250x16 mm	each	225.50
28.100	Providing and fixing aluminium tower bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete :		
28.100.1	300x10 mm	each	101.50
28.100.2	250x10 mm	each	102.00
28.100.3	200x10 mm	each	89.40
28.100.4	150x10 mm	each	74.00
28.100.5	100x10 mm	each	56.50
28.101	Providing and fixing aluminium pull bolt lock anodised ISI marked (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws bolts, nut and washers etc. complete.	each	77.50
28.102	Providing and fixing 50cm long aluminium kicking plate 100x3.15 mm anodised (anodic coating not less than grade AC 10 as per IS :1868) transparent or dyed to required colour or shade with necessary screws etc. complete.	each	176.00

Code No	Description	Unit	Rate Rs.
28.103	Providing and fixing aluminium handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete :		
28.103.1	125 mm	each	62.90
28.103.2	100 mm	each	55.00
28.103.3	75 mm	each	43.30
28.104	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete.		
28.104.1	Single rubber stopper	each	33.20
28.104.2	Twin rubber stopper	each	60.40
28.105	Providing and fixing aluminium casement stays ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete.	each	68.60
28.106	Providing and fixing bright finished brass 100 mm mortice latch and lock ISI marked with six levers and a pair of anodised (anodic coating not less than grade AC 10 as per IS : 1868) aluminium lever handles with necessary screws etc. complete (Best make of approved quality).	each	801.00
28.107	Providing and fixing aluminium tee channels (heavy duty) with rollers, stop end in pelmets as curtain rod.	metre	80.50
28.108	Providing and fixing partition upto ceiling height consisting of G.I. frame and required board including providing and fixing of frame work made of special section power pressed/ role form G.I. sheet with zinc coating of grade 175 in consisting of floor and ceiling channel 50mm wide having equal flanges of 32mm and 0.5mm thick fixed to the floor and ceiling at the spacing of 610mm centre to centre with dash fastener of 12.5mm diameter 40mm length and the studs 48mm wide having one flange of 34mm and other flange 36mm and 0.50mm thick fixed vertically within flanges of floor and ceiling channel and placed at a spacing of 610mm centre to centre by 6mm dia bolts and nuts at both ends of partition fixed flush to wall with rawl plugs at spacing of 450mm centre to centre and fixing of boards to either side of frame work by 25mm dry wall screws on studs, floor and ceiling channels at the spacing of 300mm centre to centre, including jointing and finishing to a flush finish with recommended jointing compound, jointing tape, joint finisher and two coats of primer suitable for board as per manufacture's specification all complete.		
28.108.1	67mm overall thickness partition with 8.5mm thick double skin glass reinforced Gypsum board (GRG) conforming to IS: 2095: part III	sqm	1,655.00
28.108.2	75mm overall thickness partition with 12.5mm thick double skin plain Gypsum board conforming to IS: 2095: part I	sqm	1,484.00

Code No	Description	Unit	Rate Rs.
28.108.3	66mm overall thickness Partition with 8mm thick double skin Calcium Silicate Board made with Calcareous & Siliceous materials reinforced with cellulose fibre manufactured through autoclaving process with compressive Strength 225 kg/sq.cm, Bending Strength 100 kg/ sg.cm.	sqm	1,727.00
28.108.4	66mm overall thickness partition using 8mm thick double skin non-asbestos multipurpose cement board reinforced with cellulose fibre manufactured through autoclaving process (High pressure steam cured) as per IS: 14862 with suitable fibre cement screw.	sqm	1,727.00
28.109	Providing and fixing PTMT handles with necessary screws etc. complete.		
28.109.1	125x34x24 mm weighing not less than 23 gms.	each	43.70
28.109.2	150x34x24 mm weighing not less than 26 gms.	each	45.10
28.110	Providing and fixing PTMT Butt hinges with necessary screws etc. complete.		
28.110.1	75x60x10 mm fitted with 5.5 mm dia M.S. Bright Bar Rod weighing not less than 34 gms.	each	70.40
28.110.2	100x75x10 mm fitted with 5.5 mm dia MS Bright Bar Rod weighing not less than 53 gms.	each	86.90
28.111	Providing and fixing PTMT Tower Bolts with 12 mm one piece rod inside and necessary screws etc., complete.		
28.111.1	152x42x18 mm weighing not less than 60 gms.	each	85.60
28.111.2	202x42x18 mm weighing not less than 78 gms.	each	112.50
28.112	Providing and fixing PTMT door catcher of length 72 mm and dia. of 42 mm with suitable washers weighing not less than 33 gms.	each	39.20
28.113	Providing and fixing Bamboo jaffery/ fencing consisting of superior quality 25mm dia (Average) half cut bamboo placed vertically and fixed together with three numbers horizontal running members of hollock wood in scantling of section 50X25mm fixed with nails and G.I wire to existing surface complete as per direction of Engineer-in-charge.	sqm	526.00
28.114	Providing and fixing wooden moulded corner beading of triangular shape to the junction of panelling etc. with iron screws, plugs and priming coat on unexposed surface etc. complete 2nd class teak wood.		
28.114.1	50x50mm (base and height).	metre	267.00
28.115	Providing and fixing 2nd class teak wood lipping/ moulded beading or Taj beading of size 18X5mm fixed with wooden adhesive of approved quality and screws/ nails on the edges of the Pre-laminated particle board as per direction of Engineer-in-charge.	metre	71.60
28.116	Providing and fixing bright finished 100mm mortice lock with 6 levers without pair of handles for aluminium door with necessary screws etc complete (Best make of approved quality) as per direction of Engineer-in-charge.	each	584.00

Code No	Description	Unit	Rate Rs.
28.117	Providing and fixing magnetic catcher in cupboard / ward robe shutters including fixing with necessary screws etc. complete (Best make of approved quality.		
28.117.1	Triple strip vertical type.	each	39.40
28.117.2	Double strip (horizontal type).	each	36.60
28.118	Providing and fixing powder coated telescopic drawer channels 300mm long with necessary screws etc. complete as per directions of Engineer-in-charge.	each	257.00
28.119	Providing and fixing sliding arrangement in racks/ cupboards/cabinets shutter by P/F stainless steel rollers to run inside C or E aluminium channel section (The payment of C or E channel shall be made separately)	each	15.80
28.120	Providing and fixing factory made UPVC door frame made of UPVC profile section having an overall dimension as below (tolerance ± 1 mm) with wall thickness 2.0mm ± 0.2 mm, corners of the door frame to be mitred and welded of plastic, galvanized brackets and stainless steel screws. The hinge side vertical of the frames reinforced by galvanized M.S. tube of size 19 X 19mm and 1mm ± 0.1 mm wall thickness and 3 nos. stainless steel hinges fixed to the frame complete as per manufacturers specification and direction of Engineer-in-charge		
28.120.1	Extruded section Profile size 48x40 mm.	metre	230.00
28.120.2	Extruded section Profile size 42x50 mm.	metre	258.50
28.121	Providing and fixing to existing door frames.		
28.121.1	24 mm thick factory made PVC door shutters made of styles and rails of a UPVC hollow section of size 59x24 mm and wall thickness 2 mm ± 0.2 mm with inbuilt edging on both sides. The styles and rails mitred and joined at the corners by means of M.S. galvanised/ plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 20x20 mm and 1 mm ± 0.1 mm wall thickness. The lock rail made up of 'H' section, a UPVC hollow section of size 100x24 mm and 2 mm ± 0.2 mm wall thickness fixed to the shutter styles by means of plastic/ galvanised M.S. 'U' cleats. The shutter frame filled with a UPVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm ± 0.1 mm wall thickness . The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and fastened with nuts and washers, complete as per manufacturer's specification and direction of Engineer-in-charge. (For W.C. and bathroom door shutter).	sqm	2,119.00

Code No	Description	Unit	Rate Rs.
28.121.2	30 mm thick factory made Polyvinyl Chloride (PVC) door shutter made of styles and rails of a UPVC hollow section of size 60x30 mm and wall thickness 2 mm $\pm$ 0.2 mm with inbuilt decorative moulding edging on one side. The styles and rails mitred and joined at the corners by means of M.S. galvanised/ plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 25x20 mm and 1 mm $\pm$ 0.1 mm wall thickness. The lock rail made up of 'H' section, a UPVC hollow section of size 100x30 mm and 2 mm $\pm$ 0.2 mm wall thickness fixed to the shutter styles by means of plastic/ galvanised M.S. 'U' cleats. The shutter frame filled with a UPVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm $\pm$ 0.1 mm wall thickness . The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and fastened with nuts and washers, complete as per manufacturer's specification and direction of Engineer-in-charge.	sqm	2,290.00
28.121.3	25mm thick PVC flush door shutters made out of a one piece Multi chamber extruded PVC section of the size of 762mm X 25mm or less as per requirement with an average wall thickness of 1mm $\pm$ 0.3mm. PVC foam end cap of size 23x10mm are provided on both vertical edges to ensure the overall thickness of 25mm. An M.S. tube having dimensions 19mm x 19mm is inserted along the hinge side of the door. Core of the door shutter should be filled with High Density Polyurethane foam. The Top & Bottom edges of the shutter are covered with an end-cap of the size 25mm X 11mm. Door shutter shall be reinforced with special polymeric reinforcements as per manufactures' specification and direction of Engineer-in-charge to take up necessary hardware and fixtures. Stickers indicating the locations of hardware will be pasted at appropriate places.	sqm	2,755.00
28.122	Providing and fixing factory made P.V.C. door frame of size 50x47mm with a wall thickness of 5mm, made out of extruded 5mm rigid PVC foam sheet mitred at corners and joined with 2 Nos. of 150mm long brackets of 15x15mm M.S. square tube, the vertical door profiles to be reinforced with 19x19mm M.S. square tube of 19 gauge, EPDM rubber gasket weather seal to be provided through out the frame. The door frame to be fixed to the wall using M.S. screws of 65/100mm size complete as per manufacturers specification and direction of Engineer-in-Charge.	metre	516.00
28.123	Providing and fixing to existing door frames.		
28.123.1	30mm thick factory made panel PVC door shutter consisting of frame made out of M.S. tubes of 19 gauge thickness and size of 19mm x 19mm for styles and 15x15mm for top & bottom rails. M.S. frame shall have a coat of steel primers of approved make and manufacture . M.S. frame covered with 5mm thick heat moulded PVC 'C' channel of size 30mm thickness, 70mm width out of which 50mm shall be flat and 20mm shall be tapered in 45degree angle on	sqm	3,240.00

Code No	Description	Unit	Rate Rs.
	either side forming styles; and 5mm thick, 95mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered in 45 degree on the inner side to form top and bottom rail and 115mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided either side of the panel. 10mm (5mm x 2) thick, 20mm wide cross PVC sheet be provided as gap insert for top rail & bottom rail. paneling of 5mm thick both side PVC sheet to be fitted in the M.S. frame welded/ sealed to the styles & rails with 7mm (5mm+2mm) thick x 15mm wide PVC sheet beading on inner side, and joined together with solvent cement adhesive. An additional 5mm thick PVC strip of 20mm width is to be stuck on the interior side of the 'C' Channel using PVC solvent adhesive etc. complete as per direction of Engineer-in-charge. Manufacturer's specification & drawing (for W.C. and bathroom door shutter).		
28.123.2	30mm thick factory made solid both side Pre-laminated panel PVC door shutter consisting of frame made out of M.S. tubes of 19 gauge thickness and size of 19mm x 19mm for styles and 15x15mm for top & bottom rails. M.S. frame shall have a coat of steel primers of approved make and manufacture . M.S. frame covered with 5mm thick heat moulded Pre-laminated PVC 'C' channel of size 30mm thickness, 70mm width out of which 50mm shall be flat and 20mm shall be tapered in 45degree angle on either side forming styles; and 5mm thick, 95mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered in 45 degree on the inner side to form top and bottom rail and 115mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided either side of the panel. 10mm (5mm x 2) thick, 20mm wide cross PVC sheet be provided as gap insert for top rail & bottom rail. panelling of 5mm thick both side Pre-laminated PVC sheet to be fitted in the M.S. frame welded/ sealed to the styles & rails with 7mm (5mm+2mm) thick x 15mm wide PVC sheet beading on inner side, and joined together with solvent cement adhesive. An additional 5mm thick PVC strip of 20mm width is to be stuck on the interior side of the 'C' Channel using PVC solvent adhesive etc. complete as per direction of Engineer-in-charge. Manufacturer's specification & drawing (for W.C. and bathroom door shutter).	sqm	3,525.00
28.124	Providing and fixing of Fibre Glass Reinforced plastic (FRP) Door Frames of three legged of cross-section 90mm x 45mm having single rebate of 32mm x 15mm to receive shutter of 30mm thickness .The laminate doorframe moulded with fire resistant grade unsaturated polyester resin and chopped mat .Doorframe laminate shall be 2mm thick and shall be filled with suitable wooden block in all the three legs. The frame shall be covered with fibreglass from all sides. MS stat shall be provided at the bottom to sturdy the frame.	metre	555.00
28.125	Providing and fixing to existing door frames.		

Code No	Description	Unit	Rate Rs.
28.125.1	30 mm thick Glass Fibre Reinforced Plastic (FRP) panelled door shutter of required colour and approved brand and manufacture, made with fire - retardant grade unsaturated polyester resin, moulded to 3 mm thick FRP laminate for forming hollow rails and styles, with wooden frame and suitable blocks of seasoned wood inside at required places for fixing of fittings, cast monolithically with 5 thick FRP laminate for panels and confirming to IS: 14856 - 2000 including fixing to frames.	sqm	3,225.00
28.125.2	30mm thick fibreglass reinforced plastic (F.R.P.) flush door shutter in different plain and wood finish made with fire retardant grade unsaturated polyester resin, moulded to 3mm thick FRP laminate all around, with suitable wooden blocks inside at required places for fixing of fittings and polyurethane foam (PUF) / Polystyrene foam to be used as filler material throughout the hollow panel, casted monolithically with testing parameters of F.R.P. laminate conforming to table - 3 of IS: 14856 : 2000, complete as per direction of Engineer-in-charge.	sqm	3,095.00
28.126	Providing and fixing factory made door frame (single rebate) made of solid PVC foam profile with homogenous fine cellular structure having smooth outer integral skin having 60mm width & 30mm thickness and shall be fixed to wall as per instructions of engineer-in-charge using 100x8 sheet metal CSK screws.	metre	438.50
28.127	Providing and fixing 28 mm thick door shutter made of solid PVC foam profile with homogenous fine cellular structure having smooth outer integral skin having 71mm width & 28mm thick as styles and rails. Joints are made using solvent adhesive and GI 'C' sections (39mm x 19mm x 0.6mm thick) or M S pipe (40mm x 20mm) stiffener frame insert & telescopic polymeric 'L' corners .The panel shall be filled with 3mm thick high - pressure compact laminate as per manufacturer's specifications and direction of Engineer-in-charge, cover moulding shall be provided for covering fixing screws and elegant look.(for W.C. and bathroom door shutter).	sqm	4,070.00
28.128	Providing and fixing PVC rigid foam sheet 1mm thick on existing door shutters (bathroom and W.C. doors) using synthetic rubber based adhesive.	sqm	1,009.00
28.129	Providing and fixing 12mm thick panelling or panelling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (area of opening for panel inserts excluding portion inside grooves or rebates to be measured). Panelling for panelled or panelled and glazed shutters 25mm to 40mm thick.		
28.129.1	Marine plywood of lamination / painting quality and conforming to IS: 710	sqm	2,133.00
28.129.2	Fire retardant plywood of lamination / painting quality conforming to IS: 5509.	sqm	2,174.00
28.130	Providing & Fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt / suede finish with high density protective		

Code No	Description	Unit	Rate Rs.
	surface layer and reverse side of adhesive bonding quality conforming to IS : 2046 Type S including cost of adhesive of approved quality.		
28.130.1	1.5 mm thick.	sqm	921.00
28.130.2	1.0 mm thick.	sqm	685.00
28.131	Providing and fixing factory made Fibreglass Reinforced plastics (F.R.P.) chajja 4mm thick of required colour, size and design made by Resin Transfer Moulding (RTM) Machine Technology, resulting in void free compact laminate in single piece, having smooth gradual slope curvature for easy drainage of water and duly reinforced by 2nos. vertically and 1nos. horizontally 50x2mm thick M.S. flat with 12mm in built hole for grouting on the existing wall along with the 50mm flanges duly inserted and sealed in the wall complete in one single piece casted monolithically, including all necessary fittings . The FRP Chajja should be manufactured using unsaturated Polyester resin as per IS: 6746 duly reinforced with fibre glass chopped strand mat (CSM) as per IS: 11551 complete with protective Gel coat U/V coating on Top for complete resistance from the extreme of temperature, weather & sunlight,	sqm	4,990.00
28.132	Providing and fixing cup board shutters 25mm thick, with Pre-laminated flat pressed three layer particle board or graded wood particle board IS: 12823 marked exterior grade (Grade I Type II) having one side decorative lamination and other side balancing lamination including IInd class teak wood lipping of 25mm wide x12 mm thick with necessary screws and bright finished stainless steel piano hinges complete as per direction of the Engineer-in-Charge.	sqm	1,791.00
28.133	Providing and fixing cup board shutters with 25mm thick veneered particle board IS : 3097 marked exterior grade (Grade I) of approved make including IInd class teak wood lipping of 25mm wide x 12 mm thick with necessary screws and bright finished stainless steel piano hinges complete as per direction of Engineer-in-Charge.		
28.133.1	With decorative veneering on one side and commercial veneering on other side.	sqm	1,613.00
28.133.2	With non decorative veneering on both sides.	sqm	1,492.00
28.134	Providing and fixing factory made Pre-laminated particle board flat pressed three layer or graded wood particle board with one side decorative finish and other side balancing lamination conforming to IS: 12823 Grade I Type II, of approved design, and edges sealed with water resistant paint and lipped with aluminium 'U' type edge beading all-round the shutter, including fixing with angle cleat, grip strip, cadmium plated steel screws including fixing of aluminium hinges 100x63x4 mm etc. complete as per architectural drawing and direction of Engineer-in-Charge (Cost of 'U' beading and hinges will be paid for separately).		
28.134.1	25 mm thick.	sqm	2,077.00
28.135	Providing and fixing aluminium U beading of required size to Pre-laminated /flush door shutter including fixing etc. complete as per direction of Engineer-in-charge.	kg	433.50

Code No	Description	Unit	Rate Rs.
28.136	Providing and fixing, in position concealed G.I. section for wall panelling using board of required thickness fixed on the 'W' profile (0.55mm thick) having a knurled web of 51.55mm and two flanges of 26mm each with lips of 10.55 mm placed @ 610mm C/C in perimeter channel having one flange of 20mm and another flange of 30mm with thickness of 0.55mm and web of length 27mm. Perimeter channel is fixed on the floor and the ceiling with the nylon sleeves @ 610mm C/C with fully threaded self-tapping drywall screws. Board is fixed to the 'W' profile with 25 mm countersunk ribbed head screws @ 200mm C/C., all complete as per the drawing & directions of Engineer-in-charge the joints of the boards are finished with specially formulated jointing compound and 48mm wide fibre tape to provide seamless finish.		
28.136.1	Tapered edge calcium silicate board made with calcareous & siliceous materials reinforced with cellulose fibre manufactured through autoclaving process to give stable crystalline structure, with compressive strength 225 kg/sq.cm, Bending strength 100 kg/sq.cm.		
28.136.1.1	10mm thick.	sqm	1,206.00
28.136.2	Non-asbestos multipurpose cement board reinforced with cellulose fibre manufactured through autoclaving process (high pressure steam cured) as per IS 14862 with suitable fibre cement screw.		
28.136.2.1	8 mm thick.	sqm	1,042.00
28.136.3	Gypsum board conforming to IS: 2095 - 1996: Part - I .		
28.136.3.1	12.5 mm thick.	sqm	921.00
28.137	Providing and fixing Drapery rod 25.4 mm dia made of 20 gauge cold rolled steel strip by electrical resistance welded, coated with acid resistance polymer finial made from ABS material with suitable nos of ring made from ABS material in nearest matching colour of rod including Brackets of made of galvanized steel.	metre	458.00
28.138	Providing and fixing sun control film having thickness 1 Mil (25.4 micron) Visible Light Transmittance 4-24% & Solar Energy Transmittance 42-51% & Total solar Energy rejection 37-43% of approved colour and shade , complete in all respect , at all level , as directed by engineer- in -charge.	Sqm	806.00
28.139	Supply and installation of Multi Rib Proofing /Cladding Sheet Manufacture out of following thickness TCT(Total Coated thickness) high tensile Zinc aluminium alloy coated galvaume steel (as per 150gsm zinc aluminium coated 550Mpa yield strength) confirming to IS: 1397/ astm A -792, sheet to have wide pens 30mm high nb at 250mm centre and centre width of 1020 mm sheets be casted with regular modified polyster system on a continuous with line on centre for face and with a polyster coating respectively, sheet shall have proportionality with siphoned plate at, made to prevent leakage, sheet shall be fixed by more of sell drilling lift tapping hot dip zinc coated hoax head fastener of size 12x14x55mm long. The sheet shall be supplied in one length and for a minimum up to 12 mts with		

Code No	Description	Unit	Rate Rs.
	all scaffolding.		
28.139.1	0.50mm TCT(Total Coated thickness)	sqm	795.00
28.139.2	0.60mm TCT(Total Coated thickness)	sqm	877.00
28.139.3	0.80mm TCT(Total Coated thickness)	sqm	1,038.00
28.140	Supply and Installation PREFABRICATED INSULATED PPGL Insulated sandwich panels for ROOF of total thickness mentioned below exclusive of crest height of top corrugation. Panel shall be made of 0.50mm (+/-0.04mm) thick pre coated metal sheet on both sides of rigid polyurethane insulation. The top external facing metal sheet shall have corrugated shape with crest. The trapezoidal shape crowns/crest height should not be less than 30mm. The pre-coated metal sheet shall be PPGL (Pre Painted Galvalume Sheet with AZ coating) sheet having SDP (Super Durable Polyester) colour coat of 18 micron (min). The bottom sheet must have tongue and groove type flange (U shape) of 8mm x 8mm on groove side and 8mm x 12mm on tongue side. Flange must be on lengthwise sides for joining adjacent panels. Panel's bottom side PPGL sheet must also be pre-strengthened by full lengthwise stiffening with semi-circular beading of 12mm width & 3 to 4mm depth at 240 (+/-5) mm pitch. The top corrugated sheet must have at-least one open crown/crest for overlapping adjacent panel width wise. Similarly the top corrugated sheet must have suitable open extension of min 6" on bottom width wise side of panel for overlapping further panels joined lengthwise also. The insulation core shall be self-extinguishing DIN 4102,Class B3 fire retardant class rigid PUR with thermal conductivity of 0.025 W/mK and with initial density of 40kg/m3 (+/-2kg) suitable for temperature range of -30 degree C to +80 degree C. The panel must be made using glue-free high pressure hot pressing self-bonding method. PPGL sheet on both sides of panel shall have a min15 micron protective plastic guard film to avoid scratches during transportation.		
28.140.1	Thickness 65mm (+/- 2mm)	sqm	2,302.00
28.140.2	Thickness 105mm (+/- 2mm)	sqm	2,560.00
28.141	Supply and Installation of WALL – PREFABRICATED INSULATED PPGL PANEL: Walls: Insulated sandwich panels for wall of total thickness mentioned below. Panel shall have 0.50mm (+/-0.04mm) thick pre coated metal sheet on both sides of rigid PUR insulation. The pre-coated metal sheet shall be PPGL (Pre Painted Galvalume Sheet with AZ coating) sheet having SDP (Super Durable Polyester) colour coat of 18 micron (min). The panels shall be vertically joined together with adjacent panel by tongue and groove joints. For joining, wall panel's metal sheet facings must have lengthwise flange (U shape) of 8mm x 8mm on groove side and 8mmx12mm on tongue side of panel. The pre-coated metal sheet (PPGL) must also be pre-strengthened by full lengthwise stiffening with semi-circular beading of 12mm width & 3 to 4mm depth at 240 (+/-5) mm pitch. Panels may have optional provision for inbuilt electrical conduit		

Code No	Description	Unit	Rate Rs.
	running lengthwise at vertical center of specified panels. The insulation core shall be self-extinguishing DIN 4102, Class B3 fire retardant class rigid PUR with thermal conductivity of 0.025 W/mK and with density of 40kg/m ³ (+/-2kg) suitable for temperature range of -30 degree C to +80 degree C. The panel must be made using glue-free high pressure pressing self-bonding method. PPGL sheet on both sides of panel shall have a min15 micron protective plastic guard film to avoid scratches during transportation.		
28.141.1	Thickness 55mm (+/- 2mm)	sqm	2,195.00
28.141.2	Thickness 65mm (+/- 2mm)	sqm	2,195.00
28.142	Supply and Installation of WALL – PREFABRICATED INSULATED CEMENT FACE PANEL: Factory-readymade structural reinforced insulated wall panel of thickness mentioned below. Panel shall be made of 6mm (+/-0.6mm) thick asbestos-free fiber cement sheet/ Cement bonded particle board as per IS:14276:1995 on both sides of rigid PUR insulation. The wall panel shall be vertically joined together with adjacent panel by biscuit joints lengthwise with suitable construction adhesive. Joining member (biscuit) shall be made of approx 12mm thick cement sheet /Cement bonded particle board as per IS:14276:1995. Panels may have optional provision for inbuilt electrical conduit running lengthwise at vertical center of specified panels. Both vertical lengthwise sides of panels must have full length MS tubes of min 1.0mm thickness for better structural strength. The final panel surface must be free from undulations. The Insulating core shall be self-extinguishing DIN 4102, Class B3 fire retardant class rigid PUR with thermal conductivity of 0.025 W/mK and with density of 40kg/m ³ (+/-2kg) suitable for temperature range of -30 degree C to +80 degree C. The panel must be made using glue-free high pressure hot pressing self-bonding method and shall be free from major surface undulations.		
28.142.1	Thickness 65mm (+/- 2mm)	sqm	2,195.00
28.142.2	Thickness 75mm (+/- 2mm)	sqm	2,294.00
28.143	Supply and Installation of WALL – PREFABRICATED INSULATED LAMINATED FACE PANEL: Factory-readymade interior wall panel of thickness mentioned below. Panel shall be made of min 4mm (+/- 0.5mm) thick laminated wood based medium density fiber board sheet on both sides of rigid PUR insulation. The panels shall have suitable provision for joining adjacent panels. Interior panels may have optional provision for inbuilt electrical conduit running lengthwise at vertical center of specified panels. The insulation core shall be self-extinguishing DIN 4102, Class B3 fire retardant class rigid PUR with thermal conductivity of 0.025 W/mK and with density of 40kg/m ³ (+/-2kg) suitable for temperature range of -30 degree C to +80 degree C. The panel must be made using glue-free high pressure hot pressing self-bonding method and shall be free from major surface undulations. both sides of panel shall have a min15 micron protective plastic guard film to avoid scratches during transportation.		

Code No	Description	Unit	Rate Rs.
28.143.1	Thickness 65mm (+/- 2mm)	sqm	2,294.00
28.143.2	Thickness 75mm (+/- 2mm)	sqm	2,407.00
28.144	Providing & Fixing in position, following Acoustical Panelling on 50 x 50 mm sal-wood frame of 600 x 600 c to c having wooden supports from wall of required length, in front of 1000 gsm synthetic wool 50 mm thick with chicken mesh on wall side, including cost of required Cut-Outs, decorative mouldings / finishing-items / paint & Scaffolding, as per Architectural & Acoustical Design & Instructions & Complete in all aspects including all materials labour, finishing etc complete		
28.144.1	Fabric wrapped Compressed polyester fibre nonwoven 9 mm panels	Sqm	4,590.00
28.144.2	Wood- wool board 20mm panels	Sqm	3,430.00
28.144.3	Gypsum plain 12mm panels	Sqm	2,300.00
28.144.4	12mm wp Ply wood & 1.5mm laminate panels	Sqm	5,090.00
28.145	Providing & Fixing in position Acoustical Doors along with 150 x 150 mm teak wood frame, doors made from 50mm Teak wood frame 600 x600 c to c filled with 1000 Gsm synthetic wool 50mm thick and 3mm Tecsound from both sides, 12mm waterproof ply & veneer from both sides , including 150mm heavy duty SS hinges (Geze / Dorma or eq.) 4 no each leaf, with Door-closer (Dorma / Geze or eq.) including cost of required Cut-Outs, decorative mouldings / finishing-items / melamine polish & Scaffolding as per Architectural & Acoustical Design & Instructions & Complete in all aspects .including all materials labour, finishing etc complete	Sqm	23,700.00
28.146	Providing & fixing in position Stage flooring Made from 18mm plywood 1200 x 2400 & 18mm Teakwood planks 100 x 800 having tongue & grove on Sal-wood frame of 50 x 100 at 600mm c to c on stage surface including cost of required Cut-Outs, decorative mouldings / finishing-items / polish etc., as per Architectural & Acoustical Design & Instructions & Complete in all aspects. .including all materials labour, finishing etc complete	Sqm	8,220.00
28.147	Providing & Fixing in position, Acoustical Ceiling with following Panels on approved heavy duty G.I. frame ceiling channels at 450 c to c, & intermediate channels not more than 1200 c to c, along with ply wood forms suspended with Hangers from Roof, in front of 1000 Gsm synthetic wool 50 mm thick, with Paint, including cost of required Cut-Outs, decorative mouldings / finishing-items & Scaffolding, as per Architectural & Acoustical Design & Instructions & Complete in all aspects including all materials labour, finishing etc complete		
28.147.1	Gypsum Plain panels	Sqm	1,466.00
28.147.2	Compressed polyester fibre nonwoven 9mm panels	Sqm	2,865.00
28.147.3	Rigitone 8/18 perforated panels	Sqm	1,200.00

Code No	Description	Unit	Rate Rs.
28.148	Providing & Fixing in position, Acoustical Panelling made from 12mm thick Agro wood strips of 50, 75 x 100 mm width on 50 x 50 mm Sal- wood frame of 600 x 600 c to c having supports from wall of required length, in front of 1000 gsm synthetic wool 50 mm thick with approved coloured fabric on strips side & chicken mesh on wall side, including cost of required Cut-Outs, decorative mouldings / finishing-items / Melamine Polish & Scaffolding, as per Architectural & Acoustical Design & Instructions & Complete in all aspects. including all materials labour, finishing etc complete	Sqm	5,070.00
28.149	Providing & Fixing in position, Fabric wrapped Compressed polyester fibre nonwoven 9mm panels above the wood wool board panelling or existing sal wood frame, using adhesive, as per Architectural & Acoustical Design & Instructions & Complete in all aspects. including all materials labour, finishing etc complete	Sqm	2,950.00
28.150	Providing & Fixing in position, Partition made from 12mm thick Gypsum from both sides on 50 x 50 mm Sal-wood frame of 600 x 600 c to c, having of 800 gsm synthetic wool 50 mm thick in between, including cost of required Cut-Outs & Scaffolding, as per Architectural & Acoustical Design & Instructions & Complete in all aspects including all materials labour, finishing etc complete	Sqm	3,105.00
28.151	Providing & Fixing in position, Carpet more than 800+ gsm, made with 100% stain proof fibres of approved make along with 5mm underlay as per Architectural & Acoustical Design & Instructions & Complete in all aspects including all materials labour, finishing etc complete	Sqm	1,451.00
28.152	Providing & Fixing in position, 12mm wp Ply wood & 1.5mm laminate panels above the fabricated frame on one side, as per Architectural & Acoustical Design & Instructions & Complete in all aspects. including all materials labour, finishing etc complete	Sqm	2,177.00
28.153	Providing & Fixing in position, Under Deck insulation for metal deck using 1000 Gsm synthetic wool with fixed to deck using adhesive and chicken mesh.	sqm	740.00
28.154	Providing & fixing in position, heavy duty fully upholstered Auditorium chairs 520 mm c to c tip-up type. Height of back should be less than 1030 mm with plastic protective cover on back and bottom having teak wood handles. Back to back distance is 1000mm. The auditorium chairs should be of following specifications 1. Powder Coated Heavy duty MS Stand. 2. Individually moulded, ergonomically designed seat and back cushions. 3. Moulded Polyurethane Foam cushion. PU foam density 48 – 52 kgs/cu.mtr 4. Moulded Polyurethane Foam manufactured in certified ISO 9001 facility to ensure consistency in density for longevity. 5. Upholstered in Foam laminated stretch sandwich Fabric for clean finish and soft comfortable feel as per the colour & pattern selected by the client. 6. Seat and Back should have moulded synthetic protective cover. 7. Wooden or PU armrest 65mm x 20mm - 330mm long. 8. Mounted using Anchor fasteners.	No	6,000.00

Code No	Description	Unit	Rate Rs.
28.155	Supply and Installation of SMALL ROOM (TOILET & GUARD ROOM) with following thickness PREFABRICATED INSULATED PPGL FACE closed lip panels (for door, wall and roof) of thickness mentioned below. Panel shall have 0.50mm (+/-0.04mm) thick pre-coated metal sheet on both sides of rigid PUR insulation. The pre-coated metal sheet shall be PPGL (Pre Painted Galvalume Sheet with AZ coating) sheet having SDP (Super Durable Polyester) colour coat of 18 micron(min). The Pre coated metal sheet on both sides must be pre-strengthened by full lengthwise stiffening with semi-circular beading of 12mm wide & 3mm depth at 240 (+/-5) mm pitch. Panels shall have closed lengthwise sides made by right angle flange on both side of Pre coated metal sheets, free from cap type covers. The top and bottom part on width wise sides of panels must have full width MS Square tube insert of (min 25mm x 1.0mm) for better screw retention and strength. The insulation core shall be self-extinguishing DIN 4102,Class B3 fire retardant class rigid PUR with thermal conductivity of 0.025 W/mK and with density of 40kg/m3 (+/-2kg) suitable for temperature range of -30 degree C to +80 degree C. The panel must be made using glue-free high pressure hot pressing self-bonding method free from major undulations. PPGL sheet on both sides of panel shall have a min15 micron protective plastic guard film to avoid scratches during transportation.		
28.155.1	Thickness of 32mm (+/-2mm)	sqm	3,145.00
28.155.2	Thickness of 50mm (+/-2mm)	sqm	3,345.00
28.156	Supply and Installation of following accessories in Small rooms made of prefabricated panels including necessary screws, adhesives etc complete.		
28.156.1	Bottom and Top U track for mounting panels with floor made from minimum 1.15 mm thick PPGL sheet with flange height of minimum 35 mm and width as per thickness of panel used.	metre	301.50
28.156.2	50x50mm Corner angle flashings (inner and outer) of equal shape for covering various corners and open sides of panels made from 0.5mm thick pre-coated PPGL sheet in following sizes:	metre	235.50
28.156.3	100x100mm Corner angle flashings (inner and outer) of equal shape for covering various corners and open sides of panels made from 0.5mm thick pre-coated PPGL sheet in following sizes:	metre	301.50
28.156.4	200x200mm Roof Ridge Cap flashing for roof panels made from 0.5mm thick pre-coated PPGL sheet	metre	301.50
28.156.5	Roof Front side flashing for roof panels (corrugated trapazodial shape) made from 0.5mm thick pre-coated PPGL sheet.	metre	301.50
28.156.6	Roof End cap for closing ends of roof panels made from 0.5mm thick PPGL sheet.	metre	235.50
28.156.7	Frame for door/ windows made out of min 1.15mm thick press steel sheet.	metre	347.00

Code No	Description	Unit	Rate Rs.
28.156.8	U or L shape panel end caps suitable for thickness of panel used, with 30mm flange made from 0.5mm Pre coated PPGL sheet.	metre	107.00
28.157	Supply and fixing of Cement Bonded Particle Board (as per IS 14276) false ceiling using 6MM thick Cement Board with galvanized and pre painted steel T section of size 24mm x 27mm x 0.4mm for main T duty pre punched to accept cross T section of size 24mm x 25mm x 0.4mm duly punched at both ends for insertion into main T. The grid size will be 610mm x 610mm. The frame work (grid) is suspended to the roof by using G.I flat of 0.60mm or 14-gauge G.I wire with necessary fixers to the roof and frame work. Cement Board panel is loaded on the grid. The cost inclusive of necessary hardware, labour, one coat of primer (Both side) and two coats of smooth finish on visible side.	Sqm	680.00
28.158	Supply and fixing of Cement Bonded Particle Board (as per IS 14276) wall panelling using 10 MM thick Cement Board with frame work made of GI stud section of size 48mm x 35mm x 0.55mm thick placed at every 610 mm C/C intervals vertically and at 1200mm internals horizontally fixed to the wall by means of self expansion screws and caps. Cement Board panel is to be fixed to frame by means of self taping screws placed at every 300 mm intervals leaving 3mm gap between two panels. The cost inclusive of one coat of Altek primer and two coats of Altek smooth finish and cost & conveyance of all materials, labour charges etc. complete as per the direction of Engineer in charge.	Sqm	1,563.00
28.159	Supply and fixing of Cement Bonded Particle Board (as per IS 14276) double skin partition using with 10 MM thick Cement Board made out of G.I. track section of size 50mmx 35mm x 0.55 mm for fixing to the roof and floor and stud section of size 48mm x 35mm x 0.55mm placed in track section vertically at 610mm intervals and at 1200mm intervals horizontally fixed to the wall by means of self expansion screws and caps to the wall and roof. Cement Board panel is to be fixed both sides of frame work by using self taping screws fixed at every 300mm intervals to the frame work leaving 3 mm gap between two panels. The cost inclusive with one coat of Alltek primer and two coats of Alltek smooth finish and cost and conveyance of all materials to site, labour charges etc., complete as per the direction of Engineer in charge.	Sqm	2,760.00
28.160	Supply and fixing of Factory Laminated Cement Bonded Particle Board double skin partition using with 10MM Factory Laminated Cement Bonded Board made out of G.I track section of size 50 mm x 35mm x 0.55mm for fixing to the roof and floor and stud section of size 48mm x 35mm x 0.55mm placed in track section vertically at 610mm intervals and at 1200mm internals horizontally. The frame is fixed by means of self expansion screws and caps to the wall / roof. Laminated Cement Bonded Particle Board is to be fixed both sides of the frame work by using 2mm thick electro plated CR flat section leaving 3mm gap between two panels. The cost inclusive of cost and conveyance of all materials to sites, other materials incidentals and labour charges as per the direction of Engineer in charges.	Sqm	3,595.00

Code No	Description	Unit	Rate Rs.
28.161	Supply and fixing of Bath room / Toilet door shutter with 16mm Factory Laminated Cement Bonded Particle Board BISON Lam (IS 14276) door shutter with all-round 'U' lipping of PPS section of size 12mm X 18mmX 12mmX0.6mm thickness with a hardware of 12mm dia X200mm long aluminium aldrop – 2 nos2 No of 125mm long handles and also 3 no Of IS304 grade Patee Hinges 3mmX12mmX180mm long with pole receiver of 10mm dia pole X40mm long welded on 2mm X40mm(ss304) plates works as receiver for RT patte hinges. The price inclusive of all material at site.	Sqm	2,540.00

29.0 STEEL WORK

Code No	Description	Unit	Rate Rs.
29.1	Structural steel work in single section fixed with or without connecting plate including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	kg	74.40
29.2	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete:	kg	88.10
29.3	Providing and fixing in position collapsible steel shutters with vertical channels 20x10x2mm and braced with flat iron diagonals 20x5mm size with top and bottom rail of T-iron 40x40x6mm with 40mm dia, steel pulleys complete with bolts, nuts, locking arrangement, stoppers, handles, including applying a priming coat of approved steel primer.	sqm	7,290.00
29.4	Providing and fixing 1mm thick M.S. sheet sliding-shutters with frame and diagonal braces of 40x40x6mm angle iron, 3mm M.S. gusset plates at the junction and corners 25mm dia pulley, 40x40x6mm angle and T-iron guide at the top and bottom respectively including applying a priming coat of approved steel primer.	sqm	4,120.00
29.5	Providing and fixing 1mm thick M.S. sheet door with frame of 40x40x6mm angle iron and 3mm M.S. gusset plates at the junctions and corners, all necessary fittings complete, including applying a priming coat of approved steel primer.		
29.5.1	Using M.S. angels 40x40x6 mm for diagonal braces.	sqm	3,695.00
29.5.2	Using flats 30x6mm for diagonal braces and central cross piece.	sqm	3,565.00
29.6	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete including the cost of providing and fixing necessary 27.5cm long wire springs grade No.2 and M.S. top cover of required thickness for rolling shutters.		
29.6.1	80x1.25mm M.S. laths with 1.25 mm thick top cover.	sqm	2,685.00
29.6.2	80x1.20 mm M.S. laths with 1.20 mm thick top cover.	sqm	2,132.00
29.6.3	80x0.90 mm M.S. laths with 0.90 mm thick top cover.	sqm	1,963.00
29.7	Providing and fixing ball bearing for rolling shutters.	each	400.00
29.8	Extra for providing mechanical device chain and crank operation for operating rolling shutters.		
29.8.1	Exceeding 10.00 sqm and upto 16.80 sqm in the area.	sqm	921.00

Code No	Description	Unit	Rate Rs.
29.8.2	Exceeding 16.80 sqm in area.	sqm	942.00
29.9	Extra for providing grilled rolling shutters manufactured out of 8 mm dia. M.S. bar instead of laths as per design approved by Engineer-in-charge. (area of grill to be measured).	sqm	457.00
29.10	Fixing standard steel glazed doors, windows and ventilators in walls with 15x3mm lugs 10 cm long embedded in cement concrete blocks 15x10x10cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required, including fixing of float glass panes with glazing clips and special metal-sash putty of approved make, or metal beading with screws (only steel windows with lugs, glass panes cut to size and glazing clips or metal beading with screws, shall be supplied by department free of cost.)	kg	58.70
29.11	Providing and fixing factory made ISI marked steel glazed doors, windows and ventilators side /top /centre hung with beading and all members such as F7D, F4B, K11 B and K12 B etc. complete of standard rolled steel sections, joints mitred and flash butt welded and sash bars tenoned and rivetted with 15x3mm lugs, 10cm long, embedded in cement concrete blocks 15x10x10cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required, including providing and fixing of hinges, pivots, float glass panes with glazing clips and special metal sash putty of approved make and a priming coat of approved steel primer excluding the cost of metal beading and other fittings except necessary hinges or pivots complete as per approved design.	kg	160.00
29.12	Providing and fixing factory made ISI marked steel glazed doors, windows and ventilators side /top /centre hung with beading and all members such as F7D, F4B, K11 B and K12 B etc. complete of standard rolled steel sections, joints mitred and flash butt welded and sash bars tenoned and rivetted with 15x3mm lugs, 10cm long, embedded in cement concrete blocks 15x10x10cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required, including providing and fixing of hinges, pivots, float glass panes with glazing clips and special metal sash putty of approved make and a priming coat of approved steel primer excluding the cost of metal beading and other fittings except necessary hinges or pivots complete as per approved design.	sqm	3,560.00
29.13	Extra for providing and fixing steel beading of approved shape and section with screws instead of glazing clips and metal sash putty in steel doors, windows, ventilators and composite units.	metre	33.50

Code No	Description	Unit	Rate Rs.
29.14	Providing and fixing T-iron frames for doors, windows and ventilators of mild steel Tee-sections, joints mitred and welded with 15x3 mm lugs 10cm long embedded in cement concrete blocks 15x10x10 cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) or with wooden plugs and screws or with dash fastener or rawl plugs and screws or with fixing clips or with bolts and nuts as require including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer.	kg	88.40
29.15	Providing and fixing pressed steel door frames confirming to IS: 4351 manufactured from commercial mild steel sheet of 1.25 mm thickness including hinges jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25mm, or base ties of 1.25mm pressed mild steel welded or rigidly fixed together by mechanical means, adjustable lugs with split end tail to each jamb including steel butt hinges 2.5mm thick with mortar guards, lock strike-plate and shock absorbers as specified and applying a coat of approved steel primer after pre-treatment of the surface as directed by Engineer-in-charge:		
29.15.1	Profile B	metre	460.50
29.15.2	Profile C	metre	503.00
29.15.3	Profile E	metre	546.00
29.16	Providing and fixing M.S. Tubular frames for doors, windows, ventilators and cupboard with L-Type section made of 1.60mm thick M.S. Sheet, joints mitred and welded and grinded finish profiles required size with 15x3mm lugs 10cm long embedded in cement concrete blocks 15x10x10cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primers.	kg	135.50
29.17	Steel work in built up tubular trusses including cutting, hoisting fixing in position and applying a priming coat of approved steel primer, welded and bolted including special shaped washers etc. complete.		
29.17.1	Hot finished welded type tubes	kg	124.50
29.17.2	Hot finished seamless type tubes	kg	132.00
29.17.3	Electric resistance or induction butt welded tubes.	kg	139.50
29.18	Providing and fixing M.S. fan clamp type I or II of 16 mm dia M.S. bar bent to shape with hooked ends in R.C.C. slabs, beams during laying including painting the exposed portion of loop, all as per standard design complete.	each	145.00
29.19	Providing and fixing circular/ Hexagonal cast iron or M.S. sheet box for ceiling fan clamp of internal dia 140mm, 73mm height, top lid of 1.5mm thick M.S. sheet with its top surface hacked for proper bonding, top lid shall be screwed into the cast iron/ M.S. sheet box by means of 3.3mm dia. round headed screws, one lock at the corners. Clamp shall be made of 12mm dia M.S. bar bent to shape as per standard drawing.	each	152.50

Code No	Description	Unit	Rate Rs.
29.20	Providing and fixing M.S. round holding down bolts with nuts and washer plates complete.	kg	103.00
29.21	Providing and fixing bolts including nuts and washers complete.	kg	145.00
29.22	Providing and fixing M.S. rivets of sizes in position.	kg	197.00
29.23	Welding by gas or electric plant including transportation of plant at site etc. complete.	cm	4.30
29.24	Providing and fixing bright finished brass casement window fasteners or peg stays to windows/ ventilators with necessary welding and machine screws etc. complete.	kg	69.30
29.25	Providing and fixing 14 mm bright finished brass spring catch to steel centre hung ventilators with necessary welding and machine screws etc. complete.	each	38.60
29.26	Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.		
29.26.1	In stringers, treads, landings etc. of stair cases including use of chequered plate wherever required, all complete.	kg	91.70
29.26.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	kg	117.50
29.27	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing and staircase railing including applying a priming coat of approved steel primer.		
29.27.1	M.S. tube.	kg	125.00
29.27.2	E.R.W. tubes.	kg	149.00
29.27.3	G.I. pipes.	kg	151.50
29.28	Providing and fixing GI wire gauge of average width of aperture 1.56mm with wire of 0.45mm to existing steel door, window shutter frames with necessary M.S. strip beading 20x3mm with suitable screw at not exceeding 150mm distance etc. complete.	sqm	595.00
29.29	Providing and fixing cow catcher made of R.S. joist angles channels MS rounds including cutting welding and fabrication with priming coat of red oxide (as per design).	kg	78.60
29.30	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates etc., including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete, i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge, (for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.).	kg	361.00

Code No	Description	Unit	Rate Rs.
29.31	Providing and fixing SS grab bars set for accessible toilets comprising of 1 no S.S. 304 SWING HANDICAP GRAB BAR 700 mm and of DIA 32MM and thickness 1.5mm, 1 No S.S. 304 L SHAPED DISABLED GRAB BAR of IZE-600MM (H) X 600MM (D) and 32MM DIA and thickness 1.5mm, 2 Nos S.S 304 Straight GRAB bar 600 mm, 32mm dia, thickness 1.5mm.	No	5,030.00
29.32	Providing & Fixing in position, MS fabrication work using angles, sqr tubes, c channels etc for various partition frame as per Design & Instructions & Complete in all aspects . including all materials labour, finishing etc complete	Kg	88.10

30.0 FLOORING

Code No	Description	Unit	Rate Rs.
30.1	Brick on edge flooring with bricks of class designation 75 including cement slurry etc. complete in cement mortar:		
30.1.1	1:4 (1 cement : 4 coarse sand)	sqm	704.00
30.1.2	1:6 (1cement : 6 coarse sand)	sqm	666.00
30.2	Dry brick on edge flooring in required pattern with bricks of class designation 75 on a bed of 12 mm mud mortar including filling joints with Jamuna sand complete.	sqm	540.00
30.3	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded 20mm nominal size stone aggregate) finished with a floating coat of neat cement including cement slurry, but excluding the cost of nosing of steps etc. complete.		
30.3.1	40mm thick	sqm	384.50
30.3.2	75mm thick	sqm	721.00
30.4	52 mm thick cement concrete flooring with concrete hardener topping under layer 40 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and top layer 12 mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6 mm nominal size) by volume .hardening compound is mixed @ 2 litre per 50kg of cement or as per manufacturers specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	sqm	617.00
30.5	62 mm thick cement concrete flooring with concrete hardener topping under layer 50 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) and top layer 12mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6mm nominal size) by volume. Hardening compound is mixed @ 2 litre per 50kg of cement or as per manufactures specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	sqm	671.00
30.6	Cement plaster skirting (upto 30 cm height) with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement.		
30.6.1	18 mm thick.	sqm	410.50
30.7	Providing and laying M30 grade controlled cement concrete pavements including mixing and vibrations concrete with necessary needle vibrators and surface with screed board vibrating complete in all respect with 20/25 mm stone aggregate (crusher broken) including anti-skid textured finish to required camber/ super	Cum	5,780.00

Code No	Description	Unit	Rate Rs.
	elevation and grade including curing etc. as per specification with cement concrete M-30 grade including cost of Steel frame work for sides of C.C. pavement consisting of M. S. channels flats and angles with required steel pegs (some of them may left embedded in concrete/ including providing frame work) (only for Building Campus)		
30.8	Cement concrete pavement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including finishing complete.	cum	6,210.00
30.9	Extra for making chequers of approved pattern on cement concrete floors, steps, landing, pavements etc.	sqm	50.50
30.10	40 mm thick marble chips flooring rubbed and polished to granolithic finish, under layer 34 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size) and top layer 6mm thick with white, black, chocolate, grey, yellow or green marble chips of sizes from 1mm to 4mm nominal size laid in cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 4:7 (4 cement marble powder mix : 7 marble chips) by volume including cement slurry etc. complete :		
30.10.1	Dark shade pigment with ordinary cement.	sqm	650.00
30.10.2	Light shade pigment with white cement .	sqm	795.00
30.10.3	Medium shade pigment with 50% white cement and 50% ordinary cement.	sqm	744.00
30.10.4	White cement without any pigment.	sqm	675.00
30.10.5	Light shade pigment with ordinary cement.	sqm	694.00
30.10.6	Ordinary cement without any pigment.	sqm	625.00
30.11	40 mm thick marble chips flooring, rubbed and polished to granolithic finish, under layer 31mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size) and top layer 9mm thick with white, black, chocolate, grey, yellow or green marble chips of sizes from 4mm to 7mm nominal size laid in cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 4:7 (4 cement marble powder : 7 marble chips) by volume including cement slurry etc. complete.		
30.11.1	Dark shade pigment with Ordinary cement.	sqm	652.00
30.11.2	Light shade pigment with white cement.	sqm	859.00
30.11.3	Medium shade pigment with 50% white cement and 50% ordinary cement.	sqm	787.00
30.11.4	White cement without any pigment.	sqm	710.00
30.11.5	Light shade pigment with ordinary cement.	sqm	696.00
30.11.6	Ordinary cement without any pigment.	sqm	643.00
30.12	40 mm thick marble chips flooring, rubbed and polished to granolithic finish, under layer 28 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal		

Code No	Description	Unit	Rate Rs.
	size) and top layer 12mm thick with white, black, chocolate, grey yellow or green marble chips of sizes from 7mm to 10mm nominal size laid in cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 2:3 (2 cement marble powder mix : 3 marble chips) by volume including cement slurry etc. complete :		
30.12.1	Dark shade pigment with ordinary cement.	sqm	701.00
30.12.2	Light shade pigment with white cement.	sqm	788.00
30.12.3	Medium shade pigment with 50% white cement and 50% ordinary cement.	sqm	742.00
30.12.4	White cement without any pigment.	sqm	752.00
30.12.5	Light shade pigment with ordinary cement.	sqm	695.00
30.12.6	Ordinary cement without any pigment.	sqm	658.00
30.13	Marble chips skirting (upto 30 cm height) rubbed and polished to granolithic finish, top layer 6 mm thick with white, black, chocolate, grey, yellow or green marble chips of sizes from smallest to 4 mm nominal size laid in cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 4:7 (4 cement marble powder mix : 7 marble chips) by volume :		
30.13.1	18 mm thick with under layer 12 mm thick in cement plaster 1:3 (1 cement : 3 coarse sand) :		
30.13.1.1	Dark shade pigment with ordinary cement.	sqm	1,134.00
30.13.1.2	Light shade pigment with white cement.	sqm	1,178.00
30.13.1.3	Medium shade pigment with 50% white cement and 50% ordinary cement.	sqm	1,154.00
30.13.1.4	White cement without any pigment.	sqm	1,159.00
30.13.1.5	Light shade pigment with ordinary cement.	sqm	1,131.00
30.13.1.6	Ordinary cement without any pigment.	sqm	1,109.00
30.14	Providing and fixing glass strips in joints of terrazo/ cement concrete floors.		
30.14.1	40 mm wide and 4 mm thick.	metre	58.90
30.15	Extra for laying terrazo flooring on staircase treads not exceeding 30 cm in width including cost of forming, nosing etc.	sqm	56.80
30.16	Crazy marble stone flooring including filling the gaps with light shade pigment with white cement marble powder mixture (3 parts of white cement : 1 part of marble powder) by weight in proportion of 4:7 (4 cement marble powder mix : 7 white, black or white and black marble chips of sizes from 1mm to 4mm nominal size by volume) and under layer 25mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5 mm nominal size) rubbing, polishing and cement slurry etc. complete :		
30.16.1	18 mm thick crazy marble stone white, black or as specified.	sqm	1,145.00

Code No	Description	Unit	Rate Rs.
30.17	Precast terrazo tiles 20mm thick with graded marble chips of size upto 12mm laid in floors, and landings, jointed with neat cement slurry mixed with pigment to match the shade of the tiles including rubbing and polishing complete with precast tiles on 20mm thick bed of cement mortar 1:4 (1 cement :4 coarse sand) :		
30.17.1	Light shade using white cement.	sqm	964.00
30.17.2	Medium shade using 50%white cement and 50% ordinary cement.	sqm	915.00
30.17.3	Dark shade using ordinary cement.	sqm	877.00
30.17.4	Ordinary cement without any pigment.	sqm	828.00
30.18	Extra if terrazo tiles are laid in treads of steps not exceeding 30 cm in width.	sqm	75.30
30.19	Precast terrazo tiles 20 mm thick with graded marble chips of sizes upto 12 mm in skirting and risers of steps not exceeding 30 cm in height on 12 mm thick cement plaster 1:3 (1 cement : 3 coarse sand) jointed with neat cement slurry mixed with pigment to match the shade of the tiles, including rubbing and polishing complete with tiles of :		
30.19.1	Light shade using white cement.	sqm	1,520.00
30.19.2	Medium shades using 50% white cement and 50% ordinary cement.	sqm	1,459.00
30.19.3	Dark shade using ordinary cement.	sqm	1,410.00
30.19.4	Ordinary cement without any pigment.	sqm	1,361.00
30.20	Chequered terrazo tiles 22 mm thick with graded marble chips of size up to 6 mm in floors jointed with neat cement slurry mixed with pigment to match the shade of the tiles including rubbing and polishing complete on 20 mm thick bed of cement mortar 1:4 (1 cement :4 coarse sand) :		
30.20.1	Light shade using white cement.	sqm	901.00
30.20.2	Medium shade using 50% white cement, 50% ordinary cement.	sqm	891.00
30.20.3	Dark shade using ordinary cement.	sqm	853.00
30.20.4	Ordinary cement without any pigment.	sqm	804.00
30.21	Chequered precast cement concrete tiles 22 mm thick in footpath & courtyard jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing and cleaning etc. complete on 20 mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand).		
30.21.1	Light shade using white cement.	sqm	905.00
30.21.2	Medium shade using 50% white cement 50% Grey cement.	sqm	1,036.00
30.21.3	Dark shade using ordinary cement.	sqm	854.00
30.21.4	Ordinary cement without any pigment.	sqm	805.00

Code No	Description	Unit	Rate Rs.
30.22	Providing and fixing 10mm thick acid and or alkali resistant tiles of approved make and colour using acid and or alkali resisting mortar bedding and joints filled with acid and or alkali resisting cement as per IS : 4457 complete as per the direction of Engineer-in- Charge.		
30.22.1	In flooring on a bed of 10 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand).		
30.22.1.1	Acid and alkali resistant tile.	sqm	1,243.00
30.22.2	In dado/skirting on 12 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand).		
30.22.2.1	Acid and alkali resistant tile.	sqm	1,340.00
30.23	Extra for prefinished nosing to treads of steps of marble stone.	metre	492.00
30.24	Extra for marble stone flooring in treads of steps and risers using single length upto 2.00 metre .	sqm	533.00
30.25	Kota stone slab flooring 25mm thick over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :		
30.25.1	Area of each slab 900 to 2000 sqcm	sqm	1,299.00
30.25.2	Area of each slab 2001 to 5000 sqcm	sqm	1,381.00
30.26	Kota stone slabs 25 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	sqm	1,538.00
30.27	40 mm thick fine dressed stone flooring over 20 mm (average) thick base of cement mortar 1:5 (1cement : 5 coarse sand) with joints finished flush.		
30.27.1	Red sand stone	sqm	756.00
30.27.2	White sand stone	sqm	806.00
30.28	40 mm thick fine dressed stone flooring over 20 mm (average) thick base of cement mortar 1:5 (1 cement : 5 coarse sand) including pointing with cement mortar 1:2 (1 cement : 2 stone dust) with an admixture of pigment to match the shade of stone.		
30.28.1	Red sand stone	sqm	1,080.00
30.28.2	White sand stone	sqm	1,130.00
30.29	40 mm thick rubbed stone flooring over 20 mm (average) thick base of cement mortar 1:5 (1 cement :5 coarse sand) with joints 3mm thick, side buttered with cement mortar 1:2 (1 cement : 2 stone dust) admixed with pigment to match the shade of stone and pointing with same mortar		
30.29.1	Red sand stone	sqm	1,159.00

Code No	Description	Unit	Rate Rs.
30.29.2	White sand stone	sqm	1,209.00
30.30	Extra for pre finished nosing in treads of steps of Kota stone/ sand stone slab.	metre	163.00
30.31	Extra for Kota stone/ sand stone in treads of steps and risers using single length upto 1.05 metre .	sqm	27.00
30.32	25mm wooden planking, tongued and grooved in flooring including fixing with iron screws complete with :		
30.32.1	Second class teak wood	sqm	3,565.00
30.32.2	Second class deodar wood	sqm	3,235.00
30.33	38mm thick wood block flooring of first class teak wood laid over 25mm thick levelling layer of cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 10mm nominal size) to be paid separately coated with a thin layer of hot bitumen (blown type) @ 2.45 kg per sqm. including fixing blocks in position after dipping in hot bitumen (blown type) upto half depth, planed, levelled smooth and finished complete.	sqm	9,010.00
30.34	Providing and fixing M.S. angle 50x50x5 mm to act as nosing with lugs of M.S. flat 10x5 mm 10cm long forked at end 60cm apart (minimum three lugs to be provided) including necessary welding and applying a priming coat of approved primer on exposed surface etc. complete.	kg	100.00
30.35	Random rubble dry stone Kharanja (soling) under floor.	cum	1,838.00
30.36	Providing and Fixing Cushion Vinyl/Fully flexible Vinyl Flooring confirming to I.S.-3462 Flooring of approved make with fibre base using rubber base adhesives including rolling with light wooden roller complete :		
30.36.1	1.0 mm thick.	Sqm	858.00
30.36.2	1.5 mm thick.	Sqm	949.00
30.36.3	2.0 mm thick.	Sqm	1,026.00
30.37	Providing and laying wooden flooring with a direct laminated surface treated with aluminium oxide on top of a high-density fiber board with a density of 850 Kg./per Mtr. having a click system tongue and groove joint to secure a long lasting joint. The planks are or termite resistant and water protected with both side lamination Wooden flooring Planks of size 1208 x 194 x 8 mm / 1215x294x8 mm (8mm thick laminated floor class of use 23/31 having a wear resistance level of AC-3 , impact resistance > 9mm, moisture resistance 3-10% as per (EN-424, EN – 438 EN – 425 EN – 417 – 2)or PREN 3329 complete in all respect as per direction of EI	Sqm	2,580.00
30.38	Providing and laying of skirting 89 mm wide having both side laminations with moulding in upper side with matching of floor fixing with nails and screws & fevicol complete in all respect as per direction of EI.	metre	1,120.00

Code No	Description	Unit	Rate Rs.
30.39	Providing and fixing fine dressed " marble stone flooring " with white lime stone (raj nagar stone) machine cut of approved shade set in pattern over 20mm thick base of cement mortar 1:3 including jointing finished flush with white cement and stone powder with an admixture of pigment as per direction of Engineer in charge. (50-75mm thick)	Sqm	3,576.00

31.0 ROOFING

Code No	Description	Unit	Rate Rs.
31.1	Providing corrugated G.S. sheet roofing including vertical/ curved surface fixed with polymer coated J or L hooks, bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead and including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete upto any pitch in horizontal/ vertical or curved surfaces) excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.		
31.1.1	1.00mm thick with zinc coating not less than 275gm/m ²	sqm	1,147.00
31.1.2	0.80mm thick with zinc coating not less than 275gm/m ²	sqm	982.00
31.1.3	0.63 mm thick with zinc coating not less than 275gm/m ²	sqm	843.00
31.2	Extra for straight cutting in C.G.S. sheet roofing for making opening of area exceeding 40 sq. decimetre for chimney stacks, sky light etc.:		
31.2.1	1.00 mm thick	metre	75.30
31.2.2	0.80 mm thick	metre	60.30
31.2.3	0.63 mm thick	metre	50.20
31.3	Extra for circular cutting in C.G.S. sheet roofing for making opening of area exceeding 40 square decimetre :		
31.3.1	1.00 mm thick	metre	424.00
31.3.2	0.80 mm thick	metre	338.50
31.3.3	0.63 mm thick	metre	338.50
31.4	Providing ridges or hips of width 60 cm over all width plain G.S. sheet fixed with polymer coated J or L hooks, bolts and nuts 8 mm dia. G.I. limpet and bitumen washers complete.		
31.4.1	0.80mm thick with zinc coating not less than 275gm/m ²	metre	833.00
31.4.2	0.63mm thick with zinc coating not less than 275gm/m ²	metre	742.00
31.5	Providing valleys of 90cm wide overall in plain G.S. sheet fixed with polymer coated J or L hooks, bolts and nuts 8mm dia. G.I. limpet and bitumen washers complete :		
31.5.1	1.60mm thick with zinc coating not less than 350gm/m ²	metre	1,504.00
31.6	Providing flashing of 40 cm over all width in plain, G.S. sheet fixed with polymer coated J, or L hooks, bolts and nuts, G.I. limpet and bitumen washer complete, bent to shape and fixed in wall with cement mortar 1:3 (1cement : 3 coarse sand).		
31.6.1	1.00mm thick with zinc coating not less than 275gm/m ²	metre	659.00

Code No	Description	Unit	Rate Rs.
31.7	Providing and fixing 15 cm wide 45 cm over all semi circular plain G.S. sheet gutter with iron brackets 40x3mm size, bolts, nuts and washers etc. including making necessary connections with rain water pipes complete.		
31.7.1	0.80mm thick with zinc coating not less than 275gm/m ²	metre	768.00
31.7.2	0.63mm thick with zinc coating not less than 275gm/m ²	metre	692.00
31.8	Providing non-asbestos high impact Polypropylene reinforced cement 6 mm thick corrugated sheets (As per IS:14871) roofing upto any pitch and fixing with polymer coated J or L hooks, bolts and nuts 8mm dia. G.I. plain and bitumen washers or with self drilling fastener and EPDM washers etc. complete excluding the cost of purlins, rafters and trusses: corrugated sheets and including cutting to size and shape wherever required.	sqm	435.50
31.9	Extra for straight cutting in non- asbestos polypropylene reinforced cement corrugated, semi-corrugated 6 mm thick sheet roofing for making openings of area exceeding 40 square decimetre for chimney stacks, skylights etc.	metre	60.50
31.10	Extra for circular cutting in non-asbestos polypropylene reinforced cement corrugated/ semi-corrugated 6 mm thick sheet roofing for making openings of area exceeding 40 square decimetre.	metre	167.00
31.11	Extra for providing and fixing wind ties of 40x 6mm flat iron section.	metre	130.50
31.12	Providing and fixing ridges and hips in non-asbestos fibre cement high impact polypropylene reinforced roofing with suitable fixing accessories or self drilling fastener and EPDM washer etc. complete.		
31.12.1	Corrugated serrated adjustable ridges	metre	448.50
31.12.2	Plain wing adjustable ridges	metre	457.50
31.12.3	Close fitting adjustable ridges	metre	557.00
31.12.4	Unserrated adjustable hips	metre	474.50
31.13	Providing and fixing non-asbestos fibre cement high impact polypropylene reinforced roofing accessories with polymer coated J or L hooks, bolts and nuts and or G.I. seam bolts and nuts, G.I. plain and bitumen washers or with self drilling fastener and EPDM washer etc. complete:		
31.13.1	Corrugated apron pieces	metre	347.00
31.13.2	Eave's filler pieces	metre	218.00
31.13.3	North light curves	metre	447.00
31.13.4	ventilator curves	metre	530.00
31.13.5	Barge boards	metre	527.00
31.13.6	Ridge finials	pair	195.50
31.13.7	Special north light curves	each	566.00

Code No	Description	Unit	Rate Rs.
31.13.8	S type louvers	metre	391.00
31.14	Providing flat iron brackets 50x3mm size with necessary bolts, nuts and washers etc. for fixing asbestos cement/G.S. sheets gutters with purlins.	metre	52.90
31.15	Painting top of roofs with bitumen of approved quality at 17kg per 10 sqm impregnated with a coat of coarse sand at 60 cum per 10sqm including cleaning the slab surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil complete :		
31.15.1	With residual type petroleum bitumen of penetration 80/100	sqm	134.00
31.16	10 cm thick (average) mud phaska of damped brick earth on roofs laid to slope consolidated and plastered with 25 mm thick mud mortar mixed with bhusa at 35 kg per cum of earth and gobri leaping with mix 1:1 (1 clay : 1 cow dung) and covered with flat tile bricks of class designation 100 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement and finished neat :		
31.16.1	With F.P.S. brick tiles	sqm	661.00
31.17	10cm thick (average) mud phaska of damped brick earth on roofs laid to slope consolidated and plastered with 25mm thick mud mortar with bhusha at 35kg per cum of earth and gobri leaping with mix 1:1 (1 clay : 1 cow-dung) and covered with machine moulded tile bricks of class designation 125 conforming to IS : 2690 (Part I) -1992 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement and finished neat.		
31.17.1	With machine moulded F.P.S. brick tiles	sqm	659.00
31.18	Extra for every additional 1 cm thickness of mud phaska	sqm	11.30
31.19	Providing and laying brick tiles of class designation 100 over mumty roofs grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement, over a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat :		
31.19.1	With F.P.S. brick tiles	sqm	436.50
31.20	Providing and laying pressed clay tiles (as per approved pattern 20 mm nominal thickness and of approved size) on roofs jointed with cement mortar 1:4 (1 cement : 4 coarse sand) mixed with 2% integral water proofing compound laid over a bed of 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand) and finished neat complete.	sqm	678.00
31.21	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 10mm and down gauge) including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design :		
31.21.1	In 75x75mm deep chase	metre	191.00

Code No	Description	Unit	Rate Rs.
31.22	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1mx1mx400micron, finished with 12mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement rounding the edge sand making and finishing the outlet complete.	each	167.50
31.23	Providing sand stone slab for roofing and laying them in cement mortar 1 : 4 (1 cement : 4 coarse sand) over wooden karries or R.C.C. battens (Karries and battens to be paid separately) including pointing the ceiling joints with cement mortar 1:3 (1 cement : 3 fine sand) complete :		
31.23.1	Red sand stone slab		
31.23.1.1	40 to 50 mm thick	sqm	848.00
31.23.2	White sand stone slab :		
31.23.2.1	40 to 50 mm thick	sqm	895.00
31.24	Providing and fixing insulating board ceiling of approved quality with necessary nails etc. complete (frame work to be paid separately) :		
31.24.1	Natural colour insulating board		
31.24.1.1	12 mm thick	sqm	693.00
31.24.2	White face insulating board		
31.24.2.1	12 mm thick	sqm	756.00
31.24.3	Flame retardant face insulating board		
31.24.3.1	12 mm thick	sqm	866.00
31.25	Providing and fixing flat pressed 3 layer medium density particle board or graded particle board (Grade I) IS: 3087 marked in ceiling with necessary nails etc. complete (frame work to be paid separately) :		
31.25.1	12 mm thick	sqm	755.00
31.26	Providing and fixing plain Multipurpose Cement board (High Pressure steam cured) as per IS : 14862 : 2000) with suitable fibre cement screw in ceiling etc. complete (frame work to be paid separately) :		
31.26.1	6 mm thick cement board	sqm	693.00
31.27	Extra for Circular cutting and waste in ceiling with:		
31.27.1	2nd class teak wood planks 20 mm thick	metre	514.00
31.27.2	Natural colour insulating board		
31.27.2.1	12 mm thick	metre	328.00
31.27.3	White face insulating board:		
31.27.3.1	12 mm thick	metre	336.00
31.27.4	Flame retardant face insulating board:		

Code No	Description	Unit	Rate Rs.
31.27.4.1	12 mm thick	metre	349.50
31.27.5	Standard quality hard board sheet:		
31.27.5.1	3 mm thick	metre	317.50
31.27.5.2	4.5 mm thick	metre	342.00
31.28	Extra for providing and fixing ceiling to curved surfaces in narrow widths	sqm	295.00
31.29	Providing and fixing false ceiling with 12 mm thick plain/ semi perforated or with design ceiling tiles of BWP type phenol formaldehyde synthetic resin bonded pressed particle board conforming to IS:3087 finished with a coat of aluminium primer on both sides & edges and two coats of synthetic enamel paint of approved quality on exposed face fixed to a grid made out of anodised aluminium (with 15 micron anodic coating) T-sections 35 x15x1.5 mm size main runners and cross runners 23.5x19x1.5 mm fixed to main runners placed 600 mm centre to centre both ways so as to form a grid of 600 mm square. The frame work shall be suspended from ceiling by level adjusting hangers of 6 mm dia M.S rod fixed to roof slab by means of ceiling cleats. The suspenders shall be placed 600x 1200 mm centre to centre including fixing to the frame with C.P brace screws and applying a priming coat of zinc chromate yellow primer (aluminium frame work shall be paid separately.)	sqm	528.00
31.30	Extra for providing 3 mm thick translucent white acrylic plastic sheets of approved quality in false ceiling instead of 12 mm thick plain/or with design particle board ceiling tiles in item above.	sqm	550.00
31.31	Providing 10 mm thick plaster of Paris (gypsum anhydrous) ceiling upto a height of 5 m above floor level over first class kail wood strips 25x6 mm with 10 mm gap in between and reinforced with rabbit wire mesh fixed to wooden frame (frame work to be paid separately) :		
31.31.1	Flat surfaces	sqm	1,351.00
31.31.2	Curved surfaces	sqm	1,594.00
31.32	Extra for any sunk or raised mouldings in the plaster of Paris (Gypsum anhydrous) ceiling	sqm	445.00
31.33	Extra for providing plaster of Paris (Gypsum anhydrous) ceiling above 5 metres height from floor level	sqm/ metre	183.50
31.34	Providing and fixing thermal insulation of ceiling (under deck insulation) with Resin Bonded Fibre glass wool conforming to IS : 8193 density 24kg/m ³ , 50mm thick, wrapped in 200 G Virgin Polythene bags fixed to ceiling with metallic cleats (50x50x3 mm) @ 60 cm and wire mesh of 12.5mm x 24g wire and mesh, for top most ceiling of building.	sqm	514.00
31.35	Providing and fixing thermal insulation with Resin Bonded Fibre glass wool conforming to IS : 8193, density 16kg/m ³ , 50mm thick, wrapped in 200G Virgin Polythene bags placed over existing false ceiling and held in position by criss-crossing GI wire.	sqm	248.00

Code No	Description	Unit	Rate Rs.
31.36	Thermal Insulation of roofing with Expanded polystyrene fixed with suitable adhesive to the false ceiling as per the directions of the Engineer-in-charge :		
31.36.1	With Type N - Normal 50 mm thick	sqm	280.50
31.36.2	With Type SE - Self Extinguishing type 50 mm thick	sqm	320.00
31.37	Providing and fixing 100 mm diameter and 60 cm long rain water spout in cement mortar 1:4 (1 cement : 4 fine sand)		
31.37.1	Stone ware spout	each	85.90
31.38	Providing and fixing M.S. holder bat clamps of approved design to C.I. or S.C.I. rain water pipes embedded in and including cement concrete blocks 10x10x10cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and cost of cutting holes and making good the walls etc. :		
31.38.1	100 mm diameter	each	237.50
31.38.2	150 mm diameter	each	242.00
31.39	Providing lead caulked joints to sand cast iron rain water pipes and fittings :		
31.39.1	100 mm dia. Pipe	each	332.00
31.39.2	150 mm dia. Pipe	each	455.00
31.40	Providing, fixing and embedding sand cast iron accessories for rain water pipes in the masonry surrounded with 12 mm thick cement mortar of the same mix, as that of masonry (lead caulking will be paid for separately) :		
31.40.1	Sand cast iron plain shoes :		
31.40.1.1	150 mm diameter	each	610.00
31.41	Providing and fixing on wall face Unplasticised Rigid PVC Single socketed pipes rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.		
31.41.1	75 mm diameter	metre	191.50
31.41.2	110 mm diameter	metre	303.00
31.42	Providing and fixing on wall face Unplasticised - PVC moulded fittings/ accessories for Unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.		
31.42.1	Coupler		
31.42.1.1	75 mm	each	116.00
31.42.1.2	110 mm	each	175.00
31.42.2	Single push fit Coupler :		
31.42.2.1	75 mm	each	123.00

Code No	Description	Unit	Rate Rs.
31.42.2.2	110 mm	each	175.00
31.42.3	Single tee with door		
31.42.3.1	75x75x75 mm	each	209.50
31.42.3.2	110x110x110 mm	each	363.50
31.42.4	Single tee without door		
31.42.4.1	75x75x75 mm	each	195.50
31.42.4.2	110x110x110 mm	each	327.50
31.42.5	Bend 87.5°		
31.42.5.1	75 mm bend	each	113.00
31.42.5.2	110 mm bend	each	158.00
31.42.6	Shoe (Plain)		
31.42.6.1	75 mm Shoe	each	198.50
31.42.6.2	110 mm Shoe	each	357.50
31.43	Providing and fixing Unplasticised -PVC pipe clips of approved design to Unplasticised - PVC rain water pipes by means of 50x50x50mm hard wood plugs, screwed with M.S. screws of required length including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete.		
31.43.1	75 mm	each	239.50
31.43.2	110 mm	each	246.50
31.44	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams.	each	48.80
31.45	Providing and fixing at all height false ceiling including providing and fixing of frame work made of special sections power pressed from M.S. sheet and galvanised in accordance with zinc coating of grade 350 as per IS : 277 and consisting of angle cleats of size 25mm wide x 1.6mm thick with flanges of 22mm and 37mm at 1200mm centre to centre one flange fixed to the ceiling with dash fastener 12.5mm diax40mm long with 6mm dia bolts to the angle hangers of 25x25x0.55mm of required length, and other end of angle hanger being fixed with nut and bolts to G.I. channels 45x15x0.9mm running at the rate of 1200mm centre to centre to which the ceiling section 0.5mm thick button wedge of 80mm with tapered flanges of 26mm each having clips of 10.5mm at 450mm centre to centre shall be fixed in a direction perpendicular to G.I. channel with connecting clips made out of 2.64mm diax230mm long G.I. wire at every junction including fixing the gypsum board with ceiling section and perimeter channels 0.5mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450mm centre to centre with 25mm long drive-all screws @ 230mm interval including jointing and fixing to a		

Code No	Description	Unit	Rate Rs.
	flush finish of tapered and square edges of the board with recommended filler, jointing tapes, finisher and two coats of primer suitable for board as per manufactures specification and also including the cost of making openings for light fittings, grills, diffusers, cut-outs made with frame of perimeter channels suitably fixed all complete as per drawing and specification and direction of the Engineer in Charge but excluding the cost of painting with :		
31.45.1	12.5 mm thick tapered edge gypsum board conforming to IS: 2095-Part I,	sqm	1,282.00
31.46	Providing and fixing to the inlet mouth of rain water pipe PTMT (an Engineering Thermoplastic) grating square (Slit) 150 mm square with a height of 8 mm and weighing not less than 100 gms.	each	106.00
31.47	Providing & fixing UV stabilised fibreglass reinforced plastic sheet roofing upto any pitch including fixing with polymer coated 'J' or 'L' hooks, bolts & nuts 8mm dia. G.I plain/bitumen washers complete but excluding the cost of purlins, rafters, trusses etc. The sheets shall be manufactured out of 2400 TEX panel roovigs incorporating minimum 0.3% Ultra-violet stabiliser in resin system under approximately 2400 psi and hot cured. They shall be of uniform pigmentation and thickness without air pockets and shall conform to IS 10192 and IS 12866.The sheets shall be opaque or translucent, clear or pigmented, textured or smooth as specified.		
31.47.1	2mm thick corrugated (2.5" or 4.2" or 6") or step-down (2"or 3"or 6") as specified.	sqm	1,112.00
31.47.2	2mm thick flat.	sqm	1,117.00
31.48	Providing & fixing pressed clay tile (Mangalor tile) 20 mm nominal thickness and of approved size and as per approved pattern ceiling on steel frame work complete (steel frame work to be paid separately)	sqm	352.00
31.49	Providing & laying pressed clay tile ridge (Mangalore tile) of 20mm thickness of approved pattern ceiling over steel frame work complete (steel frame work to be paid separately)	sqm	147.50
31.50	Supply & installation of precoated galvanized iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm +/- 5% total coated thickness (TCT), Zinc coating 120gsm as per IS: 277 in 240mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches while transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55mm) with EPDM seal or with polymer coated J or L hooks, bolts and nuts 8mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead complete upto any pitch in horizontal/ vertical or curved surfaces excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	sqm	623.00

Code No	Description	Unit	Rate Rs.
31.51	Providing and fixing precoated galvanised steel sheet roofing accessories 0.50 mm +/- 5% total coated thickness (TCT), Zinc coating 120gsm as per IS: 277 in 240mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns using self drilling/ self tapping screws or with polymer coated J or L hooks, bolts and nuts and or G.I. seam bolts and nuts, G.I. plain and bitumen washers complete :		
31.51.1	Ridges plain (500 - 600mm).	metre	536.00
31.51.2	Flashings/ Aprons.(Upto 600 mm)	metre	497.00
31.51.3	North light curves.	metre	568.00
31.51.4	Barge board (Upto 300 mm).	metre	464.00
31.51.5	Crimp curve	sqm	576.00
31.51.6	Gutter .(600 mm over all girth).	metre	980.00
31.52	Providing and fixing False Ceiling Tiles of approved materials of size 595x595 mm in true horizontal level suspended on inter locking metal grid of hot dipped galvanised steel sections (galvanized @ 170 gsm/sqm.) consisting of main "T" runner suitably spaced at joints to get required length and of size 24x38mm made from 0.30mm thick (minimum) sheet spaced at 1200mm center to center and cross "T" of size 24x25mm made of 0.30mm thick (minimum) sheet, 1200mm long spaced between main "T" at 600mm center to center to form a grid of 1200x600 mm and secondary cross "T" of length 600mm and size 24x25mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600mm panel to form grids of 600x600mm and laying false ceiling tiles of approved texture in the grid including, wherever, required, cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc. Main "T" runners to be suspended from ceiling using GI slotted cleats fixed to ceiling with 6 mm dia and 50mm long dash fasteners, 4mm GI adjustable rods with galvanised level clips spaced at 1200m center to center along main T, bottom exposed width of 24mm of all T-sections shall be pre-painted with polyester paint, all complete at all heights as per specifications drawings and as directed by Engineer-in-Charge. (The rate is excluding cost of tiles which will be paid separately).	sqm	705.00
31.53	Providing & fixing following False ceiling tiles of size 595 x 595 mm in true horizontal level suspended on inter locking metal grid of hot dipped galvanised steel sections (galvanized @ 170 gsm/sqm.) consisting of main "T" runner with suitably spaced joints to get required length and of size 24x38mm made from 0.30mm thick (minimum) sheet spaced at 1200mm center to center and cross "T" of size 24x25mm made of 0.30mm thick (minimum) sheet, spaced at 600mm center to center to form a grid of 1200x600 mm and secondary cross "T" of length 600mm and size 24x25mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600mm panel to form grids of 600x600mm and wall angle of		

Code No	Description	Unit	Rate Rs.
	size 21x21x0.30 mm and laying false ceiling tiles of approved texture in the grid including, wherever, required, cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc. Main "T" runners to be suspended from ceiling using GI slotted cleats fixed to ceiling with 6 mm dia and 50mm long dash fasteners, 4mm GI adjustable rods with galvanised level clips spaced at 1200mm center to center along main T, bottom exposed width of 24mm of all T-sections shall be pre-painted with polyester paint, all complete at all heights as per specifications drawings and as directed by Engineer-in-Charge.		
31.53.1	12 mm thick tegular edge Glass Fibre Reinforced Gypsum false ceiling tiles	sqm	1,947.00
31.53.2	6mm thick calcium silicate perforated ceiling tiles	sqm	1,293.00
31.53.3	8mm thick calcium silicate perforated ceiling tiles	sqm	1,433.00
31.54	Providing and fixing following tiles false ceiling at all heights including providing and fixing of frame work made of special sections power pressed from M.S. sheet and galvanised in accordance with zinc coating of grade 350 as per IS : 277 and consisting of angle cleats of size 25mm wide x 1.6mm thick with flanges of 22mm and 37mm at 1200mm centre to centre one flange fixed to the ceiling with dash fastener 12.5mm dia x 40mm long with 6mm dia bolts to the angle hangers of 25x25x0.55mm of required length, and other end of angle hanger being fixed with nut and bolts to G.I. channels 45x15x0.9mm running at the rate of 1200mm centre to centre to which the ceiling section 0.5mm thick bottom wedge of 80mm with tapered flanges of 26mm each having clips of 10.5mm at 450mm centre to centre shall be fixed in a direction perpendicular to G.I. channel with connecting clips made out of 2.64mm dia x 230mm long G.I. wire at every junction including fixing the calcium silicate board with ceiling section and perimeter channels 0.5mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450mm centre to centre with 25mm long drive-all screws @ 230mm interval including jointing and fixing to a flush finish of tapered and square edges of the board with recommended filler, jointing tapes, finisher and two coats of primer suitable for board as per manufactures specification and also including the cost of making openings for light fittings, grills, diffusers, cut outs made with frame of perimeter channels suitably fixed all complete as per drawing and specification and direction of the Engineer in Charge but excluding the cost of painting of thickness of calcium silicate board as below:-		
31.54.1	6 mm thick calcium silicate board	sqm	1,132.00
31.54.2	8 mm thick calcium silicate board	sqm	1,236.00
31.54.3	6 mm thick calcium silicate perforated board	sqm	1,340.00
31.54.4	8 mm thick calcium silicate perforated board	sqm	1,487.00
31.55	Providing & fixing following tiles of size 595 x 595 mm in true		

Code No	Description	Unit	Rate Rs.
	horizontal level suspended on inter locking metal grid of hot dipped galvanised steel sections (galvanized @ 120 gsm/sqm both side inclusive) consisting of main T runner with suitably spaced joints to get required length and of size 24x38mm made from 0.30mm thick (minimum) sheet spaced at 1200mm center to center and cross T of size 24x25mm made of 0.30mm thick (minimum) sheet, 1200mm long spaced between main T at 600mm center to center to form a grid of 1200x600 mm and secondary cross T of length 600mm and size 24x25mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600mm panel to form grids of 600x600mm and wall angle of size 21x21x0.30 mm and laying false ceiling tiles of approved texture in the grid including, wherever, required, cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc. Main T runners to be suspended from ceiling using GI slotted cleats fixed to ceiling with 6 mm dia and 50mm long dash fasteners, 4mm GI adjustable rods with galvanised level clips spaced at 1200mm center to center along main T, bottom exposed width of 24mm of all T-sections shall be pre-painted with polyester paint, all complete at all heights as per specifications drawings and as directed by Engineer-in-Charge of thickness of tiles as mentioned below:-		
31.55.1	6 mm thick calcium silicate tiles	sqm	1,080.00
31.55.2	8 mm thick calcium silicate tiles	sqm	1,179.00
31.55.3	GI in Plain Tegular edge Global white colour 0.5 mm thick with 8 mm drop, having galvanizing of 100 gms/sqm (both sides inclusive) and electro statically polyester powder coated of thickness 60 microns (minimum).	sqm	2,221.00
31.55.4	GI perforated Tegular edge global white colour 0.5 mm thick with 8 mm drop having galvanizing of 100 gms/ sqm (both sides inclusive) and 20% perforation area with 1.8 mm dia holes and having NRC (Noise Reduction Coefficient) of 0.5, electro statically polyester powder coated of thickness 60 microns (minimum)	sqm	2,311.00
31.56	Providing and fixing 15 mm thick densified tegular edged eco friendly light weight calcium silicate false ceiling tiles of approved texture as per direction of Engineer-in-charge of size 595 X 595 mm in true horizontal level suspended on inter locking metal grid of hot dipped galvanized steel sections (galvanizing @120 grams per sqm) consisting of main 'T' runner suitably spaced at joints to get required length and size of 24X38mm made from 0.33 mm thick (minimum) sheet, 1200mm centre to centre, and cross 'T' of size 24X32mm made out of 0.33mm (Minimum) sheet, spaced at 600mm centre to centre to form a grid of 1200X600mm and secondary cross 'T' of length 600mm and size 24X32mm made out of 0.33 mm thick (Minimum) sheet to be interlocked at middle of the 1200X600mm panel to form grid of size 600X600mm resting on periphery walls/partitions on a perimeter wall angle pre-coated steel of size (24X24X3000mm made of 0.40mm thick (minimum) sheet with the help of rawl plugs at 450mm centre to centre with 25mm long dry	Sqm	2,387.00

Code No	Description	Unit	Rate Rs.
	wall screws @ 230mm interval and laying 15mm thick densified edged calcium silicate ceiling tiles of approved texture in the grid including cutting /making opening for services like diffusers, grills, light fitting, fixtures, smoke detectors etc., wherever required, Main 'T' runners to be suspended from ceiling using 50 mm long M 6 dash fasteners, 6mm G.I. fully threaded rods with galvanised steel L cleat level adjusters of size 80x25x2mm, spaced at 1200mm centre to centre long main 'T' bottom exposed with 24mm of all T-sections shall be pre-painted with polyester baked paint, for all heights, as per specifications, drawing and as directed by engineer-in-charge. Note :- Only calcium silicate false ceiling area will be measured from wall to wall. No deduction shall be made for exposed frames/opening (cut outs)having area less than 0.30 Sqm. The calcium silicate ceiling tiles shall have NRC. Value 0.50 (Minimum), light reflection> 85% non-combustible as per B.S. 476 part IV, 100% humidity resistance and also having thermal conductivity <= 0.043 w/m0KC.		
31.57	Providing & Fixing of following Suspended Ceiling System in module size of 600 x 600 mm, Fire Performance UK Class 0/Class 1 (BS 476 Part 6 & 7), suitable for Green Building application, with Recycled content of 34 % The tile shall be laid on Silhouette profile grid system with 15 mm white/black flanges incorporating a 6 mm central reveal in white/black colour and with a web height of 45mm and a load carrying capacity of minimum 15.68 Kgs/M2 & minimum pull out strength of 100 kgs. Silhouette, Main Runners & Cross Tees to have mitred ends & "birds mouth" notches to provide mitred cruciform junctions. The T Sections have a Galvanizing of 90 grams per sqm and need to be installed with suspension system of make. The Tile & Grid system used together should carry a 10 year warranty. INSTALLATION :- To comprise main runner spaced at 1200 mm centres securely fixed to the structural soffit using suspension system (Specifications below) at 1200mm maximum centre. The First/Last suspension system at the end of each main runner should not be greater than 450 mm from the adjacent wall. Flush fitting 1200 mm long cross tees to be interlocked between main runners at 600 mm centre to form 1200 x 600 mm module. Cut cross tees longer than 600mm require independent support. 600 x 600 mm module to be formed by fitting 600 mm long flush fitting cross tees centrally between the 1200 mm cross tees. Perimeter trim to be wall angles of size 3000 x 19 x 19mm, secured to walls at 450 mm maximum centres. SUSPENSION SYSTEM accessories consisting of M6 Anchor Fasteners with Vertical Hangers made of Galvanised steel of size 26 x 26x 25x1.2 mm with a Galvanised Thickness of 80 gsm, A pre Straightened Hanger wire of dia-2.5 mm of 1.8 m length., thickness of 80 gsm and a tensile strength of 344-413 MPa, along with Adjustable hook clips of 0.8 mm thick, galvanised spring steel for 2.68 mm with a minimum pull strength of 110 kg. The adjustable clip also consists of a 3.5 mm aquiline wire to be used with the main runner.		

Code No	Description	Unit	Rate Rs.
31.57.1	15mm thick Mineral Fibre Anti Bacterial tiles with Bioguard (Bevelled Tegular) EDGE TILES WITH 15 mm Exposed GRID. The tiles should have Humidity Resistance (RH) of 95% Light Reflectance 90%, Thermal Conductivity K =0.052-0.057 w/m K, Colour White with Anti Microbial coating on the face of the tile	sqm	1,927.00
31.57.2	16mm thick Mineral Fibre Acoustical tiles with Bioguard (Bevelled Tegular) EDGE TILES WITH 15 mm Exposed GRID. The tiles should have Humidity Resistance (RH) of 99% NRC 0.5, Light Reflectance >85%, Thermal Conductivity K =0.052-0.057 w/m K, Colour White	sqm	1,841.00
31.58	Providing and fixing 300C Aluminium Panel with perforation of 2mm diameter and 5mm centre to centre to give 15% open area with Non woven textile False Ceiling system of approved colour consisting of Panel 300 mm wide X 30 mm deep X 0.7 mm thick with bevelled edges having panel length upto 6 mtrs, Coil Coated on a Continuous Paint Line, Double baked and roll formed for higher strength and good roll forming characteristics. The panel ends will be raised upto 29mm. Panel shall be clipped to a baked enamelled aluminium panel carrier of 41.5mm wide x 62mm deep x 0.95 mm thick in standard length of 5 mtrs. made of double baked stove enamelled aluminium magnesium alloy AA3005 black with cut outs to hold the panels. The Carrier shall be suspended by means of G.I. threaded rod of 6-mm diameter directly fixed to the Carrier. The Carrier tabs to be bent down to secure the panels at all Panel Carrier intersections. The panels will be installed in a module of 300MM. (Tensile strength of suspension-344/413 mpa and fastener strength-110kg) All Ceiling Panels shall adhere to GreenPro Certifications.	Sqm	5,790.00
31.59	Providing and fixing of following tiles in false Ceiling System. The Tile will be manufactured on advanced includes several levelling stages in the manufacturing process by approved manufacturers. Tile ends will be raised with pips and slops to ensure positive engagement into the spring to enable for de-mounting of individual panels. The Tile sides will be sufficiently high to ensure a minimum deflection across the length of Tile. All Tiles will be bevel edged. The Tile shall be epoxy polyester powder coating in white colour. The Tile shall be clipped into clip in rail of 0.5mm thick GI. in form of a grid system using a cross connector. The clip in rail shall be supported from slab by means of rigid Suspension of 4mm G.I rod, Hold on Clamp with Clip. POWDER COATING SPECIFICATION: Aluminium PANELS, cleaned through eco friendly cleaning process and powder applied thru electrostatic charged Automatic Carona technology spray guns and cured in combination of Infrared & hot air oven in a certified plant as Akzo International approved applicator. The powder is conforming with the performance requirements of the AAMA2603.02 & Qualicoat Class 1 specifications. The coating thickness will be minimum 60 microns with properties of Salt Spray of 1500 hrs in exposure in SST Cabinet with Minimum blister rating 8. (Tensile strength of suspension-344/413 mpa and fastener strength-110kg) All Ceiling Panels shall adhere to GreenPro Certifications.		

Code No	Description	Unit	Rate Rs.
31.59.1	Perforated Metal Ceiling Tile 600mm x 600mm x 0.7mm thick aluminium alloy 3105 with beveled edge of 4.15mm width and height of 32mm and perforated to 1.5mm dia with open area of 23%.	sqm	4,005.00
31.59.2	Un-perforated Metal Tile of 600mm x 600mm x 0.7mm thick aluminium alloy 3105 with beveled edge of 4.15mm width height of 32mm.	sqm	3,370.00
31.59.3	Antibacterial Un-perforated Metal Tile of 600mm x 600mm x 0.7mm thick aluminium alloy 3105 with beveled edge of 4.15mm width height of 32mm.	sqm	4,340.00
31.59.4	Perforated Metal Tile 600mm x 600mm x 0.5mm thick Galvanised Iron with beveled edge of 4.15mm width height of 32mm, perforated to 1.5mm dia with open area of 23%.	sqm	3,530.00
31.59.5	Un-perforated Metal Tile 600mm x 600mm x 0.5mm thick Galvanised Iron with beveled edge of 4.15mm width height of 32mm.	sqm	3,265.00
31.60	Supply & Fixing false Ceiling System with following tiles. The metal ceiling panels shall be downward accessible with a minimum of four (4) torsion springs per panel . The Plank will be manufactured on advanced CAD/CAM equipment that includes several levelling stages in the manufacturing process. Torsion Spring panel with two side legs die formed and two end legs die formed and punched to receive torsion springs (min two springs each end or side) for secure engagement into Tee Grid main runners which are factory punched to receive torsion springs. Planks will be square edged. The metal ceiling panels shall be downward accessible with a minimum of four (4) torsion springs per panel. The Plank shall be Polyester powder coated in desired colour. Main Runners: 24mm deep, inverted "Tee" sections, 3.6m long, with factory punched flanges to receive torsion spring assembly. Main Tee on center spacing to match panel length. Cross Runners: 24 mm deep, inverted "Tee" sections designed to interlock in to web of main tee section on designated spacing. Cross tee length to match panel length. Cross tees are spaced spacing 1200mm on center maximum. Suspension System: As per manufacturer standard considering type of plenum and its height. Paint finish – POWDER COATING SPECIFICATION: Aluminium PANELS, cleaned through eco friendly cleaning ,process and powder applied thru electrostatic charged Automatic Carona technology spray guns and cured in combination of Infrared & hot air oven in a certified plant as Akzo International approved applicator . The powder is conforming with the performance requirements of the AAMA2603.02 & Qualicoat Claa 1 specifications. The coating thickness will be minimum 60 microns with properties of Salt Spray of 1500 hrs in exposure in SST Cabinet with Minimum blister rating 8 Acoustic Felt (Optional): Non-woven felt made of glass-reinforced fibre glued over the perforation for sound absorption. NRC- 0.7. (Tensile strength of suspension-344/413 mpa and fastener strength-110kg) All Ceiling Panels shall adhere to GreenPro Certifications.		

Code No	Description	Unit	Rate Rs.
31.60.1	Torsion spring Plank 600mm x 1200mm x 0.7mm thick Aluminium Alloy 3105 perforated to 1.5mm dia and 22% area.	sqm	5,420.00
31.60.2	Torsion spring Plank 600mm x 600mm x 0.7mm thick Aluminium Alloy 3105 perforated to 1.5mm dia and 22% area.	sqm	5,400.00
31.60.3	Torsion spring Plank 600mm x 1200mm x 0.6mm thick GALVANISED IRON perforated to 1.5mm dia and 22% area.	sqm	4,325.00
31.61	Stone slab roofing on ground floor with fine grained stone slab 90mm average thickness from approved quarry including filling of joints slab in cement sand mortar 1:4 with ceiling pointing in cement sand mortar 1 : 3 complete as per specification for span:		
31.61.1	Up to 2.00 metre.	sqm	1,178.00
31.61.2	Above 2.00 metre and up to 2.50 metre	sqm	1,225.00
31.61.3	Above 2.50 metre and up to 3.00 metre	sqm	1,327.00
31.61.4	Above 3.00 metre and up to 3.30 metre	sqm	1,398.00
31.62	Grading roof for water proofing treatment with water proofing compound		
31.62.1	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	Cum	6,030.00
31.62.2	Cement mortar 1:3 (1 cement : 3 coarse sand)	Cum	5,530.00
31.62.3	Cement mortar 1:4 (1cement : 4 coarse sand)	Cum	4,660.00
31.63	Providing & fixing UV stabilised fibreglass reinforced plastic sheet roofing upto any pitch including fixing with polymer coated 'J' or 'L' hooks, bolts & nuts 8mm dia. G.I plain/ bitumen washers complete but excluding the cost of purlins, rafters, trusses etc. The sheets shall be manufactured out of 2400 TEX panel rovigs incorporating minimum 0.3% Ultra-violet stabiliser in resin system under approximately 2400 psi and hot cured. They shall be of uniform pigmentation and thickness without air pockets and shall conform to IS 10192 and IS 12866.The sheets shall be opaque or translucent, clear or pigmented, textured or smooth as specified. (B) 2mm thick flat.	Sqm	1,042.00
31.64	Filling of sunk portion of roof with earthen pots of required height including filling voids with 1:3:6 light concrete, using brick bats complete levelling and dressing the surface by 50mm thick cement concrete 1:2:4 as per specification.	Cum	2,520.00
31.65	Supply and fixing Bare Galvanised/ Prepainted iron sheet roofing including vertical/ curved surface fixed with polymer coated J or L hooks, bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead and including a metallic coating -Z-120 max, paint coating RMP, SMP, PVDF and paint thickness 18-22 micron top & 5-8 bottom as per Coating standard : JISG 3312, IS 1397-1993/227 and two coats of approved paint on overlapping of sheets complete upto any pitch in horizontal/ vertical or curved surfaces) excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	Sqm	1,000.00

32.0 FINISHING

Code No	Description	Unit	Rate Rs.
32.1	Cement plastering including T&P, scaffolding, material and complete labour, including cost of water, curing, racking of joints etc. with 12 mm cement plaster of mix :		
32.1.1	1:4 (1 cement : 4 fine/ coarse sand)	sqm	204.50
32.1.2	1:6 (1 cement : 6 fine/ coarse sand)	sqm	192.00
32.2	Cement plastering including T&P, scaffolding, material and complete labour, including cost of water, curing, racking of joints etc. with 15 mm cement plaster on the rough side of single or half brick wall of mix :		
32.2.1	1:4 (1 cement : 4 fine/ coarse sand)	sqm	237.00
32.2.2	1:6 (1 cement : 6 fine/ coarse sand)	sqm	222.00
32.3	Cement plastering including T&P, scaffolding, material and complete labour, including cost of water, curing, racking of joints etc. with 20 mm cement plaster of mix :		
32.3.1	1:3 (1 cement : 3 fine/ coarse sand)	sqm	306.50
32.3.2	1:4 (1 cement : 4 fine/ coarse sand)	sqm	283.50
32.3.3	1:6 (1 cement : 6 fine/ coarse sand)	Sqm	264.00
32.4	Cement plastering including T&P, scaffolding, material and complete labour, including cost of water, curing, racking of joints etc. with 12 mm cement plaster finished with a floating coat of neat cement of mix :		
32.4.1	1:3 (1 cement : 3 fine/ coarse sand)	sqm	265.00
32.4.2	1:4 (1 cement : 4 fine/ coarse sand)	sqm	252.50
32.5	Cement plastering including T&P, scaffolding, material and complete labour, including cost of water, curing, racking of joints etc. with 15 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix :		
32.5.1	1:3 (1 cement : 3 fine/ coarse sand)	sqm	300.00
32.5.2	1:4 (1 cement : 4 fine/ coarse sand)	sqm	285.50
32.6	Cement plastering including T&P, scaffolding, material and complete labour, including cost of water, curing, racking of joints etc. with 20 mm cement plaster on rough side of brick wall finished with a floating coat of neat cement of mix :		
32.6.1	1:3 (1 cement : 3 fine/ coarse sand)	sqm	331.50
32.7	6 mm cement plaster of mix :		
32.7.1	1:3 (1 cement : 3 fine sand)	sqm	169.00

Code No	Description	Unit	Rate Rs.
32.8	Cement plastering including T&P, scaffolding, material and complete labour, including cost of water, curing, racking of joints etc. with 6 mm cement plaster 1:3 (1 cement : 3 fine sand) finished with a floating coat of neat cement and thick coat of Lime wash on top of walls when dry for bearing of R.C.C. slabs and beams.	sqm	227.50
32.9	Neat cement punning	sqm	49.80
32.10	Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers.	per 50 kg cement bag	38.60
32.11	Extra for plastering exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof.	sqm	46.20
32.12	Extra for plastering on circular work not exceeding 6 m in radius:		
32.12.1	In one coat	sqm	26.70
32.12.2	In two coats	sqm	40.00
32.13	Extra for plastering done on moulding cornices or architraves including neat finish to line and level:		
32.13.1	In one coat	sqm	406.00
32.13.2	In two coats	sqm	670.00
32.14	Extra for plastering :		
32.14.1	Spherical ceiling	sqm	99.50
32.14.2	Groined ceiling	sqm	107.00
32.14.3	Flewing soffits	sqm	66.80
32.15	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete	sqm	184.50
32.16	Extra for lining out plaster to imitate stone or concrete blocks walling	sqm	67.00
32.17	12 mm thick plain cement mortar bands in cement mortar 1:4 (1 cement : 4 fine sand) :		
32.17.1	Flush Band	cm per metre	4.30
32.17.2	Sunk Band	cm per metre	4.65
32.17.3	Raised Band	cm per metre	5.30
32.17.4	Moulded Band	cm per metre	9.05
32.18	18 mm thick plain cement mortar band in cement mortar 1:4 (1 cement : 4 fine sand):		
32.18.1	Flush Band	cm per metre	5.25
32.18.2	Sunk Band	cm per metre	5.75

Code No	Description	Unit	Rate Rs.
32.18.3	Raised Band	cm per metre	6.50
32.18.4	Moulded Band	cm per metre	12.10
32.19	18 mm thick moulded cement mortar band in two coats under layer 12mm thick with cement mortar 1:5 (1 cement : 5 coarse sand) top layer 6mm thick with cement mortar 1:4 (1 cement : 4 fine sand).	cm per metre	12.10
32.20	Pointing on brick work or brick flooring with cement mortar 1:3 (1 cement : 3 fine sand) :		
32.20.1	Flush / Ruled/ Struck or weathered pointing.	sqm	136.50
32.20.2	Raised and cut pointing	sqm	228.50
32.21	Pointing on tile brick work with cement mortar 1:3 (1 cement :3 fine sand) :		
32.21.1	Flush/ Ruled/ Struck or weathered pointing	sqm	187.50
32.22	Pointing on stone work with cement mortar 1:3 (1 cement : 3 fine sand) :		
32.22.1	Flush/ Ruled pointing	sqm	205.00
32.22.2	Raised and cut pointing	sqm	380.00
32.23	Raised and cut pointing on stone work in white cement mortar 1:3 (1 white cement : 3 marble dust)	sqm	398.00
32.24	Pointing on stone slab ceiling with cement mortar 1:2 (1 cement : 2 fine sand):		
32.24.1	Flush/ Ruled pointing	sqm	114.50
32.25	Extra for pointing on walls on the outside at height more than 10 m from ground level for every additional height of 3 m or part there of.	sqm	3.80
32.26	White washing with lime to give an even shade:		
32.26.1	New work (three or more coats)	sqm	23.20
32.27	Satna lime wash on walls one coat	sqm	9.20
32.28	Colour washing such as green, blue or buff to give an even shade :		
32.28.1	New work (two or more coats) with a base coat of white washing with lime	sqm	30.60
32.28.2	New work (two or more coats) with a base coat of whitening	sqm	30.40
32.29	Distempering with dry distemper of approved brand and manufacture (two or more coats) and of required shade on new work, over and including priming coat of whitening to give an even shade.	sqm	95.40
32.30	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade		
32.30.1	New work (two or more coats) over and including priming coat with cement primer.	sqm	125.00

Code No	Description	Unit	Rate Rs.
32.31	Distempering with 1st quality acrylic washable distemper (ready mixed) of approved manufacturer and of required shade and colour complete. as per manufacturer's specification.		
32.31.1	Two or more coats on new work.	sqm	71.30
32.32	Applying one coat of cement primer of approved brand and manufacture on wall surface :		
32.32.1	Cement primer.	sqm	49.60
32.33	Finishing walls with water proofing cement paint of required shade :		
32.33.1	New work (Two or more coats applied @ 3.84 kg/10 sqm).	sqm	85.40
32.34	Finishing walls with textured exterior paint of required shade :		
32.34.1	New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including base coat of water proofing cement paint applied @ 2.20kg/10 sqm.	sqm	198.00
32.35	Finishing walls with Acrylic Smooth exterior paint of required shade :		
32.35.1	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including base coat of water proofing cement paint applied @ 2.20 kg/ 10 sqm).	sqm	134.50
32.36	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade		
32.36.1	New work (Two or more coats applied @ 1.43 ltr/ 10 sqm. over and including base coat of water proofing cement paint applied @ 2.20 kg/ 10 sqm).	sqm	123.50
32.37	Finishing walls with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :		
32.37.1	Two or more coats applied @ 1.25 ltr/10 sqm. over and including one coat of Special primer applied @ 0.75 ltr / 10 sqm.	sqm	132.00
32.37.2	Painting wood work with Deluxe Multi Surface Paint of required shade. Two or more coat applied @0.90 ltr/10 sqm over an under coat of primer applied @0.75 ltr/ 10 sqm of approved brand or manufacture	sqm	118.00
32.37.3	Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @0.90 ltr/10 sqm over an under coat of primer applied @ 0.80 ltr/ 10 sqm of approved brand or manufacture	sqm	115.00
32.38	Extra for applying water proofing cement paint as primer applied @ 2.2 kg/ 10 sqm instead of primer for exterior finishing in Item No. 32.37.1	sqm	3.25
32.39	Applying priming coat :		
32.39.1	With ready mixed pink or Grey primer of approved brand and manufacture on wood work (hard and soft wood)	sqm	44.80
32.39.2	With ready mixed aluminium primer of approved brand and manufacture on resinous wood and plywood	sqm	44.20

Code No	Description	Unit	Rate Rs.
32.39.3	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/steel works	sqm	39.50
32.39.4	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel work (second coat)	sqm	20.90
32.40	Painting one thin coat with white lead of approved brand and manufacture on wet or patchy portion of plastered surfaces	sqm	63.80
32.41	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete.		
32.41.1	On steel work	sqm	161.50
32.41.2	On concrete work	sqm	162.50
32.42	Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :		
32.42.1	New work (two or more coats) including a coat of approved steel primer but excluding a coat of mordant solution.	sqm	115.00
32.43	Applying a coat of mordant solution on G.S. sheet :		
32.43.1	With a solution of 38 gms of copper acetate in a litre of soft water	sqm	35.30
32.43.2	With a solution made of 13 gms of hydrochloric acid in a solution of 13 gms each of copper chloride, copper nitrate and ammonium chloride dissolved in a litre of soft water.	sqm	35.10
32.44	Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint approved brand and manufacture over and including a priming of ready mixed zinc chromate yellow primer on new work :		
32.44.1	100 mm diameter pipes	metre	45.10
32.44.2	150 mm diameter pipes	metre	67.10
32.45	Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with synthetic enamel paint of approved brand and manufacture and required colour over a priming coat of approved steel primer on new work.		
32.45.1	100 mm diameter pipes	metre	46.80
32.45.2	150 mm diameter pipes	metre	69.70
32.46	Painting with oil type wood preservative of approved brand and manufacture:		
32.46.1	New work (two or more coats)	sqm	32.40
32.47	Providing and applying two coats of fire retardant paint un-thinned on cleaned wood/ply surface @ 3.5 sqm per litre per coat including preparation of base surface as per recommendations of manufacturer to make the surface fire retardant.	sqm	314.50
32.48	Coal tarring two coats on new work using 0.16 and 0.12 litre coal tar per sqm in the first coat and second coat respectively.	sqm	44.60

Code No	Description	Unit	Rate Rs.
32.49	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade:		
32.49.1	Two or more coats on new work	sqm	108.50
32.50	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :		
32.50.1	Two or more coats on new work	sqm	97.50
32.51	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:		
32.51.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture.	sqm	147.00
32.52	Painting with aluminium paint of approved brand and manufacture to give an even shade .		
32.52.1	Two or more coats on new work	sqm	92.10
32.53	Painting with acid proof paint of approved brand and manufacture of required colour to give an even shade:		
32.53.1	Two or more coats on new work.	sqm	99.80
32.54	Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade:		
32.54.1	Two or more coats on new work.	sqm	86.20
32.55	Floor painting with floor enamel paint of approved brand and manufacture of required colour to give an even shade:		
32.55.1	Two or more coats on new work.	sqm	108.50
32.56	Varnishing with varnish of approved brand and manufacture:		
32.56.1	Two or more coats of glue sizing with copal varnish over an under coat of flatting varnish.	sqm	150.50
32.56.2	Two or more coats glue sizing with spar varnish or an under coat of flatting varnish.	sqm	158.00
32.57	French spirit polishing :		
32.57.1	Two or more coats on new works including a coat of wood filler.	sqm	317.00
32.58	Polishing on wood work with ready mixed wax polish of approved brand and manufacture :		
32.58.1	New work	sqm	126.00
32.59	Floor polishing on masonry or concrete floors with wax polish of approved brand and manufacture.	sqm	58.40
32.60	Lettering with black Japan paint of approved brand and manufacture	per letter per cm height	4.05
32.61	Washed stone grit plaster on exterior walls of height upto 10 M. above level in two layers, under layer 12mm cement plaster 1:4 (1 cement : 4 coarse sand) furrowing the under layer with scratching tool, applying cement slurry on the under layer @ 2 Kg of cement per square metre, top layer 15mm cement plaster 1:1/2:2 (1 cement	sqm	742.00

Code No	Description	Unit	Rate Rs.
	: 1/2 coarse sand : 2 stone chipping 10mm nominal size) in panels with groove all around as per approved pattern including scrubbing and washing, the top layer with brushes and water to expose the stone chippings ,complete as per specification and direction of Engineer-in- charge (Payment for providing grooves shall be made separately).		
32.62	Forming groove of uniform size in the top layer of washed stone grit plaster as per approved pattern using wooden battens, nailed to the under layer including removal of wooden battens, repair to the edges of panels and finishing the groove complete as per specifications and direction of the Engineer-in-charge :		
32.62.1	15 mm wide and 15 mm deep groove	metre	47.70
32.62.2	20 mm wide and 15 mm deep groove	metre	48.30
32.63	Extra for washed grit plaster on exterior walls of height more than 10m from ground level for every additional height of 3 m or part thereof.	sqm	84.30
32.64	Extra for washed stone grit plaster on circular work not exceeding 6m in radius (in two coats).	sqm	75.70
32.65	Forming groove of uniform size from 12x12mm and upto 25x15mm in plastered surface as per approved pattern using wooden battens, nailed to the under layer including removal of wooden battens, repairs to the edges of plaster panel and finishing the groove complete as per specifications and direction of the Engineer-in-Charge.	metre	47.70
32.66	Extra for using white cement in place of ordinary cement in the top layer of the item of washed stone grit plaster.	sqm	116.00
32.67	Providing and applying 12 mm thick (average) premixed formulated one coat gypsum lightweight plaster having additives and light weight aggregates as vermiculite/ perlite respectively conforming to IS: 2547 (Part - 1 & II) 1976, applied on hacked / uneven background such as bare brick/ block/ RCC work on walls & ceiling at all floors and locations, finished in smooth line and level etc. complete.	sqm	322.00
32.68	Add extra over items of cement concrete flooring/cement plaster/ cement pipes, canal works, cc lining, cc Road, Plain or RCC work and water retaining works providing & mixing admixture of virgin synthetic polyester/ polypro lane, fibrillated/ Monofilament fibres cut length 6 mm to 25 mm with effective diameter from 10 micron to 1 mm; melting point of 160 degree centigrade, having aspect ratio of 200 to 2000; specific gravity more than 1. It is required in specific ratio @ 0.25% (125 gm fibre in 50 kg cement) for use. Mix it directly with contents in rotating site mixes as per directions of the Engineer with all leads and lifts(confirming to IS : 16481 : 2016)	Per Pack 125 gm	67.70

33.0 REPAIRS TO BUILDINGS

Code No	Description	Unit	Rate Rs.
33.1	Repairs to plaster of thickness 12mm to 20mm in patches of area 2.5 sq. metres and under including cutting the patch in proper shape, raking out joints and preparing and plastering the surface of the walls complete including disposal of rubbish to the dumping ground within 50metres lead :		
33.1.1	With cement mortar 1:4 (1 cement : 4 fine sand)	sqm	323.50
33.1.2	With cement mortar 1:4 (1 cement : 4 coarse sand).	sqm	326.50
33.2	Repair to damaged plaster with high performance curing free. Quick setting cement mortar & confirming to ASTM C 1600 in ratio of 1:4 with following properties of cement: Compressive strength of 20 MPa within 4 hours, curing free, Bond strength of 4 MPa within 24 hours, Non shrink & Nontoxic in following steps- i) Chopping loose and cracked plaster to required depth, cleaning the exposed surface with wire brush, cleaning of plaster surface with water as necessary and getting dried. ii) Plastering the surface with above mentioned high performance cement sand mortar 1:4 upto depth of 25mm complete with all scaffolding. iii) No curing has to be done as the high performance cement used should be curing free. (this item is to be used in only emergency situation after decided by Engineer in charge)	sqm	957.00
33.3	Providing and applying treatment of plaster and masonry cracks with pre-mixed, ready to use, geo polymer based mortar & confirming to ASTM C:1600 upto 15mm width and 15mm depth by making V-Groove with following property- Curing free, compressive strength of 15 MPa within 2 hours, Quick setting and with bond strength of 4 MPa within 24 Hours with all scaffolding. (This item is to be used in only emergency situation after decided by Engineer in charge)	metre	195.00
33.4	Providing and laying treatment of wear & tear concrete surface with pre-mixed, ready to use, geo polymer based mortar & confirming to ASTM C: 1600 upto 10mm thickness with following property- Curing free, compressive strength of 15 MPa within 2 hours, Quick setting, and Bond strength of 4 MPa within 24 Hours and repaired surface should be ready to use within 3 hours. (This item is to be used in only emergency situation after decided by Engineer in charge)	sqm	3,190.00
33.5	Fixing chowkhats in existing opening including embedding chowkhats in floors or walls cutting masonry for holdfasts embedding hold fasts in cement concrete blocks with cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) painting two coats of approved wood preservative to sides of chowkhats and making good the damages to walls and floors as required complete including disposal of rubbish to the dumping ground within 50 metres lead :		

Code No	Description	Unit	Rate Rs.
33.5.1	Door chowkhats	each	1,054.00
33.5.2	Window chowkhats	each	676.00
33.5.3	Clerestory window chowkhats	each	502.00
33.6	Fixing chowkhat in existing opening in brick / RCC wall with dash fasteners of appropriate size/ chemical fastener (3nos on each vertical member of door chowkhat and 2 nos. on each vertical member of window 1.20 metre height as per CPWD specification including cost of dash fasteners/ chemical fastener.	each	132.50
33.7	Making the opening in brick masonry including dismantling in floor or walls by cutting masonry and making good the damages to walls, flooring and jambs complete to match existing surface i/c disposal of mulba/ rubbish to the nearest municipal dumping ground.		
33.7.1	For door/ window/ clerestory window.	sqm	752.00
33.8	Renewing glass panes, with putty and nails wherever necessary:		
33.8.1	Float glass panes of thickness 4 mm	sqm	848.00
33.8.2	Float glass panes of thickness 5.5 mm	sqm	1,075.00
33.9	Renewing glass panes, with wooden fillets wherever necessary:		
33.9.1	Float glass panes of thickness 4 mm	sqm	1,182.00
33.9.2	Float glass panes of thickness 5.5 mm	sqm	1,410.00
33.10	Renewing glass panes and refixing existing wooden fillets:		
33.10.1	Float glass panes of thickness 4 mm	sqm	926.00
33.10.2	Float glass panes of thickness 5.5 mm	sqm	1,153.00
33.11	Supplying and fixing new wooden fillets wherever necessary:		
33.11.1	2nd class teak wood fillets	metre	50.40
33.11.2	Hollock wood fillets.	metre	45.20
33.12	Renewal of old putty of glass panes (length)	metre	36.60
33.13	Refixing old glass panes with putty and nails	sqm	501.00
33.14	Fixing old glass panes with wooden fillets (excluding cost of fillets)	sqm	462.00
33.15	Providing and fixing 16 mm M.S. Fan clamps of standard shape and size in existing R.C.C. slab including cutting chase and making good and painting exposed portion of the clamps complete.	each	331.50
33.16	Re-grading terracing of mud phaska covered with tiles or brick, in cement by dismantling tiles or bricks, removing mud plaster preparing the surface of mud phaska to proper slope relaying mud plaster gobri leaping and tiles or bricks, grouted in cement mortar 1:3 (1 cement : 3 fine sand) including replacing unserviceable tiles or bricks with new ones and disposal of unserviceable material to the dumping ground (the cost of the new tiles or brick excluded) within 50 metres lead.	sqm	400.00

Code No	Description	Unit	Rate Rs.
33.17	Replacing sand stone slabs in roofing laid in cement mortar 1:4 (1 cement : 4 coarse sand) including necessary repairs and cement pointing with same mortar complete including disposal of rubbish to dumping ground within 50 metres of lead :		
33.17.1	Red/ white sand stone slabs 30 to 50 mm thick.	sqm	965.00
33.18	Renewing wooden battens in roofs, including making good the holes in wall and painting with oil type wood preservative of approved brand and manufacture complete including removal of rubbish to the dumping ground within 50 metres lead :		
33.18.1	Sal wood battens.	cum	71,300.00
33.19	Renewing wooden beams in roofs including making good the holes in walls and painting with oil type wood preservative of approved brand and manufacture complete including removal of rubbish to the dumping ground within 50 metres lead :		
33.19.1	Not exceeding 4.00 metres in length.		
33.19.1.1	Sal wood beams	cum	74,600.00
33.19.1.2	Hollock wood beams	cum	59,100.00
33.19.2	Above 4.00 metres and upto 5.00 metres length.		
33.19.2.1	Sal wood beams	cum	76,000.00
33.19.2.2	Hollock wood beams	cum	60,500.00
33.20	Raking out joints in lime or cement mortar and preparing the surface for re-pointing or replastering including disposal of rubbish to the dumping ground within 50 metres lead.	sqm	41.10
33.21	Flush pointing with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement for flat tile bricks on top of mud phaska :		
33.21.1	With F.P.S. brick tiles	sqm	73.80
33.21.2	With modular brick tiles	sqm	75.00
33.22	Taking out wind ties from roof including cutting out rusted bolts, nuts etc. and removing materials to any distance within compound and stacking.	kg	3.15
33.23	Fixing of old wind tie with new fittings including painting two or more coats with anticorrosive bitumastic paint of approved brand & manufacturer over and including priming coat of ready mixed zinc chromate yellow primer of approved brand.	metre	89.10
33.24	Renewing bottom rail and/or top rubber of collapsible gate including making good all damages and applying priming coat of zinc chromate yellow primer of approved brand and manufacturer.	kg	181.50
33.25	Renewing Wrought iron or M.S. Wheel or roller of steel door or gate and fitting and fixing the same with necessary clamps, nuts and bolts/welding and erection etc. complete.		

Code No	Description	Unit	Rate Rs.
33.25.1	Wheel 50 mm dia. and below.	per wheel	155.00
33.25.2	Wheel above 50 mm dia.	per wheel	246.00
33.26	Pumping out water caused by springs, tidal or river seepage, broken water mains or drains and the like.	kilo litre	138.50
33.27	Mud mortar	cum	448.00
33.28	Brick work with bricks of class designation 75 in mud mortar	cum	4,160.00
33.29	Providing and fixing 25 mm thick shutters for cup board etc. :		
33.29.1	Panelled or panelled & glazed shutters :		
33.29.1.1	Superior class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	4,280.00
33.29.1.2	1st class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	3,675.00
33.29.2	Glazed shutters :		
33.29.2.1	Superior class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	4,300.00
33.29.2.2	1st class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	3,645.00
33.30	Providing and fixing plain jaffri door and window shutters including bright or/and black enamelled M.S. butt hinges with necessary screws 35x10mm laths placed 35mm apart (frames to be paid separately) including fixing 50x12mm beading complete with :		
33.30.1	Second class teak wood.	sqm	2,720.00
33.31	Providing and fixing curtain rods of 1.25mm thick brass plates with two brass brackets fixed with brass screws and wooden plugs etc. wherever necessary complete.		
33.31.1	20 mm diameter.	metre	212.50
33.31.2	25 mm diameter.	metre	248.00
33.32	Providing and fixing M.S. round or square bars with M.S. flats at required spacing in wooden frames of windows and clerestory windows.	kg	78.00
33.33	Providing joists (karries) including hoisting fixing in position and applying wood preservative on unexposed surface etc. complete with:		
33.33.1	Sal wood.	cum	70,300.00
33.33.2	Hollock wood.	cum	55,000.00
33.34	Providing and fixing bright finished brass single acting spring hinges with necessary screws etc. complete :		
33.34.1	150 mm	each	468.00

Code No	Description	Unit	Rate Rs.
33.34.2	125 mm	each	369.50
33.34.3	100 mm	each	297.00
33.35	Providing and fixing bright finished brass double acting spring hinges with necessary screws etc. complete :		
33.35.1	150 mm	each	647.00
33.35.2	125 mm	each	511.00
33.35.3	100 mm	each	440.00
33.36	Providing and fixing bright finished brass flush bolts with necessary screws etc. complete :		
33.36.1	250 mm	each	191.50
33.36.2	150 mm	each	160.00
33.36.3	100 mm	each	116.00
33.37	Providing and fixing 150 mm bright finished floor brass door stopper with rubber cushion, screws etc. to suit shutter thickness complete	each	210.00
33.38	Providing and fixing bright finished brass hard drawn hooks and eyes :		
33.38.1	300 mm	each	82.50
33.38.2	250 mm	each	77.50
33.38.3	200 mm	each	114.50
33.38.4	150 mm	each	63.90
33.38.5	100 mm	each	56.80
33.39	Providing and fixing bright finished brass fan light pivot with necessary screws etc. complete.	each	42.40
33.40	Providing and fixing 300 mm long bright finished brass chain with hook for fan light including necessary screws etc. complete.	each	46.60
33.41	Providing and fixing bright finished brass quadrant stay 300mm long with necessary screws etc. complete.	each	151.00
33.42	Providing and fixing bright finished brass helical door spring (superior quality).	each	400.50
33.43	Providing and fixing chromium plated brass butt hinges with necessary screws etc. complete.		
33.43.1	125x70x4 mm (ordinary type)	each	151.00
33.43.2	100x70x4 mm (ordinary type)	each	133.00
33.43.3	75x65x4 mm (heavy type)	each	129.00
33.43.4	75x40x2.5 mm (ordinary type)	each	71.00
33.43.5	50x40x2.5 mm (ordinary type)	each	33.70
33.44	Providing and fixing 85x42mm chromium plated brass pull bolt lock with necessary screws, nuts, bolts and washers etc. complete.	each	234.50

Code No	Description	Unit	Rate Rs.
33.45	White washing with lime to give an even shade :		
33.45.1	Old work (two or more coats)	sqm	13.50
33.45.2	Old work (one or more coats)	sqm	8.15
33.46	Removing white or colour wash by scrapping and sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete	sqm	10.60
33.47	Distempering with dry distemper of approved brand and manufacture (one or more coats) and of required shade on old work to give an even shade.	sqm	41.10
33.48	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade :		
33.48.1	Old work (one or more coats)	sqm	41.90
33.49	Removing dry or oil bound distemper, water proofing cement paint and the like by scrapping, sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete.	sqm	13.40
33.50	Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :		
33.50.1	Old work (one or more coats)	sqm	57.70
33.51	Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint of approved brand and manufacture over and including a priming coat of ready mixed zinc chromate yellow primer on new work :		
33.51.1	75 mm diameter pipes	metre	33.90
33.52	Painting (one or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint of approved brand and manufacture on old work :		
33.52.1	75 mm diameter pipes	metre	15.70
33.53	Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with aluminium paint of approved brand and manufacture over a priming coat of ready mixed zinc chromate yellow primer on new work :		
33.53.1	75 mm diameter pipes	metre	35.20
33.54	Painting (one or more coats) on rain water, soil, waste and vent pipes and fittings with synthetic enamel paint of approved brand and manufacture and required colour on old work :		
33.54.1	75 mm diameter pipes	metre	16.90
33.54.2	100 mm diameter pipes	metre	21.70
33.54.3	150 mm diameter pipes	metre	31.50

Code No	Description	Unit	Rate Rs.
33.55	Painting with oil type wood preservative of approved brand and manufacture :		
33.55.1	Old work (one or more coats)	sqm	24.60
33.56	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade :		
33.56.1	One or more coats on old work.	sqm	69.90
33.57	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :		
33.57.1	One or more coats on old work.	sqm	67.00
33.58	Painting with aluminium paint of approved brand and manufacture to give an even shade :		
33.58.1	One or more coats on old work.	sqm	59.80
33.59	Painting with acid proof paint of approved brand and manufacture of required colour to give an even shade :		
33.59.1	One or more coats on old work.	sqm	65.00
33.60	Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade :		
33.60.1	One or more coats on old work.	sqm	56.90
33.61	French spirit polishing :		
33.61.1	One or more coats on old work.	sqm	160.00
33.62	Polishing on wood work with ready made wax polish of approved brand and manufacture :		
33.62.1	Old work	sqm	63.20
33.63	Re-lettering with black Japan paint of approved brand and manufacture.	per letter per cm height	2.55
33.64	Painting (one or more coats) with black Japan paint of approved brand and manufacture to give an even shade.	sqm	58.00
33.65	Providing and fixing C.P. brass chain and rubber plug complete for sink or wash basin :		
33.65.1	32 mm dia	each	68.60
33.65.2	40 mm dia	each	68.60
33.66	Distempering with 1st quality acrylic washable distemper (ready mixed) of approved manufacturer and of required shade and colour complete. as per manufacturer's specification.		
33.66.1	One or more coats on old work.	sqm	37.40
33.67	Finishing walls with water proofing cement paint of required shade :		
33.67.1	Old work (one or more coats applied @ 2.20 kg/10 sqm) over priming coat of primer applied @ 0.80 litres/10 sqm complete including cost of Priming coat.	sqm	80.60

Code No	Description	Unit	Rate Rs.
33.68	Finishing walls with textured exterior paint of required shade :		
33.68.1	Old work (Two or more coats on existing cement paint surface applied @ 3.28 ltr/10 sqm.	sqm	163.50
33.68.2	Old work (One or more coats) applied @ 1.82 ltr/10 sqm.	sqm	99.50
33.69	Finishing walls with Acrylic Smooth exterior paint of required shade :		
33.69.1	Old work (Two or more coat applied @ 1.67 ltr/ 10 sqm) on existing cement paint surface).	sqm	99.50
33.69.2	Old work (One or more coat applied @ 0.90 ltr/10 sqm).	sqm	63.40
33.70	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade		
33.70.1	Old work (Two or more coats applied @ 1.43 ltr/ 10 sqm) over existing cement paint surface.	sqm	88.70
33.70.2	Old work (one or more coats applied @ 0.83 ltr/10 sqm).	sqm	59.00
33.71	Painting (one or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint approved brand and manufacture on old work :		
33.71.1	100 mm diameter pipes	sqm	20.80
33.71.2	150 mm diameter pipes	sqm	30.20
33.72	Varnishing with varnish of approved brand and manufacture:		
33.72.1	One or more coats with copal varnish.	sqm	61.00
33.72.2	One or more coats with spar varnish.	sqm	65.10
33.73	Melamine polishing on wood work (one or more coat).	sqm	100.00
33.74	Varnishing with flatting varnish of approved brand and manufacture one or more coats on old work.	sqm	60.20
33.75	Providing and fixing double scaffolding system (cup lock type) on the exterior side, upto seven story height made with 40mm dia. M.S. tube 1.5 m centre to centre horizontal & vertical tubes joining with cup & lock system with M.S. tubes, M.S. tube challies, M.S. clamps and M.S. staircase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for the required duration as approved and removing it there after .The scaffolding system shall be stiffened with bracings, runners, connection with the building etc wherever required for inspection of work at required locations with essential safety features for the workmen etc. complete as per directions and approval of Engineer-in-charge .The elevational area of the scaffolding shall be measured for payment purpose .The payment will be made once irrespective of duration of scaffolding. (To be used for maintenance work judiciously . necessary deduction for scaffolding in the existing item to be done.)	sqm	182.00

Code No	Description	Unit	Rate Rs.
33.76	Repair to damaged RCC slabs, beams and columns etc for strengthening with cement mortar 1 : 2 in following steps i) Chopping loose and cracked concrete to required depth, cleaning the exposed surface of steel and concrete with wire brush and sand papering , cleaning of concrete surface with water as necessary and getting dried. ii) Applying Epoxy primer on the exposed steel bars. iii) Applying Epoxy hardener and resin mix (as per manufacturer's specification) on concrete and steel bars with brush. iv) Spreading dry cement mortar 1 : 2 mix over epoxy treated wet surface and allow it to dry for one day. v) Plastering the surface with cement sand mortar 1 : 3 upto depth of 30mm complete. vi) Cure the plastered surface for 15 days All work including scaffolding etc. complete in all respect.	Sqm	2,138.00
33.77	Mechanised cleaning of storage tanks comprises of following 6 stage as mentioned below : 1. Mechanical dewatering 2. Desalting removal of leftover dirty water and sludge with sludge pump 3. Cleaning of wall, ceiling and floor by high pressure water jet with help of equipments which creates a pressure of 100-150 bar 4. Removal of remaining sludge from floor with the help of industrial vacuum cleaner. 5. Spraying of non toxic, bio degradable ecofriendly and bacterial agent certified by a govt approved laboratory to disinfect the tank from all harmful pathogens. The dose should be safe as per the UECD guidelines & 23 adopted on 17th December 2001. 6. Treatment of inside tank by exposing UV radiation to kill further suspended or floating bacteria if any		
33.77.1	Upto 500 ltr.	each	895.00
33.77.2	Above 500 ltr. to 1000 Ltr.	each	1,342.00
33.77.3	Above 1000 ltr.	each	1,789.00

34.0 WATER SUPPLY (Building)

Code No	Description	Unit	Rate Rs.
34.1	Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80 C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with clamps at 1.00 metre spacing. this includes testing of joints complete as per direction of the Engineer in charge. Internal work - Exposed on wall		
34.1.1	1216 (16 mm OD) pipe	metre	236.50
34.1.2	1620 (20 mm OD) pipe	metre	270.00
34.1.3	2025 (25 mm OD) pipe	metre	337.50
34.1.4	2532 (32 mm OD) pipe	metre	432.00
34.1.5	3240 (40 mm OD) pipe	metre	597.00
34.1.6	4050 (50 mm OD) pipe	metre	764.00
34.2	Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80 C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with clamps at 1.00 metre spacing. This includes the costs of cutting chases and including testing of joints complete as per direction of the engineer in charge. Concealed work including cutting chases and making good the wall etc.		
34.2.1	1216 (16 mm OD) pipe	metre	400.00
34.2.2	1620 (20 mm OD) pipe	metre	430.00
34.2.3	2025 (25 mm OD) pipe	metre	505.00
34.2.4	2532 (32 mm OD) pipe	metre	605.00
34.3	Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 - 2004 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80 C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with trenching, refilling and testing of joints complete as per direction of the engineer in charge. External work		

Code No	Description	Unit	Rate Rs.
34.3.1	1216 (16 mm OD) pipe	metre	211.00
34.3.2	1620 (20 mm OD) pipe.	metre	233.00
34.3.3	2025 (25 mm OD) pipe.	metre	289.00
34.3.4	2532 (32 mm OD) pipe.	metre	363.00
34.3.5	3240 (40 mm OD) pipe.	metre	502.00
34.3.6	4050 (50 mm OD) pipe.	metre	669.00
34.4	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP - R plain & brass threaded polypropylene random fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes testing of joints complete as per direction of Engineer in Charge. Internal work - Exposed on wall		
34.4.1	PN - 16 Pipe, 16 mm OD	metre	203.00
34.4.2	PN - 16 Pipe, 20 mm OD	metre	212.00
34.4.3	PN - 16 Pipe, 25 mm OD	metre	311.00
34.4.4	PN - 16 Pipe, 32 mm OD	metre	395.00
34.4.5	PN - 16 Pipe, 40 mm OD	metre	560.00
34.4.6	PN - 16 Pipe, 50 mm OD	metre	746.00
34.5	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP - R plain & brass threaded polypropylene random fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. Concealed work including cutting chases and making good the walls etc.,		
34.5.1	PN - 16 Pipe, 16 mm OD	metre	355.00
34.5.2	PN - 16 Pipe, 20 mm OD	metre	367.50
34.5.3	PN - 16 Pipe, 25 mm OD	metre	442.50
34.5.4	PN - 16 Pipe, 32 mm OD	metre	555.00
34.6	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP - R plain & brass threaded polypropylene random fittings i/c trenching, refilling & testing of joints complete as per direction of Engineer in Charge. External work		
34.6.1	PN - 16 Pipe, 16 mm OD	metre	177.50
34.6.2	PN - 16 Pipe, 20 mm OD	metre	187.00

Code No	Description	Unit	Rate Rs.
34.6.3	PN - 16 Pipe, 25 mm OD	metre	251.50
34.6.4	PN - 16 Pipe, 32 mm OD	metre	335.00
34.6.5	PN - 16 Pipe, 40 mm OD	metre	464.50
34.6.6	PN - 16 Pipe, 50 mm OD	metre	650.00
34.6.7	PN - 16 Pipe, 63mm OD	metre	985.00
34.6.8	PN - 16 Pipe, 75 mm OD	metre	1,366.00
34.6.9	PN - 16 Pipe, 90 mm OD	metre	1,932.00
34.6.10	PN - 10 Pipe, 110 mm OD (SDR - 11)	metre	2,775.00
34.6.11	PN - 10 Pipe, 160 mm OD (SDR - 11)	metre	7,690.00
34.7	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge. Internal work - Exposed on wall		
34.7.1	15 mm nominal outer dia .Pipes.	metre	224.00
34.7.2	20 mm nominal outer dia .Pipes.	metre	282.00
34.7.3	25 mm nominal outer dia .Pipes.	metre	347.00
34.7.4	32 mm nominal outer dia .Pipes.	metre	497.00
34.7.5	40 mm nominal outer dia .Pipes.	metre	634.00
34.7.6	50 mm nominal outer dia .Pipes.	metre	959.00
34.8	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. Concealed work including cutting chases and making good the walls etc.,		
34.8.1	15 mm nominal outer dia .Pipes.	metre	367.50
34.8.2	20 mm nominal outer dia .Pipes.	metre	430.00
34.8.3	25 mm nominal outer dia .Pipes.	metre	517.00
34.8.4	32 mm nominal outer dia .Pipes.	metre	692.00
34.9	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings. This included jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge. External work		

Code No	Description	Unit	Rate Rs.
34.9.1	15 mm nominal outer dia .Pipes.	metre	187.00
34.9.2	20 mm nominal outer dia .Pipes.	metre	233.00
34.9.3	25 mm nominal outer dia .Pipes.	metre	307.50
34.9.4	32 mm nominal outer dia .Pipes.	metre	437.50
34.9.5	40 mm nominal outer dia .Pipes.	metre	539.00
34.9.6	50 mm nominal outer dia .Pipes.	metre	864.00
34.9.7	62.50 mm nominal inner dia Pipes.	metre	1,867.00
34.9.8	75 mm nominal inner dia .Pipes.	metre	2,386.00
34.9.9	100mm nominal inner dia .Pipes.	metre	3,435.00
34.10	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. Internal work - Exposed on wall		
34.10.1	15 mm dia. nominal bore	metre	242.50
34.10.2	20 mm dia. nominal bore	metre	294.00
34.10.3	25 mm dia. nominal bore	metre	354.50
34.10.4	32 mm dia. nominal bore	metre	443.00
34.10.5	40 mm dia. nominal bore	metre	587.00
34.10.6	50 mm dia. nominal bore	metre	666.00
34.11	Concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall.		
34.11.1	15 mm dia nominal bore	metre	372.50
34.11.2	20 mm dia nominal bore	metre	412.50
34.12	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. External work :		
34.12.1	15 mm dia. nominal bore	metre	203.00
34.12.2	20 mm dia. nominal bore	metre	238.00
34.12.3	25 mm dia. nominal bore	metre	290.50
34.12.4	32 mm dia. nominal bore	metre	352.00
34.12.5	40 mm dia. nominal bore	metre	448.00
34.12.6	50 mm dia. nominal bore	metre	478.50
34.12.7	65 mm dia. nominal bore	metre	604.00
34.12.8	80 mm dia. nominal bore	metre	712.00
34.13	Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete :		
34.13.1	25 to 40 mm nominal bore	each	572.00

Code No	Description	Unit	Rate Rs.
34.13.2	50 to 80 mm nominal bore	each	1,078.00
34.14	Fixing water meter and stop cock in G.I. pipe line including cutting and threading the pipe and making long screws etc. complete (cost of water meter and stop cock to be paid separately).	each	517.00
34.15	Providing and fixing brass bib cock of approved quality :		
34.15.1	15 mm nominal bore	each	311.50
34.15.2	20 mm nominal bore	each	377.50
34.16	Providing and fixing brass stop cock of approved quality :		
34.16.1	15 mm nominal bore	each	333.00
34.16.2	20 mm nominal bore	each	413.50
34.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :		
34.17.1	25 mm nominal bore	each	551.00
34.17.2	32 mm nominal bore.	each	896.00
34.17.3	40 mm nominal bore	each	1,162.00
34.17.4	50 mm nominal bore	each	2,120.00
34.17.5	65 mm nominal bore	each	3,990.00
34.17.6	80 mm nominal bore	each	8,410.00
34.18	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :		
34.18.1	15 mm nominal bore	each	316.50
34.18.2	20 mm nominal bore	each	379.50
34.18.3	25 mm nominal bore	each	531.00
34.19	Providing and fixing gun metal non- return valve of approved quality (screwed end) :		
34.19.1	25 mm nominal bore		
34.19.1.1	Horizontal	each	876.00
34.19.1.2	Vertical	each	705.00
34.19.2	32 mm nominal bore		
34.19.2.1	Horizontal	each	1,577.00
34.19.2.2	Vertical	each	1,106.00
34.19.3	40 mm nominal bore		
34.19.3.1	Horizontal	each	1,793.00
34.19.3.2	Vertical	each	1,358.00
34.19.4	50 mm nominal bore		
34.19.4.1	Horizontal	each	2,725.00

Code No	Description	Unit	Rate Rs.
34.19.4.2	Vertical	each	2,281.00
34.19.5	65 mm nominal bore		
34.19.5.1	Horizontal	each	6,530.00
34.19.5.2	Vertical	each	3,620.00
34.19.6	80 mm nominal bore		
34.19.6.1	Horizontal	each	9,170.00
34.19.6.2	Vertical	each	5,030.00
34.20	Providing and fixing brass ferrule with C.I. mouth cover including boring and tapping the main :		
34.20.1	15 mm nominal bore	each	211.50
34.20.2	20 mm nominal bore	each	267.50
34.20.3	25 mm nominal bore	each	344.00
34.21	Providing and fixing uplasticised PVC connection pipe with brass unions :		
34.21.1	30 cm length		
34.21.1.1	15 mm nominal bore	each	50.30
34.21.1.2	20 mm nominal bore	each	60.30
34.21.2	45 cm length		
34.21.2.1	15 mm nominal bore	each	62.10
34.21.2.2	20 mm nominal bore	each	76.40
34.22	Providing and fixing C.P. brass shower rose with 15 or 20 mm inlet :		
34.22.1	100 mm diameter	each	81.00
34.22.2	150 mm diameter	each	104.50
34.23	Laying in position centrifugally cast (spun) iron S&S or flanged pipes (excluding cost of pipe)	quintal	215.00
34.24	Laying in position S&S or flanged C.I. special such as tees, bends, collars, tapers and caps etc. (excluding cost of specials).	quintal	405.00
34.25	Providing and laying S&S C.I. standard specials such as tees, bends, collars, tapers, caps etc. (Heavy class) :		
34.25.1	Upto 300 mm dia.	quintal	5,090.00
34.25.2	Over 300 mm dia.	quintal	5,220.00
34.26	Providing and laying flanged C.I. standard specials such as tees, bends, collars, tapers, caps etc., suitable for flanged jointing as per IS : 1538 :		
34.26.1	Upto 300 mm dia.	quintal	7,570.00
34.26.2	Over 300 mm dia.	quintal	8,220.00

Code No	Description	Unit	Rate Rs.
34.27	Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS - 1536 :		
34.27.1	100 mm dia. pipe	metre	1,256.00
34.27.2	125 mm dia. pipe	metre	1,555.00
34.27.3	150 mm dia. pipe	metre	1,818.00
34.27.4	200 mm dia. pipe	metre	3,185.00
34.27.5	250 mm dia. pipe	metre	4,170.00
34.27.6	300 mm dia. pipe	metre	5,600.00
34.27.7	350 mm dia. pipe	metre	6,720.00
34.27.8	400 mm dia. pipe	metre	8,850.00
34.27.9	450 mm dia. pipe	metre	10,700.00
34.27.10	500 mm dia. pipe	metre	12,450.00
34.27.11	600 mm dia. pipe	metre	17,400.00
34.28	Providing lead caulked joints to spun iron or C.I. pipes and specials including testing of joints but excluding the cost of pig lead :		
34.28.1	100 mm diameter pipe	each	316.50
34.28.2	125 mm diameter pipe	each	469.50
34.28.3	150 mm diameter pipe	each	474.00
34.28.4	200 mm diameter pipe	each	631.00
34.28.5	250 mm diameter pipe	each	788.00
34.28.6	300 mm diameter pipe	each	948.00
34.28.7	350 mm diameter pipe	each	965.00
34.28.8	400 mm diameter pipe	each	1,271.00
34.28.9	450 mm diameter pipe	each	1,426.00
34.28.10	500 mm diameter pipe	each	1,508.00
34.28.11	600 mm diameter pipe	each	2,046.00
34.29	Supplying pig lead at site of work.	quintal	13,550.00
34.30	Constructing masonry Chamber 30x30x50 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for stop cock, with C. I. surface box 100x100 x75 mm (inside) with hinged cover fixed in cement concrete slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand:10 graded stone aggregate 40mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12mm thick finished with a floating coat of neat cement complete as per standard design :		
34.30.1	With bricks	each	1,237.00

Code No	Description	Unit	Rate Rs.
34.31	Constructing masonry Chamber 60x60x75 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100mm. top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :		
34.31.1	With F.P.S. bricks	each	7,170.00
34.32	Constructing masonry Chamber 90x90x100 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm. top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :		
34.32.1	With F.P.S. bricks	each	12,450.00
34.33	Constructing masonry Chamber 120x120x100 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm. top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement :2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :		
34.33.1	With F.P.S. bricks	each	17,200.00
34.34	Constructing masonry Chamber 60x60x75 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for fire hydrants, with C.I. surface box 350x350 mm top and 165 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand:10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :		
34.34.1	With F.P.S. bricks	each	6,740.00
34.35	Constructing masonry Chamber 60x45x50 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement : 4 coarse		

Code No	Description	Unit	Rate Rs.
	sand) for water meter complete with C.I. double flap surface box 400x200x200 mm (inside) with locking arrangement and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand :10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :		
34.35.1	With F.P.S. bricks	each	6,380.00
34.36	Painting G.I. pipes and fittings with synthetic enamel white paint over a ready mixed priming coat, both of approved quality for new work :		
34.36.1	15 mm diameter pipe.	metre	11.50
34.36.2	20 mm diameter pipe.	metre	14.00
34.36.3	25 mm diameter pipe.	metre	18.00
34.36.4	32 mm diameter pipe.	metre	21.90
34.36.5	40 mm diameter pipe.	metre	25.50
34.36.6	50 mm diameter pipe.	metre	30.80
34.37	Repainting G.I. pipes and fittings with synthetic enamel white paint of approved quality :		
34.37.1	15 mm diameter pipe.	metre	5.65
34.37.2	20 mm diameter pipe.	metre	6.80
34.37.3	25 mm diameter pipe	metre	8.65
34.37.4	32 mm diameter pipe	metre	10.50
34.37.5	40 mm diameter pipe	metre	12.10
34.37.6	50 mm diameter pipe	metre	14.60
34.38	Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :		
34.38.1	15 mm diameter pipe	metre	6.95
34.38.2	20 mm diameter pipe	metre	8.45
34.38.3	25 mm diameter pipe	metre	10.70
34.38.4	32 mm diameter pipe	metre	13.00
34.38.5	40 mm diameter pipe	metre	14.80
34.38.6	50 mm diameter pipe	metre	18.10
34.38.7	65 mm diameter pipe	metre	22.50
34.38.8	80 mm diameter pipe	metre	26.20
34.39	Providing and filling fine sand of grading zone V or coarser grade all-round the G.I. pipes in external work.	Cum	1,393.00
34.40	Providing and filling sand of grading zone V or coarser grade all-round the G.I. pipes in external work.		

Code No	Description	Unit	Rate Rs.
34.40.1	15 mm diameter pipe	metre	103.00
34.40.2	20 mm diameter pipe	metre	104.50
34.40.3	25 mm diameter pipe	metre	107.50
34.40.4	32 mm diameter pipe	metre	110.00
34.40.5	40 mm diameter pipe	metre	111.50
34.40.6	50 mm diameter pipe	metre	115.50
34.40.7	65 mm diameter pipe	metre	182.50
34.40.8	80 mm diameter pipe	metre	188.00
34.40.9	100 mm diameter pipe	metre	199.00
34.40.10	150 mm diameter pipe	metre	296.50
34.41	Boring with 100 mm diameter casting pipe for hand pump/ tube well in all soils except ordinary hard rocks requiring blasting including removing the casing pipe after the hand pipe/tube well is lowered and tested :		
34.41.1	Upto 6 metres depth.	metre	467.00
34.41.2	Beyond 6 m and upto 12 m depth.	metre	554.00
34.41.3	Beyond 12 m and upto 18 m depth.	metre	645.00
34.42	Providing and placing in position filters of 40 mm diameter G.I. pipe with brass strainer of approved quality.	metre	646.00
34.43	Providing and fixing to filter and lowering to proper levels 40 mm G.I. pipe for tube well including cleaning and priming the tube well.	metre	412.50
34.44	Providing and placing in position hand pump of approved quality for 40 mm diameter G.I. pipe complete with all accessories.	each	1,009.00
34.45	Providing and fixing G.I. Union in G.I. pipe including cutting and threading the pipe and making long screws etc. complete (New work)		
34.45.1	15 mm nominal bore	each	232.00
34.45.2	20 mm nominal bore	each	259.50
34.45.3	25 mm nominal bore	each	294.50
34.45.4	32 mm nominal	each	356.50
34.45.5	40 mm nominal bore	each	391.00
34.45.6	50mm nominal bore	each	566.00
34.45.7	65mm nominal bore	each	880.00
34.45.8	80 mm nominal bore	each	1,139.00
34.46	Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws including excavation, refilling the earth or cutting of wall and making good the same complete wherever required :		

Code No	Description	Unit	Rate Rs.
34.46.1	15 mm nominal bore.	each	568.00
34.46.2	20 mm nominal bore.	each	595.00
34.46.3	25 mm nominal bore.	each	631.00
34.46.4	32 mm nominal bore.	each	693.00
34.46.5	40 mm nominal bore.	each	727.00
34.46.6	50 mm nominal bore.	each	1,024.00
34.46.7	65 mm nominal bore.	each	1,339.00
34.46.8	80 mm nominal bore.	each	1,597.00
34.47	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI : 12701 marked with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank	per litre	8.80
34.48	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931		
34.48.1	15 mm nominal bore.	each	473.50
34.49	Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms.		
34.49.1	15 mm nominal bore.	each	666.00
34.50	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.		
34.50.1	15 mm nominal bore	each	584.00
34.51	Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS:8931.		
34.51.1	15 mm nominal bore.	each	709.00
34.52	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931		
34.52.1	15 mm nominal bore	each	509.00
34.53	Providing and fixing PTMT bib cock of approved quality and colour.		
34.53.1	15mm nominal bore, 86 mm long. Weighing not less than 88 gms.	each	147.00
34.53.2	15 mm nominal bore, 122mm long. Weighing not less than 99 gms.	each	204.50
34.53.3	15 mm nominal bore, 165mm long. Weighing not less than 110 gms.	each	233.00
34.53.4	15mm nominal bore, 90mm long. Weighing not less than 93 gms.	each	190.00
34.54	Providing and fixing PTMT stop cock of approved quality and colour.		
34.54.1	15 mm nominal bore, 86mm long. Weighing not less than 88 gms.	each	147.00
34.54.2	20mm nominal bore, 89mm long. Weighing not less than 88 gms.	each	175.50
34.54.3	Concealed stop cock, 15mm nominal bore, 108mm long. Weighing not less than 108 gms.	each	225.50

Code No	Description	Unit	Rate Rs.
34.55	Providing and fixing PTMT pillar cock of approved quality and colour		
34.55.1	15mm nominal bore, 107mm long. Weighing not less than 110 gms.	each	242.00
34.55.2	15mm nominal bore, 125mm long foam flow. Weighing not less than 120 gms.	each	206.50
34.56	Providing and fixing PTMT, push cock of approved quality and colour.		
34.56.1	15 mm nominal bore, 98mm long. Weighing not less than 75 gms.	each	125.50
34.56.2	15 mm nominal bore, 80mm long. Weighing not less than 46 gms.	each	118.50
34.57	Providing and fixing PTMT grating of approved quality and colour.		
34.57.1	Circular type.		
34.57.1.1	100 mm nominal dia.	each	41.60
34.57.1.2	125 mm nominal dia with 25 mm waste hole.	each	48.80
34.57.2	Rectangular type with openable circular lid.		
34.57.2.1	150 mm nominal size square 100 mm diameter of the inner hinged round grating .	each	70.20
34.58	Providing and fixing PTMT Ball cock of approved quality, colour and make complete with Epoxy coated aluminium rod with L.P./ H.P.H.D. plastic ball.		
34.58.1	15 mm nominal bore, 105 mm long. Weighing not less than 138 gms.	each	223.50
34.58.2	20 mm nominal bore, 120 mm long. Weighing not less than 198 gms.	each	309.50
34.58.3	25 mm nominal bore, 152mm long. Weighing not less than 440 gms.	each	596.00
34.58.4	40mm nominal bore, 206mm long. Weighing not less than 690 gms.	each	960.00
34.58.5	50mm nominal bore, 242mm long. Weighing not less than 1240 gms.	each	1,545.00
34.59	Providing and fixing PTMT angle stop cock 15 mm nominal bore. Weighing not less than 85 gms.	each	183.00
34.60	Providing and fixing PTMT swivelling shower, 15mm nominal bore. Weighing not less than 40gms.	each	145.50
34.61	Providing and fixing PTMT soap Dish Holder having length of 138mm, breadth 102mm, height of 75mm with concealed fitting arrangements. Weighing not less than 106 gms.	each	152.50
34.62	Providing and fixing Unplasticised P.V.C. connection pipe with PTMT Nuts collar and bush of approved quality and colour.		
34.62.1	15 mm nominal bore with 30cm length.	each	74.60
34.62.2	15 mm nominal bore with 45 cm length.	each	90.70
34.63	Providing and fixing PTMT extension nipple for water tank pipe, fittings of approved quality and colour.		

Code No	Description	Unit	Rate Rs.
34.63.1	15 mm nominal bore. Weighing not less than 32 gms.	each	33.40
34.63.2	20mm nominal bore. Weighing not less than 40gms.	each	54.80
34.63.3	25mm nominal bore. Weighing not less than 62 gms.	each	83.40
34.64	Cutting holes upto 30x30 cm in walls including making good the same :		
34.64.1	With F.P.S. bricks.	each	263.50
34.65	Cutting holes upto 15x15 cm in R.C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including finishing complete so as to make it leak proof.	each	272.00
34.66	Making chases upto 7.5x7.5 cm in walls including making good and finishing with matching surface after housing G.I. pipe etc.	metre	123.50
34.67	Making hole upto 20x20 cm and embedding pipes upto 150 mm diameter in masonry and filling with cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) including disposal of malba.	metre	117.50
34.68	Dismantling old C.I. pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes at site lead upto 50 metre :		
34.68.1	80 mm diameter C.I. pipe.	metre	222.00
34.68.2	100 mm diameter C.I. pipe.	metre	232.00
34.68.3	125 mm diameter C.I. pipe.	metre	242.00
34.68.4	150 mm diameter C.I. pipe.	metre	251.50
34.68.5	200 mm diameter C.I. pipe.	metre	281.50
34.68.6	250 mm diameter C.I. pipe.	metre	310.00
34.68.7	300 mm diameter C.I. pipe.	metre	336.00
34.68.8	350 mm diameter C.I. pipe.	metre	361.00
34.68.9	400 mm diameter C.I. pipe.	metre	384.00
34.68.10	450 mm diameter C.I. pipe.	metre	407.50
34.68.11	500 mm diameter C.I. pipe.	metre	428.50
34.68.12	600 mm diameter C.I. pipe.	metre	466.00
34.69	Labour for cutting C.I. pipe with steel saw.		
34.69.1	80 mm diameter C.I. pipe.	each cut	94.30
34.69.2	100 mm diameter C.I. pipe.	each cut	126.00
34.69.3	125 mm diameter C.I. pipe.	each cut	174.50
34.69.4	150 mm diameter C.I. pipe.	each cut	237.00

Code No	Description	Unit	Rate Rs.
34.69.5	200 mm diameter C.I. pipe.	each cut	316.00
34.69.6	250 mm diameter C.I. pipe.	each cut	393.50
34.69.7	300 mm diameter C.I. pipe.	each cut	472.50
34.69.8	350 mm diameter C.I. pipe.	each cut	550.00
34.69.9	400 mm diameter C.I. pipe.	each cut	629.00
34.69.10	450 mm diameter C.I. pipe.	each cut	707.00
34.69.11	500 mm diameter C.I. pipe	each cut	786.00
34.69.12	600 mm diameter C.I. pipe.	each cut	940.00

35.0 DRAINAGE (Building)

Code No	Description	Unit	Rate Rs.
35.1	Providing, laying and jointing glazed stoneware pipes grade 'A' with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :		
35.1.1	100 mm diameter	metre	410.50
35.1.2	150 mm diameter	metre	720.00
35.1.3	200 mm diameter	metre	1,113.00
35.1.4	230 mm diameter	metre	1,278.00
35.1.5	250 mm diameter	metre	1,797.00
35.1.6	300 mm diameter	metre	2,201.00
35.2	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design:		
35.2.1	100 mm diameter S.W. pipe	metre	603.00
35.2.2	150 mm diameter S.W. pipe	metre	738.00
35.2.3	200 mm diameter S.W. pipe	metre	860.00
35.2.4	230 mm diameter S.W. pipe	metre	941.00
35.2.5	250 mm diameter S.W. pipe	metre	994.00
35.3	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) upto haunches of S.W. pipes including bed concrete as per standard design :		
35.3.1	100 mm diameter S.W. pipe	metre	286.50
35.3.2	150 mm diameter S.W. pipe	metre	464.50
35.3.3	200 mm diameter S.W. pipe	metre	546.00
35.3.4	230 mm diameter S.W. pipe	metre	599.00
35.3.5	250 mm diameter S.W. pipe	metre	636.00
35.3.6	300 mm diameter S.W. pipe	metre	734.00
35.4	Providing and fixing square-mouth S.W. gully trap grade 'A' complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design :		
35.4.1	100x100 mm size P type		
35.4.1.1	With bricks class designation 75	each	1,779.00
35.4.1.2	With Sewer bricks conforming to IS : 4885	each	1,769.00

Code No	Description	Unit	Rate Rs.
35.4.2	150 x 100 mm size P type.		
35.4.2.1	With bricks class designation 75	each	1,818.00
35.4.2.2	With sewer bricks conforming to IS : 4885	each	1,808.00
35.4.3	180x150 mm size P type		
35.4.3.1	With bricks class designation 75	each	1,917.00
35.4.3.2	With Sewer bricks conforming to IS : 4885	each	1,906.00
35.5	Dismantling of old S.W. pipes including breaking of joints and bed concrete stacking of useful materials near the site within 50 m lead and disposal of unserviceable materials into municipal dumps:		
35.5.1	100 mm diameter	metre	50.00
35.5.2	150 mm diameter	metre	54.80
35.5.3	200 mm diameter	metre	58.10
35.5.4	230 mm diameter	metre	59.70
35.5.5	250 mm diameter	metre	61.40
35.5.6	300 mm diameter	metre	64.60
35.5.7	350 mm diameter	metre	74.70
35.5.8	400 mm diameter	metre	81.70
35.5.9	450 mm diameter	metre	84.90
35.6	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design :		
35.6.1	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) :		
35.6.1.1	With bricks with class designation 75	each	8,930.00
35.6.1.2	With Sewer bricks conforming to IS : 4885	each	8,910.00
35.6.2	Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg) :		
35.6.2.1	With bricks class designation 75	each	19,450.00
35.6.2.2	With Sewer bricks conforming to IS : 4885	each	19,400.00

Code No	Description	Unit	Rate Rs.
35.6.3	Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (heavy duty) 560 mm internal diameter, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 kg) :		
35.6.3.1	With bricks class designation 75	each	24,800.00
35.6.3.2	With Sewer bricks conforming to IS : 4885	each	24,700.00
35.7	Extra for depth for manholes		
35.7.1	Size 90x80 cm		
35.7.1.1	With bricks class designation 75	metre	6,010.00
35.7.1.2	With Sewer bricks conforming to IS : 4885	metre	5,930.00
35.7.2	Size 120x90 cm		
35.7.2.1	With bricks class designation 75	metre	7,200.00
35.7.2.2	With Sewer bricks conforming to IS : 4885	metre	7,110.00
35.8	Supplying and fixing C.I. cover without frame for manholes :		
35.8.1	455x610 mm rectangular C.I. cover (light duty) the weight of the cover to be not less than 23 kg.	each	1,374.00
35.8.2	500 mm diameter C.I. cover (medium duty) the weight of the cover to be not less than 58 kg.	each	3,245.00
35.8.3	560 mm diameter C.I. cover (heavy duty) the weight of the cover to be not less than 108 kg.	each	6,140.00
35.9	Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality		
35.9.1	L D- 2.5		
35.9.1.1	Rectangular shape 600x450mm internal dimensions	each	1,260.00
35.9.1.2	Square shape 450mm internal dimensions	each	993.00
35.9.1.3	Circular shape 450mm internal diameter	each	1,434.00
35.9.2	M D - 10		
35.9.2.1	Square shape 450mm internal dimension	each	1,215.00
35.9.2.2	Circular shape 500mm internal diameter	each	1,751.00
35.10	Supplying and fixing C.I. cover 300x300 mm without frame for gully trap (standard pattern) the weight of cover to be not less than 4.5kg.	each	411.50
35.11	Dismantling of manhole including R.C.C. top slab, C.I. cover with frame including stacking of useful materials near the site and disposal of unserviceable materials into municipal dumps within 50 m lead :		
35.11.1	Rectangular manhole 90x80 cm and 45 cm deep	each	799.00
35.11.2	Rectangular manhole 120x90 cm and 90 cm deep	each	1,261.00
35.11.3	Rectangular arch type manhole 140x90cm and 2.45m deep	each	1,893.00

Code No	Description	Unit	Rate Rs.
35.11.4	Circular manhole 122 cm diameter and 1.68 m deep	each	1,059.00
35.12	Extra for depth of manholes dismantled:		
35.12.1	Rectangular manhole 90x80 cm and 45 cm deep	metre	364.50
35.12.2	Rectangular manhole 120x90 cm and 90 cm deep	metre	434.00
35.12.3	Rectangular arch type manhole 140x90 cm and 2.45m deep (upto 4.25 m depth).	metre	343.00
35.12.4	Circular manhole 122 cm diameter and 1.68 m deep (upto 2.29 m depth)	metre	388.50
35.13	Constructing brick masonry road gully chamber 50x45x60 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm precast R.C.C. horizontal grating with frame complete as per standard design :		
35.13.1	With bricks	each	4,385.00
35.14	Constructing brick masonry road gully chamber 45x45x77.5 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) with precast R.C.C. vertical grating complete as per standard design :		
35.14.1	With bricks	each	4,760.00
35.15	Constructing brick masonry road gully chamber 110x50x77.5 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm precast R.C.C. horizontal grating with frame and vertical grating complete as per standard design :		
35.15.1	With bricks	each	8,300.00
35.16	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with 75 class designation bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design :		
35.16.1	Inside dimensions 455x610 mm and 45 cm deep for single pipe line :		
35.16.1.1	With bricks	each	5,020.00
35.16.2	Inside dimensions 500x700 mm and 45 cm deep for pipe line with one or two inlets :		
35.16.2.1	With bricks	each	5,830.00

Code No	Description	Unit	Rate Rs.
35.16.3	Inside dimensions 600x 850 mm and 45 cm deep for pipe line with three or more inlets :		
35.16.3.1	With bricks	each	6,740.00
35.17	Extra for depth beyond 45 cm of brick masonry chamber :		
35.17.1	For 455x610 mm size		
35.17.1.1	With bricks	metre	4,175.00
35.17.2	For 500x700 mm size		
35.17.2.1	With bricks	metre	4,560.00
35.17.3	For 600x850 mm size		
35.17.3.1	With bricks	metre	5,310.00
35.18	Making soak pit 2.5 m diameter 3.0 metre deep with 45 x 45 cm dry brick honey comb shaft with bricks of class designation 75 and S.W. drain pipe 100 mm diameter, 1.8 m long complete as per standard design.		
35.18.1	With bricks	each	18,850.00
35.19	Constructing soak pit 1.20x1.20x1.20m filled with brickbats including S.W. drain pipe 100 mm diameter and 1.20 m long complete as per standard design.	each	2,161.00
35.20	Providing and fixing S.W. intercepting trap in manholes with stiff mixture of cement mortar 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :		
35.20.1	100 mm dia	each	346.00
35.20.2	150 mm dia	each	483.50
35.21	Providing and fixing precast dense cement concrete M-20 Grade(Vibro-pressed) drain section block of different size as per approved drawing, design and strength as per IS:2185 (part I) of grade 'D' (5.00 N/mm ²) proper quality of additive/admixture like plasticizer etc. added to produce high quality and durable drain section Blocks of 'L' shape 'U' shape etc. over 50mm thick CC M15 base course with fixing and joining with C.M.1:4 in proper grade and level complete in all respect. (cost of earth work, steel & welded mesh shall be paid extra).		
35.21.1	40mm thick	sqm	485.00
35.21.2	60mm thick	sqm	557.00
35.21.3	80mm thick	sqm	686.00
35.22	Cleaning and removal of earth, silt, sludge, kankar, boulder, building material and garbage in existing nallah/drains including construction of bye pass arrangement to bypass water with 1.5m lift from ground level and lead upto 50 m including foul & saturated condition where pumping out or bailing out of water is required, including shoring, shuttering where required and dewatering. Making access for		

Code No	Description	Unit	Rate Rs.
	disposal and dressing disposal side as per the directed of the Engineer.		
35.22.1	For Depth upto 1.50 m	cum	379.50
35.22.2	For depth above 1.50 m and upto 3.00 m	cum	442.50
35.22.3	For depth above 3.00 m and upto 4.50 m	cum	474.00
35.22.4	For depth above 4.50 m and upto 6.00 m	cum	558.00
35.22.5	For depth above 6.00 m and upto 7.50 m	cum	621.00
35.22.6	For depth above 7.50 m and upto 9.00 m	cum	688.00

36.0 SANITARY INSTALLATIONS

Code No	Description	Unit	Rate Rs.
36.1	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required :		
36.1.1	White Vitreous china Orissa pattern W.C. pan of size 580x440mm with integral type foot rests.	each	4,775.00
36.1.2	Stainless Steel AISI-304(18/8) Orissa pattern W.C. pan of size 585x480 mm with flush pipe and integrated type foot rests.	each	7,860.00
36.2	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required :		
36.2.1	W.C. pan with ISI marked white solid plastic seat and lid	each	4,595.00
36.2.2	W.C. pan with ISI marked black solid plastic seat and lid	each	4,540.00
36.3	Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous china flushing cistern & C.P. flush bend with fittings & C.I. brackets, 40mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete including painting of fittings and brackets, cutting and making good the walls and floors wherever required :		
36.3.1	W.C. pan with ISI marked white solid plastic seat and lid.	each	5,930.00
36.3.2	W.C. pan with ISI marked black solid plastic seat and lid.	each	5,870.00
36.4	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350mm and 340x410x265mm sizes respectively with automatic flushing cistern with standard flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :		
36.4.1	One urinal basin with 5 litre white P.V.C. automatic flushing cistern.	each	4,505.00
36.4.2	Range of two urinal basins with 5 litre white P.V.C. automatic flushing cistern.	each	7,120.00
36.4.3	Range of three urinal basins with 10litre white P.V.C. automatic flushing cistern.	each	9,730.00
36.4.4	Range of four urinal basins with 10 litre white P.V.C. automatic flushing cistern.	each	13,450.00

Code No	Description	Unit	Rate Rs.
36.5	Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350mm with white PVC automatic flushing cistern, with fittings, standard size C.P. brass flush pipe, spreaders with unions and clamps (all in C.P. brass) with waste fitting as per IS : 2556, C.I. trap with outlet grating and other couplings in C.P. brass including painting of fittings and cutting and making good the walls and floors wherever required :		
36.5.1	Single half stall urinal with 5 litre P.V.C. automatic flushing cistern.	each	8,580.00
36.5.2	Range of two half stall urinals with 5 litre P.V.C. automatic flushing cistern.	each	13,050.00
36.5.3	Range of three half stall urinals with 10 litre P.V.C. automatic flushing cistern.	each	16,250.00
36.5.4	Range of four half stall urinals with 10 litre P.V.C. automatic flushing cistern.	each	19,300.00
36.6	Providing and fixing one piece construction white vitreous china squatting plate with an integral longitudinal flushing pipe, white P.V.C. automatic flushing cistern, with fittings, standard size G.I. flush pipe for back and front flush with standard spreader pipes with fittings, G.I clamps and C.P. brass coupling complete including painting of fittings and cutting and making good the walls and floors etc. wherever required :		
36.6.1	Single squatting plate with 5 litre P.V.C. automatic flushing cistern.	each	6,200.00
36.6.2	Range of two squatting plates with 5 litre P.V.C. automatic flushing cistern.	each	8,970.00
36.6.3	Range of three squatting plates with 10 litre P.V.C. automatic flushing cistern.	each	11,750.00
36.6.4	Range of four squatting plates with 10 litre P.V.C. automatic flushing cistern.	each	14,000.00
36.7	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :		
36.7.1	White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps.	each	2,620.00
36.7.2	White Vitreous China Wash basin size 630x450 mm with a single 15 mm C.P. brass pillar tap.	each	2,373.00
36.7.3	White Vitreous China Wash basin size 550x400 mm with a pair of 15 mm C.P. brass pillar taps.	each	2,520.00
36.7.4	White Vitreous China Flat back wash basin size 550x400 mm with single 15 mm C.P. brass pillar tap.	each	2,273.00
36.7.5	White Vitreous China Angle back wash basin size 600x480 mm with single 15 mm C.P. brass pillar tap.	each	2,323.00
36.7.6	White Vitreous China Angle back wash basin size 400x400 mm with single 15 mm C.P. brass pillar tap.	each	1,988.00

Code No	Description	Unit	Rate Rs.
36.7.7	White Vitreous China Flat back wash basin size 450x300 mm with single 15 mm C.P. brass pillar tap.	each	1,945.00
36.7.8	White Vitreous China Surgeon type wash basin of size 660x460 mm with a pair of 15 mm C.P. brass pillar taps with elbow operated levers.	each	4,055.00
36.7.9	White Vitreous China Surgeon type wash basin of size 660x460 mm with single 15 mm C.P. brass pillar taps with elbow operated levers ISI marked.	each	3,295.00
36.7.10	Stainless Steel AISI-304(18/8) Round basin 405x355 mm with single 15 mm C.P. brass pillar tap.	each	3,730.00
36.7.11	Stainless Steel AISI-304(18/8) Wash basin 530x345 mm with single 15 mm C.P. brass pillar tap.	each	3,475.00
36.8	Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.	each	1,272.00
36.9	Providing and fixing kitchen sink with C.I. brackets, C.P. brass chain with rubber plug, 40 mm C.P. brass waste complete, including painting the fittings and brackets, cutting and making good the walls wherever required :		
36.9.1	White glazed fire clay kitchen sink of size 600x450x250 mm.	each	3,600.00
36.10	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required :		
36.10.1	Kitchen sink with drain board		
36.10.1.1	510x1040 mm bowl depth 250mm.	each	4,920.00
36.10.1.2	510x1040 mm bowl depth 225mm.	each	4,980.00
36.10.1.3	510x1040 mm bowl depth 200mm.	each	4,825.00
36.10.1.4	510x1040 mm bowl depth 178mm.	each	4,610.00
36.10.2	Kitchen sink without drain board		
36.10.2.1	610x510 mm bowl depth 200 mm.	each	3,830.00
36.10.2.2	610x460 mm bowl depth 200 mm.	each	3,365.00
36.10.2.3	470x420 mm bowl depth 178 mm.	each	2,765.00
36.11	Providing and fixing white vitreous china laboratory sink with C.I. brackets, C.P. brass chain with rubber plug 40mm C.P brass waste and 40mm C.P. brass trap with necessary fittings complete including painting of fittings and brackets, cutting and making good the wall wherever required :		
36.11.1	Size 450x300x150mm	each	2,930.00
36.11.2	Size 600x450x200mm	each	3,920.00

Code No	Description	Unit	Rate Rs.
36.12	Providing and fixing draining board with C.I. brackets including painting of brackets, cutting and making good the walls wherever required :		
36.12.1	White glazed fire clay draining board of size 600x450x25mm	each	1,137.00
36.13	Providing and fixing white vitreous china water closet squatting pan (Indian type)		
36.13.1	Long pattern W.C. pan of size 580 mm	each	1,304.00
36.13.2	Orissa pattern W.C. pan of size 580x440 mm	each	2,039.00
36.14	Extra for using coloured W.C. pan instead of white W.C. pan		
36.14.1	Orissa pattern W.C. pan 580x440 mm	each	1,071.00
36.15	Providing and fixing white vitreous china pedestal type (European type/ wash down type) water closet pan.	each	1,818.00
36.16	Extra for using coloured pedestal type W.C pan (European type) with low level cistern of same colour instead of white vitreous china W.C pan and cistern.	each	1,278.00
36.17	Providing and fixing a pair of white vitreous china foot rests of standard pattern for squatting pan water closet:		
36.17.1	250x130x30 mm	pair	215.00
36.17.2	250x125x25 mm	pair	186.50
36.18	Providing and fixing P.V.C. low level flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete.		
36.18.1	10 litre capacity - White	each	1,041.00
36.18.2	10 litre capacity - coloured	each	1,098.00
36.19	Providing and fixing controlled flush, low level cistern made of vitreous china with all fittings complete.		
36.19.1	10 litre (full flush) capacity-white	each	1,885.00
36.19.2	10 litre (full flush) capacity-coloured	each	2,477.00
36.20	Providing and fixing solid plastic seat with lid for pedestal type W.C. pan complete :		
36.20.1	White solid plastic seat with lid	each	483.00
36.20.2	Black solid plastic seat with lid	each	426.00
36.21	Extra for providing coloured other than black solid P.V.C. plastic seat and cover in European type W.C. pan, instead of white plastic seat and cover.	each	95.70
36.22	Providing and fixing G.I. inlet connection for flush pipe connecting with W.C. pan.	each	106.00
36.23	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350mm and 340x410x265mm sizes respectively.	each	1,194.00

Code No	Description	Unit	Rate Rs.
36.24	Providing and fixing white vitreous china squatting plate urinal with integral rim longitudinal flush pipe.	each	2,635.00
36.25	Providing and fixing white vitreous china wash basin including making all connections but excluding the cost of fittings :		
36.25.1	Flat back wash basin of size 630x450mm.	each	1,019.00
36.25.2	Flat back wash basin of size 550x400mm.	each	919.00
36.25.3	Angle back wash basin of size 600x480mm.	each	969.00
36.25.4	Angle back wash basin of size 400x400mm.	each	634.00
36.25.5	Flat back wash basin of size 450x300mm.	each	591.00
36.25.6	Surgeon type wash basin of size 660x460mm.	each	1,426.00
36.26	Providing and fixing kitchen sink including making all connections excluding cost of fittings.		
36.26.1	White glazed fire clay sink of size 600x450x250mm.	each	2,449.00
36.27	Providing and fixing white vitreous china laboratory sink including making all connections excluding cost of fittings:		
36.27.1	Size 450x300x150 mm.	each	1,585.00
36.27.2	Size 600x450x200 mm.	each	2,580.00
36.28	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.		
36.28.1	Semi rigid pipe		
36.28.1.1	32 mm dia	each	64.60
36.28.1.2	40 mm dia	each	78.90
36.28.2	Flexible pipe		
36.28.2.1	32 mm dia	each	71.80
36.28.2.2	40 mm dia	each	71.80
36.29	Providing and fixing 100 mm sand cast Iron grating for gully trap.	each	41.60
36.30	Providing and fixing in position 25mm diameter mosquito proof coupling of approved municipal design.	each	42.60
36.31	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	each	1,048.00
36.32	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing :		
36.32.1	Circular shape 450mm dia.	each	1,137.00
36.32.2	Rectangular shape 453x357mm	each	954.00
36.32.3	Oval shape 450x350mm (outer dimensions)	each	1,009.00

Code No	Description	Unit	Rate Rs.
36.32.4	Rectangular shape 1500x450 mm	each	1,645.00
36.33	Providing and fixing 600x120x5mm glass shelf with edges round of supported on anodised aluminium angle frame with C.P. brass brackets and guard rail complete fixed with 40 mm long screws, rawl plugs etc., complete.	each	607.00
36.34	Providing and fixing toilet paper holder :		
36.34.1	C.P. brass	each	398.50
36.34.2	Vitreous china	each	380.00
36.35	Providing and fixing soil, waste and vent pipes :		
36.35.1	100 mm dia.		
36.35.1.1	Sand cast iron S&S pipe as per IS: 1729.	metre	1,062.00
36.35.1.2	Centrifugally cast (spun) iron socketed pipe as per IS: 3989.	metre	1,053.00
36.35.2	75 mm diameter :		
36.35.2.1	Sand cast iron S&S pipe as per IS: 1729.	metre	890.00
36.35.2.2	Centrifugally cast (spun) iron socketed pipe as per IS: 3989.	metre	921.00
36.36	Providing and filling the joints with spun yarn cement slurry and cement mortar 1:2 (1 cement : 2 fine sand) in S.C.I./ C.I. Pipes :		
36.36.1	75 mm dia pipe	each	109.50
36.36.2	100 mm dia pipe	each	129.00
36.37	Providing and fixing M.S. holder-bat clamps of approved design to Sand Cast iron/cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including cost of cutting holes and making good the walls etc. :		
36.37.1	For 100 mm dia. Pipe	each	237.50
36.37.2	For 75 mm dia. Pipe	each	227.50
36.38	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.		
36.38.1	100 mm		
36.38.1.1	Sand cast iron S&S as per IS - 1729	each	492.00
36.38.1.2	Sand cast iron S&S as per IS - 3989	each	435.00
36.38.2	75 mm dia		
36.38.2.1	Sand cast iron S&S as per IS - 1729	each	379.50
36.38.2.2	Sand cast iron S&S as per IS- 3989	each	351.00
36.39	Providing and fixing plain bend of required degree.		
36.39.1	100 mm		
36.39.1.1	Sand cast iron S&S as per IS - 1729	each	426.00

Code No	Description	Unit	Rate Rs.
36.39.1.2	Sand cast iron S&S as per IS : 3989	each	505.00
36.39.2	75 mm		
36.39.2.1	Sand cast iron S&S as per IS -1729	each	308.00
36.39.2.2	Sand cast iron S&S as per IS - 3989	each	265.50
36.40	Providing and fixing heel rest sanitary bend		
36.40.1	100 mm dia		
36.40.1.1	Sand cast iron S&S as per IS - 1729	each	379.00
36.40.1.2	Sand cast iron S&S as per IS - 3989	each	405.00
36.40.2	75 mm		
36.40.2.1	Sand cast iron S&S as per IS - 1729	each	322.50
36.40.2.2	Sand cast iron S&S as per IS - 3989	each	344.00
36.41	Providing and fixing double equal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :		
36.41.1	100x100x100x100mm		
36.41.1.1	Sand cast iron S&S as per IS - 1729	each	820.00
36.41.1.2	Sand cast iron S&S as per IS - 3989	each	856.00
36.41.2	75x75x75x75 mm		
36.41.2.1	Sand cast iron S&S as per IS - 1729	each	622.00
36.41.2.2	Sand cast iron S&S as per IS - 3989	each	679.00
36.42	Providing and fixing double equal plain junction of required degree.		
36.42.1	100x100x100x100 mm		
36.42.1.1	Sand cast iron S&S as per IS - 1729	each	719.00
36.42.1.2	Sand cast iron S&S as per IS - 3989	each	819.00
36.42.2	75x75x75x75 mm		
36.42.2.1	Sand cast iron S&S as per IS - 1729	each	493.50
36.42.2.2	Sand cast iron S&S as per IS - 3989	each	622.00
36.43	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.		
36.43.1	100x100x100 mm		
36.43.1.1	Sand cast iron S&S as per IS - 1729	each	549.00
36.43.1.2	Sand cast iron S&S as per IS - 3989	each	692.00
36.43.2	75x75x75 mm		
36.43.2.1	Sand cast iron S&S as per IS - 1729	each	422.50
36.43.2.2	Sand cast iron S&S as per IS - 3989	each	530.00

Code No	Description	Unit	Rate Rs.
36.44	Providing and fixing single equal plain junction of required degree :		
36.44.1	100x100x100 mm		
36.44.1.1	Sand cast iron S&S as per IS - 1729	each	476.00
36.44.1.2	Sand cast iron S&S as per IS - 3989	each	633.00
36.44.2	75x75x75 mm		
36.44.2.1	Sand cast iron S&S as per IS - 1729	each	365.00
36.44.2.2	Sand cast iron S&S as per IS - 3989	each	458.00
36.45	Providing and fixing double unequal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :		
36.45.1	100x100x75x75 mm		
36.45.1.1	Sand cast iron S&S as per IS - 1729	each	842.00
36.45.1.2	Sand cast iron S&S as per IS - 3989	each	1,163.00
36.46	Providing and fixing double unequal plain junction of required degree:		
36.46.1	100x100x75x75 mm		
36.46.1.1	Sand cast iron S&S as per IS - 1729	each	762.00
36.46.1.2	Sand cast iron S&S as per IS - 3989	each	1,069.00
36.47	Providing and fixing single unequal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :		
36.47.1	100x100x75 mm		
36.47.1.1	Sand cast iron S&S as per IS - 1729	each	613.00
36.47.1.2	Sand cast iron S&S as per IS - 3989	each	892.00
36.48	Providing and fixing single unequal plain junction of required degree :		
36.48.1	100x100x75 mm		
36.48.1.1	Sand cast iron S&S as per IS - 1729	each	555.00
36.48.1.2	Sand cast iron S&S as per IS - 3989	each	769.00
36.49	Providing and fixing double equal plain invert branch of required degree:		
36.49.1	100x100x100x100 mm		
36.49.1.1	Sand cast iron S&S as per IS - 1729	each	733.00
36.49.1.2	Sand cast iron S&S as per IS - 3989	each	712.00
36.49.2	75x75x75x75 mm		
36.49.2.1	Sand cast iron S&S as per IS - 1729	each	551.00

Code No	Description	Unit	Rate Rs.
36.49.2.2	Sand cast iron S&S as per IS - 3989	each	572.00
36.50	Providing and fixing single equal plain invert branch of required degree:		
36.50.1	100x100x100 mm		
36.50.1.1	Sand cast iron S&S as per IS - 1729	each	555.00
36.50.1.2	Sand cast iron S&S as per IS - 3989	each	569.00
36.50.2	75x75x75 mm		
36.50.2.1	Sand cast iron S&S as per IS - 1729	each	444.00
36.50.2.2	Sand cast iron S&S as per IS - 3989	each	444.00
36.51	Providing and fixing double unequal invert branch of required degree:		
36.51.1	100x100x75x75 mm		
36.51.1.1	Sand cast iron S&S as per IS - 1729	each	769.00
36.51.1.2	Sand cast iron S&S as per IS - 3989	each	969.00
36.52	Providing and fixing single unequal plain invert branch of required degree :		
36.52.1	100x100x75 mm		
36.52.1.1	Sand cast iron S&S as per IS - 1729	each	662.00
36.52.1.2	Sand cast iron S&S as per IS - 3989	each	740.00
36.53	Providing and fixing sand cast iron S&S off sets as per IS: 1729		
36.53.1	76 mm off sets		
36.53.1.1	With 75 mm dia. pipe	each	329.50
36.53.1.2	With 100 mm dia. pipe	each	372.50
36.53.2	114 mm off sets		
36.53.2.1	With 75 mm dia. pipe	each	405.00
36.53.2.2	With 100 mm dia. Pipe	each	519.00
36.53.3	152 mm off sets		
36.53.3.1	With 75 mm dia. Pipe	each	489.50
36.53.3.2	With 100 mm dia. pipe	each	625.00
36.54	Providing and fixing sand cast iron S&S off sets as per IS: 3989.		
36.54.1	75 mm off sets		
36.54.1.1	With 75 mm dia. pipe	each	315.00
36.54.2	150 mm off sets		
36.54.2.1	With 75 mm dia. pipe	each	394.00
36.54.2.2	With 100 mm dia. pipe	each	537.00

Code No	Description	Unit	Rate Rs.
36.55	Providing and fixing door piece, insertion rubber washer 3mm thick, bolts & nuts complete :		
36.55.1	100 mm		
36.55.1.1	Sand cast iron S&S as per IS - 1729	each	556.00
36.55.1.2	Sand cast iron S&S as per IS - 3989	each	599.00
36.55.2	75 mm		
36.55.2.1	Sand cast iron S&S as per IS - 1729	each	415.50
36.55.2.2	Sand cast iron S&S as per IS - 3989	each	544.00
36.56	Providing and fixing terminal guard:		
36.56.1	100 mm		
36.56.1.1	Sand cast iron S&S as per IS - 1729	each	305.00
36.56.1.2	Sand cast iron S&S as per IS - 3989	each	326.50
36.56.2	75 mm		
36.56.2.1	Sand cast iron S&S as per IS - 1729	each	229.50
36.56.2.2	Sand cast iron S&S as per IS - 3989	each	279.50
36.57	Providing and fixing collar:		
36.57.1	100 mm		
36.57.1.1	Sand cast iron S&S as per IS - 1729	each	255.00
36.57.1.2	Sand cast iron S&S as per IS - 3989	each	333.50
36.57.2	75 mm		
36.57.2.1	Sand cast iron S&S as per IS - 1729	each	179.50
36.57.2.2	Sand cast iron S&S as per IS- 3989	each	222.50
36.58	Providing lead caulked joints to sand cast iron/ centrifugally cast (spun) iron pipes and fittings of diameter:		
36.58.1	100 mm	each	332.00
36.58.2	75 mm	each	278.00
36.58.3	50 mm	each	221.50
36.59	Providing and fixing M.S. stays and clamps for sand cast iron/ centrifugally cast (spun) iron pipes of diameter :		
36.59.1	100 mm	each	99.30
36.59.2	75 mm	each	61.10
36.59.3	50 mm	each	53.50
36.60	Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors :		
36.60.1	100 mm inlet and 100 mm outlet		

Code No	Description	Unit	Rate Rs.
36.60.1.1	Sand cast iron S&S as per IS: 3989.	each	1,269.00
36.60.1.2	Sand Cast iron S&S as per IS: 1729.	each	1,133.00
36.60.2	100 mm inlet and 75 mm outlet		
36.60.2.1	Sand cast iron S&S as per IS - 3989	each	1,283.00
36.60.2.2	Sand Cast iron S&S as per IS- 1729.	each	1,062.00
36.61	Cutting chases in brick masonry walls for following diameter sand cast iron/ centrifugally cast (spun) iron pipes and making good the same with cement concrete 1:3:6 (1 cement : 3 coarse sand :6 graded stone aggregate 12.5 mm nominal size) including necessary plaster and pointing in cement mortar 1:4 (1 cement : 4 coarse sand):		
36.61.1	100 mm dia.	metre	423.00
36.61.2	75 mm dia.	metre	303.50
36.61.3	50 mm dia.	metre	199.00
36.62	Painting C.I. cistern with bitumastic or any other anti-corrosive paint inside and white paint over a coat of zinc chromate yellow primer (of approved quality) on the outside surface of the cistern flush pipe, other fittings, etc. complete for new work.	each	687.00
36.63	Re-painting C.I. cistern with bitumastic or any other anti-corrosive paint inside and white paint on the outside surface of the cistern, flush pipe, other fittings, etc. complete including polishing of wooden seat and lid and cleaning of W.C. pan with acid wherever necessary.	each	440.00
36.64	Repainting C.I. cistern with synthetic enamel paint of approved colour brand and manufacture on the outside surface of cistern flush pipe, other fittings etc. complete.	each	195.00
36.65	Painting sand cast iron/ centrifugally cast (spun) iron soil, waste vent pipes and fittings with paint of any colour such as chocolate grey, or buff etc. over a coat of primer (of approved quality) for new work :		
36.65.1	100 mm diameter pipe	metre	51.70
36.65.2	75 mm diameter pipe	metre	39.20
36.66	Repainting sand cast iron/ centrifugally cast iron (spun) iron, soil, waste, vent pipes and fittings with paint of any colour such as chocolate, grey or buff etc :		
36.66.1	100 mm diameter pipe	metre	24.90
36.66.2	75 mm diameter pipe	metre	18.60
36.67	Repainting bath tub of size 1700x730x430mm with enamel paint.	each	542.00
36.68	Providing and fixing vitreous china dual purpose closet suitable for use as squatting pan or European type water closet (Anglo Indian W.C pan) with seat lid with C.P. brass hinges and rubber buffers, 10 litre low level flushing cistern with fitting and brackets, 40mm flush bend 20mm over flow pipe with specials of standard make and		

Code No	Description	Unit	Rate Rs.
	mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :		
36.68.1	White vitreous china dual purpose WC pan with white solid plastic seat and lid with white vitreous china flushing cistern and C.P. flush bend.	each	7,910.00
36.69	Providing and fixing PTMT Waste Coupling for wash basin and sink, of approved quality and colour.		
36.69.1	Waste coupling 31mm of 79mm length and 62mm breadth weighing not less than 45gms.	each	93.20
36.69.2	Waste coupling 38mm of 83mm length and 77mm breadth, weighing not less than 60gms.	each	122.00
36.70	Providing and fixing PTMT Bottle Trap for Wash basin and sink.		
36.70.1	Bottle trap 31mm single piece moulded with height of 270mm, effective length of tail pipe 260mm from the centre of the waste coupling 77mm breadth with 25mm minimum water seal, weighing not less than 260gms.	each	414.50
36.70.2	Bottle trap 38mm single piece moulded with height of 270mm, effective length of tail pipe 265mm from the centre of the waste coupling 77mm breadth with 25mm minimum water seal, weighing not less than 263gms.	each	421.50
36.71	Providing and fixing PTMT liquid soap container 109mm wide, 125mm high and 112mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour. weighing not less than 105 gms.	each	202.50
36.72	Providing and fixing PTMT towel ring trapezoidal shape 215mm long, 200mm wide with a minimum distances of 37mm from wall face with concealed fittings arrangement of approved quality and colour. Weighing not less than 88 gms.	each	214.50
36.73	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour.		
36.73.1	450MM long towel rail with total length of 495mm, 78mm wide and effective height of 88mm, weighing not less than 170gms.	each	573.00
36.73.2	600mm long towel rail with total length of 645mm, width 78mm and effective height of 88mm, weighing not less than 190gms.	each	623.00
36.74	Providing and fixing PTMT shelf 440 mm long, 124 mm width and 36 mm height of approved quality and colour. Weighing not less than 300 gms.	each	680.00
36.75	Providing and fixing PTMT 15 mm Urinal spreader size 95x69x100 mm with 1/2" BSP thread and shapes. Weighing not less than 60 gms.	each	159.50
36.76	Providing and fixing PTMT urinal cock of approved quality and colour.		

Code No	Description	Unit	Rate Rs.
36.76.1	15 mm nominal bore, 80mm long. 42 mm high and 30mm wide with BSP female threads weighing not less than 48 gms.	each	168.50
36.77	Providing and fixing M.S. holder bat clamp of approved design to sand cast iron/ cast iron (spun) pipes comprising of M.S. flat brackets made of 50x5mm flat of specified shape, projecting 75mm outside the wall surface and fixed on wall with 4nos, 6mm dia expansion hold fasteners including drilling necessary holes in brick wall/ CC/ RCC surface and the cost of bolts etc. The pipes shall be fixed to the already fixed brackets with the help of 30mm x1.6mm galvanised M.S. flats of specified shape and of total length 420mm and shall be fixed with M.S. nuts, bolts, & washers of size 25x6mm, one bolts on each side of the pipe.		
36.77.1	Total bracket length 580mm of approved shape and design (for single, 100mm dia pipe).	each	230.50
36.77.2	Total bracket length 810mm of approved shape and design (for two, 100mm dia pipes).	each	277.50
36.77.3	Total bracket length 1040mm of approved shape and design (for three, 100mm dia pipes).	each	324.50

37.0 ALUMINIUM WORK

Code No	Description	Unit	Rate Rs.
37.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS : 1285, fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / panelling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing and panelling to be paid for separately) :		
37.1.1	For fixed portion.		
37.1.1.1	Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	kg	406.00
37.1.1.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	428.50
37.1.1.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	kg	439.00
37.1.2	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of PVC / neoprene gasket required (Fittings shall be paid for separately).		
37.1.2.1	Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	kg	438.50
37.1.2.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	461.50
37.1.2.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	kg	474.00
37.2	Providing and fixing 12mm thick Pre-laminated particle board flat pressed three layer or graded wood particle board conforming to IS: 12823 Grade I Type II, in panelling fixed in aluminium doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of engineer-in-charge.		
37.2.1	Pre-laminated particle board with decorative lamination on one side and balancing lamination on other side.	sqm	1,031.00
37.2.2	Pre-laminated particle board with decorative lamination on both sides.	sqm	1,083.00

Code No	Description	Unit	Rate Rs.
37.3	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with PVC/ neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item) :		
37.3.1	With float glass panes of 4.0 mm thickness	sqm	986.00
37.3.2	With float glass panes of 5.50 mm thickness	sqm	1,214.00
37.3.3	With float glass panes of 8 mm thickness	sqm	986.00
37.4	Providing and fixing double action hydraulic floor spring of approved brand and manufacture IS : 6315 marked, for doors including cost of cutting floors as required, embedding in floors and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge.		
37.4.1	With stainless steel cover plate	each	1,883.00
37.4.2	With brass cover plate	each	2,247.00
37.5	Providing and fixing powder coated aluminium work (minimum thickness of powder coating 50 micron) consisting of tee/ angle sections, of approved make conforming to IS : 733 in frames of false ceiling including aluminium angle cleats with necessary C.P. brass/ stainless steel sunk screws, aluminium perimeter angles fixed to wall with rawl plugs @ 450 mm centre to centre and fixing the frame work to G.I. level adjusting hangers 6 mm dia. with necessary cadmium plated machine screws all complete as per approved architectural drawings and direction of the Engineer-in-charge (level adjusting hangers, ceiling cleats and expansion hold fasteners to be paid for separately).	kg	597.00
37.6	Providing and fixing 6 mm dia. G.I. level adjusting hangers (upto 1200mm length) fixed to roof slabs by means of ceiling cleats made out of G.I. flat 40x3mm size 60mm long and expansion hold fasteners 12.5 mm dia. 40mm long complete as per direction of Engineer -in-charge.	each	86.00
37.7	Providing and fixing machine moulded aluminium covering of approved pattern & design, made out of machine cut aluminium sheet and machine holed for receiving screws, over expansion joints on vertical surfaces/ceilings with full threaded, cadmium plated steel screws 4mm dia. stem, 30mm long and aluminium washers 2mm thick, 15mm dia. at a staggered pitch of 200mm centre to centre including drilling holes in the receiving surface and providing expandable plastic sleeves in holes etc. complete.		
37.7.1	Anodised aluminium sheet 2.5mm thick (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	kg	538.00
37.7.2	Powder coated aluminium sheet 2.5mm thick (minimum thickness of powder coating 50 micron)	kg	561.00

Code No	Description	Unit	Rate Rs.
37.8	Filling the gap in between aluminium frame & adjacent RCC/ Brick/ Stone work by providing weather silicon sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-charge complete.		
37.8.1	Upto 5mm depth and 5 mm width	metre	72.20
37.9	Extra for applying additional anodic coating AC 25 instead of AC 15 to aluminium extruded sections.		
37.9.1	For fixed portion	kg	7.15
37.9.2	For shutters of doors, windows & ventilators.	kg	7.15
37.10	Providing and fixing double glazed hermetically sealed glazing in aluminium windows, ventilators and partition etc. with 6 mm thick clear float glass both side having 12 mm air gap including providing EPDM gasket, perforated aluminium spacers, desiccants, sealant (Both primary and secondary sealant) etc. as per specifications, drawings and direction of Engineer-in-charge complete.	sqm	3,730.00
37.11	Providing and fixing stainless steel (SS 304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete.		
37.11.1	205 X 19 mm	each	245.00
37.11.2	255 X 19 mm	each	280.50
37.11.3	355 X 19 mm	each	320.50
37.11.4	510 X 19 mm	each	635.00
37.11.5	710 X 19 mm	each	1,113.00
37.12	Providing and fixing aluminium tubular handle bar 32 mm outer dia, 3.0 mm thick & 2100 mm long with SS screws etc .complete as per direction of Engineer-in-Charge.		
37.12.1	Anodized (AC 15) aluminium tubular handle bar	each	584.00
37.12.2	Powder coated minimum thickness 50 micron aluminium tubular handle bar.	each	619.00
37.12.3	Polyester powder coated minimum thickness 50 micron aluminium tubular handle bar	each	636.00
37.13	Providing and fixing 100mm brass locks (best make of approved quality) for aluminium doors including necessary cutting and making good etc. complete.	each	514.00
37.14	Providing and fixing anodised aluminium (anodised transparent or dyed to required shade according to IS : 1868. Minimum anodic coating of grade AC 15) sub frame work for windows and ventilators a with extruded built up standard tubular sections of approved make conforming to IS: 733 and IS : 1285 fixed with rawl plugs and stainless steel screws etc.	kg	418.00

Code No	Description	Unit	Rate Rs.
37.15	Providing fixing aluminium casement windows fastener of required length for aluminium windows with necessary screws etc. complete.		
37.15.1	Anodized (AC 15) aluminium	each	66.60
37.15.2	Powder coated minimum thickness 50 micron aluminium.	each	66.60
37.15.3	Polyester powder coated minimum thickness 50 micron aluminium .	each	73.70
37.16	Providing fixing aluminium round shape handle of outer dia 100mm with SS screws etc. Complete as per direction of Engineer-in-charge		
37.16.1	Anodized (AC 15) aluminium	each	88.00
37.16.2	Powder coated minimum thickness 50 micron aluminium	each	92.30
37.16.3	Polyester powder coated minimum thickness 50 micron aluminium .	each	95.10
37.17	Providing and fixing expanded grill made of aluminium as per design and drawing having members section of size 7.5mm x 6.0mm and opening of size 102mm x 99mm to aluminium window/vent with required screws, Y and H aluminium sec (as per drawing) at the ends and middle joints respectively complete in all respect as per direction of engineer in charge.		
37.17.1	Anodised aluminium (anodised transparent 81 dyed to required shade according to IS : 1868. (Minimum anodic coating of grade AC 15, Anodizing to be got done from approved Anodizer)	sqm	1,945.00
37.17.2	Powder coating aluminium (minimum thickness of powder coating 50 micron)	sqm	2,014.00
37.17.3	Polyester Powder coating aluminium (minimum thickness of powder coating 50 micron)	sqm	2,154.00
37.18	S&f fixed wire gauge of stainless steel of 14 mesh x 24 gauge to the aluminium window by Aluminium beading 20x3mm with suitable screws at not exceeding 150mm distance at all heights with all lead and lift with scaffolding.	Sqm	725.00
37.19	Providing & Fixing in position, 1000 mm wide Auto-glow Aluminium extruded strips on auditorium steps as per Design & Instructions & Complete in all aspects. Make Piccolo or Nexus	No	1,410.00
37.20	Providing and Fixing Rollar Blinds AMI Make or approved make & shade of 38mm round Aluminium channel with Blackout fabric & telting with chain (Ball) system with all necessary fixtures and fitting etc. complete. (Sample to be final by Engineer In-charge prior execution of work)	Sqm	2,152.00
37.21	Providing and Fixing Vertical Blinds of approved Make and shade of 100mm regular fabric with powder coated aluminium channel with telting PVC chain & bottom weight plate with all necessary fixtures and fitting etc. complete. (Sample to be final by Engineer In-charge prior execution of work)	Sqm	1,026.00

38.0 WATER PROOFING

Code No	Description	Unit	Rate Rs.
38.1	Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground level for under ground structures as directed by Engineer-in-Charge and consisting of : i) 1st layer of 22mm to 25mm thick approved and specified rough stone slab over a 25mm thick base of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound conforming to IS:2645 in the recommended proportion over the levelling course (levelling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound . ii) 2nd layer of 25mm thick cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportions. iii) Finishing top with stone aggregate of 10mm to 12mm nominal size spreading @ 8 cudm/sqm thoroughly embedded in the 2nd layer.		
38.1.1	Using rough Kota stone.	sqm	1,129.00
38.2	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge :		
38.2.1	Using rough Kota stone	sqm	1,435.00
38.3	Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of : i) 1st course of applying cement slurry @ 4.4 Kg/sqm mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface. ii) IInd course of 20mm cement plaster 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface. iii) IIIrd course of applying blown or residual bitumen applied hot at 1.7 Kg. per sqm of area. iv) IVth course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 Kg/sqm.)	sqm	579.00

Code No	Description	Unit	Rate Rs.
38.4	Providing and Placing in position suitable PVC water stops conforming to IS:12200 for construction/ expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete :		
38.4.1	Serrated with central bulb (225mm wide, 8-11mm thick).	metre	362.50
38.4.2	Dumb bell with central bulb (180mm wide, 8mm thick).	metre	312.50
38.4.3	Kickers (320mm wide, 5mm thick).	metre	341.00
38.5	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying : a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. This layer will be allowed to air cure for 4 hours. b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.	sqm	382.00
38.6	Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying : a) after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. b) laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm. c) third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30cm on parapet wall and tucked into groove in parapet all around. d) fourth and final layer of brick tiling with cement mortar (which will be paid for separately For the purpose of measurement the entire treated surface will be measured.	sqm	475.00
38.7	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations: a) Applying a slurry coat of neat cement using 2.75 kg/sqm. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and		

Code No	Description	Unit	Rate Rs.
	approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge. d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep. e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge :		
38.7.1	With average thickness of 120mm and minimum thickness at khurra as 65 mm.	sqm	1,140.00
38.8	Providing and laying four courses water proofing treatment with bitumen felt over roofs consisting of first and third courses of blown bitumen 85/25 or 90/15 conforming to IS : 702 applied hot @ 1.45 Kg per square metre of area for each course, second course of roofing felt type 3 grade-I (hessian based self finished bitumen felt) and fourth and final course of stone grit 6mm and down size or pea-sized gravel spread at 6 cubic diameter per square metre including preparation of surface but excluding grading complete with :		
38.8.1	Bitumen felt (hessian base) type 3 grade I conforming to IS : 1322.	sqm	380.50
38.9	Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth course of blown bitumen 85/25 or 90/15 conforming to IS : 702 applied hot @ 1.45, 1.20 and 1.45 Kg per square metre of area respectively, second and fourth courses of roofing felt type 3 grade I conforming to IS : 1322 (Hessian based self finished bitumen felt) conforming to IS : 1322 and sixth and final course of stone grit 6 mm and down size or pea sized gravel spread at 6 cubic dm per sqm including preparation of surface but excluding grading, complete.	sqm	602.00
38.10	Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth courses of blown or / and residual bitumen applied hot at 1.45, 1.20 and 1.70 kg per square metre of area respectively, second and fourth courses of roofing felt type 2 grade I (fibre base self finished bitumen felt) six and final courses of stone grit 6mm and down size or pea sized gravel spread at 6cu.dm per sqm including preparation of surface, excluding grading, compete.	sqm	683.00

Code No	Description	Unit	Rate Rs.
38.11	Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth courses of blow or/ and residual bitumen applied hot at 1.45, 1.20 and 1.70 kg per square metre of area respectively, second and fourth courses of roofing felt type 2 grade II (glass fibre base self finished bitumen felt) and sixth and final course of stone grit 6mm and down size or pea sized gravel spread at 6 cubic dm per sqm including preparation of surface but excluding grading, complete.	sqm	683.00
38.12	Supplying and applying bituminous solution primer on roof and or wall surface at 0.24 litre per sqm.	sqm	43.50
38.13	Deduct for omitting in water proofing treatment final course of spreading stone grit 6mm down size or pea sized gravel :		
38.13.1	At 6 cudm per sqm.	sqm	8.50
38.13.2	At 8 cudm per sqm.	sqm	11.10
38.14	Grading roof for water proofing treatment with		
38.14.1	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	5,470.00
38.14.2	Cement mortar 1:3 (1 cement : 3 coarse sand)	cum	10,400.00
38.14.3	Cement mortar 1:4 (1cement : 4 coarse sand)	cum	9,550.00
38.15	Providing and laying in situ seven course water proofing treatment with APP (Atactic poly-propylene) modified Polymeric membrane over roof consisting of first coat of bitumen primer @ 0.40Kg per sqm, 2nd, 4th & 6th courses of bonding material @ 1.20 Kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd and 5th layers of roofing membrane APP modified Polymeric membrane 1.5mm thick of 2.25 Kg/sqm weight consisting of five layers prefabricated with centre core as 20micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class designation 100 grouted with cement mortar 1:3 (1cement:3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat which shall be paid for separately.	sqm	537.00
38.16	Providing and laying in situ five course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric membrane over roof consisting of first coat of bitumen primer @ 0.40Kg per sqm, 2nd & 4th courses of bonding material @ 1.20 Kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd layer of roofing membrane APP modified Polymeric membrane 2.0mm thick of 3.00 Kg/sqm weight consisting of five layers prefabricated with centre core as 100micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20micron HMHDPE film. 5th, the top most layer shall be finished with brick tiles of class designation 100 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat which shall be paid for separately.	sqm	397.50

Code No	Description	Unit	Rate Rs.
38.17	Providing and laying in situ seven course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric membrane over roof consisting of first coat of bitumen primer @ 0.40Kg per sqm, 2nd, 4th & 6th courses of bonding material @ 1.20 Kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd and 5th layers of roofing membrane APP modified Polymeric membrane 2.0mm thick of 3.00 Kg/sqm weight consisting of five layers prefabricated with centre core as 100micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class designation 100 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat which shall be paid for separately.	sqm	641.00
38.18	Providing and fixing APP (Atactic Polypropylene Polymer) modified prefabricated five layer 2mm thick water proofing membrane, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 ltr/sq. mtr. by the same membrane manufacture of density at 25°C, 0.87 - 0.89 kg/ ltr and viscosity 70 - 160 cps. Over the primer coat the layer of membrane shall be laid using Butane torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be : Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/ 5cm. Tear strength in longitudinal and transverse direction as 60/80N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacture of membrane.		
38.18.1	2mm (for corrugated roof sheets)	sqm	396.50
38.19	Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer, 3mm thick water proofing membrane, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 ltr/sqm. by the same membrane manufactured of density at 25°C, 0.87 - 0.89 kg/ltr and viscosity 70 - 160 cps. over the primer coat the layer of membrane shall be laid using Butane torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be : Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/5cm. Tear strength in longitudinal and transverse direction as 60/80N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane :		
38.19.1	3 mm thick	sqm	507.00

Code No	Description	Unit	Rate Rs.
38.20	Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer 3mm thick water proofing membrane, black finished reinforced with non-woven polyester matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 ltr/sqm. by the same membrane manufacture of density at 25°C, 0.87-0.89 kg/ltr and viscosity 70-160 cps. Over the primer coat the layer of membrane shall be laid using Butane Torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under : Joint strength in longitudinal and transverse direction at 23°C as 650/450N/5cm. Tear strength in longitudinal and transverse direction as 300/250N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane :		
38.20.1	3 mm thick	sqm	538.00
38.21	Extra for covering top of membrane with Geotextile, 120gsm non woven, 100% polyester of thickness 1 to 1.25mm bonded to the membrane with intermittent touch by heating the membrane by Butane Torch as per manufactures recommendation [for Item No. 38.18 to 38.20].	sqm	77.10

39.0 HORTICULTURE

Code No	Description	Unit	Rate Rs.
39.1	Trenching in specified soil upto a depth of 60 cm. including removal and stacking of serviceable materials and then disposal by spreading and neatly levelling within a lead of 50 metres and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or/and farm-yard manure before and after flooding with water (excluding cost of imported earth and sludge or farm-yard manure).	cum	323.00
39.2	Preparation of mounds of various size and shape by available excavated/surplus/earth in layers not exceeding 20 cm in depth, breaking clods, watering of each layer, dressing etc. lead upto 50 meters and lift upto 1.5 m as per direction of officers in charge.	cum	354.00
39.3	Supplying and stacking good earth at site of work. Note: 1) Loading, unloading and carriage to be paid extra as per actual lead. 2) Earth measured in stacks will be reduced by 20% for payment	cum	299.50
39.4	Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stacking.	cum	671.00
39.5	Supplying and stacking of well decayed cow dung manure at site.	cum	671.00
39.6	Supply at site of work/ store- deoiled neem cake duly packed in used gunny bags.	quintal	457.00
39.7	Supplying sludge duly stacked at site/ store.	cum	121.50
39.8	Rough dressing the trenched ground including breaking of clods.	sqm	1.25
39.9	Uprooting weeds from the trenched area after 10 to 15 days of its flooding with water including disposal of uprooted vegetation.	sqm	4.10
39.10	Fine dressing the ground.	sqm	3.10
39.11	Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm- yard manure or/and good earth to be paid for separately).	cum	43.30
39.12	Grassing with 'Doobs' grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn free from weeds and fit for moving including supplying good earth if needed.		
39.12.1	In rows 15 cm apart in either direction	sqm	34.50
39.12.2	In rows 7.5 cm apart in either direction	sqm	59.90
39.12.3	In rows 30 cm apart in either direction	sqm	21.10
39.13	Grassing with 'Carpet' grass (selection no. 1) including watering and maintenance of the lawn for 30 days or more till the grass forms a		

Code No	Description	Unit	Rate Rs.
	thick lawn free from weeds and fit for moving including supplying good earth if needed.(The good earth shall be paid separately)		
39.13.1	In rows 5 cm apart in either direction	sqm	1,375.00
39.13.2	With grass Turf	sqm	1,049.00
39.14	Uprooting rank vegetation and weeds by digging the area to a depth of 60 cm removing all weeds and other growth with roots by forking repeatedly, breaking, clods, rough dressing, flooding with water, uprooting fresh growth after 10 to 15 days and then fine dressing for planting new grass, including disposal of all rubbish with all leads and lifts.	sqm	51.60
39.15	Filling mixture of earth and sludge farm-yard manure in the desired proportion in trenches, flooding with water and levelling (cost of supplying earth and sludge or farm yard manure and labour for mixing not included in this rate).	sqm	15.50
39.16	Flooding the ground with water including making kiaries and dismantling the same.	sqm	2.20
39.17	Turfing slopes of new banks with rough grassing including preparation of ground by loosening soil with kassi, flooding with water, rough dressing, fine dressing, supplying and spreading farm yard manure at the rate of 0.18 cum per 100 sqm and supplying and planting doob grass roots at 15 cm apart, complete.		
39.17.1	Of Old banks	sqm	61.60
39.17.2	Of New banks	sqm	55.40
39.18	Making lawns including ploughing and breaking of clod, removal of rubbish, dressing and supplying doobs grass roots and planting at 15 cm apart, including supplying and spreading of farm yard manure at rate of 0.18 cum per 100 sqm.	sqm	84.00
39.19	Maintenance of lawns or Turfing of slopes (rough grassing) for a period of one year including watering etc.	sqm	194.00
39.20	Turfing lawns with fine grassing including ploughing, dressing including breaking of clods, removal of rubbish, dressing and supplying doobs grass roots at 10 cm apart, including supplying and spreading of farm yard manure at rate of 0.6 cum per 100 sqm.	sqm	93.70
39.21	Maintenance of Lawns with Fine Grassing for the First Year	sqm	170.00
39.22	Planting permanent hedges including digging of trenches, 60 cm wide and 45 cm deep, refilling the excavated earth mixed with farmyard manure, supplied at the rate of 4.65 cum per 100 metres and supplying and planting hedge plants at 30 cm apart.	metre	348.00
39.23	Maintenance of Hedge for one year	metre	290.50
39.24	Planting Flowering Plants and Shrubs in Central Verge.	km	78,400.00
39.25	Maintenance of Flowering Plants and Shrubs in Central Verge for one Year.	km	3,01,400.00

Code No	Description	Unit	Rate Rs.
39.26	Maintenance of Shrubs - Complete maintenance of shrub for 12 months including weeding, hoeing, watering, pruning application of good earth, manure, insecticides, fungicides & fertilizers , security of plants disposal of garden rubbish from the premises to the approved municipal dumping ground replacing casualty of plants(occurred due to any reason) by healthy plants.	per sqm per year	300.50
39.27	Maintenance of Plants (other than Road side Plantation) -Complete maintenance of plants with watering for 12 months including weeding, hoeing, watering, pruning application of good earth, manure, insecticides, fungicides & fertilizers , security of plants disposal of garden rubbish from the premises to the approved municipal dumping ground replacing casualty of plants occurred due to any reason) by healthy plants.	per sqm per year	303.00
39.28	Renovation lawns including, weeding, forking the ground, top dressing with forked soil, watering and maintenance the lawns, for 30 days or more, till the grass forms a thick lawn, free from weeds, and fit for moving and disposal of rubbish as directed, including supplying good earth, if needed but excluding the cost of well decayed farm yard manure.	sqm	23.90
39.29	Digging holes in all kinds of soil and refilling the same with the excavated earth mixed with well decayed farm yard manure (cost of well decayed farm yard manure to be paid separately).		
39.29.1	Hole 1.2 m dia and 1.2 m deep	each	787.00
39.29.2	Hole 0.9 m dia and 0.9 m deep	each	330.50
39.29.3	Hole 0.6 m dia and 0.6 m deep	each	103.00
39.29.4	Holes 0.45 m dia, and 0.45 m deep	each	58.40
39.30	Planting of trees by the road side (Avenue trees) in 0.60 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, planting the saplings, backfilling the trench, watering, fixing the tree guard and maintaining the plants for one year.	each	1,618.00
39.31	Half brick circular tree guard, in 2nd class brick, internal diameter 1.25 metres, and height 1.2 metres, above ground and 0.20 metre below ground, bottom two courses laid dry, and top three courses in cement mortar 1:6 (1 cement 6 sand) and the intermediate courses being in dry honey comb masonry, as per design complete.	each	1,727.00
39.32	Edging with 2nd class bricks, laid dry lengthwise, including excavation, refilling, consolidation, with a hand packing and spreading nearly surplus earth within a lead of 50 metres.	metre	34.20
39.33	Making tree guard 53 cm dia and 1.3 m high as per design from empty bitumen drum, slit suitably to permit sun and air, (supplied by the department at stock issue rate) including providing and fixing 2 nos MS sheet rings 50 x 0.5 mm with rivets, complete in all respect.	each	931.00

Code No	Description	Unit	Rate Rs.
39.34	Providing and fixing of RCC pre cast tree guard consisting of four panels of size 1800mm (Height) X 600mm (Width) X 35mm (thickness); Size of opening: 100mm X 100mm. All the panels shall be manufactured with monolithic legs of size 50 x 35 mm; the legs of the panels shall be 0.5 m below ground level. All the four Panels shall have a space for display of Name etc. preferably at middle level. RCC panels to be manufactured with M-30 grade of concrete using vibro-compaction process using jointless FRP moulds so as to achieve shuttering finish. RCC panels are to be suitably reinforced to promote long use and to prevent damage during handling, transportation & erection as per drawing & specifications.	each	2,006.00
39.35	Wrought iron and mild steel welded work) (using angles, square bars, tees and channel grills, grating frames, gates and tree guards of any size and design etc. including cost of screens and welding rods or bolts and nuts complete fixed in position but without the cost of excavation and concrete for fixing which will be paid separately.	quintal	8,270.00
39.36	Providing and fixing MS iron tree guard 60 cm dia and 2 metre high above ground level formed of 4 Nos (25 x 6 mm) and 8 Nos (25 x 3 mm) vertical MS riveted to 3 Nos (25 x 6 mm) iron rings in two halves, bolted together with 8 mm dia and 30 mm long bolts including painting two coats with paint of approved brand over a coat of priming, complete in all respects.	each	1,874.00
39.37	Providing and fixing tree guard 0.60 metre square, 2.00 metre high fabricated with MS angle iron 30 x 30 x 3 mm, MS iron 25 x 3 mm and steel wire 3 mm dia welded and fabricated as per design in two halves bolted together.	each	2,735.00
39.38	Providing and fixing M. S. tree guard 45 cm square in plan, height 1.20 metre above ground level and 0.40 metre below ground level. The vertical members shall consist of four nos angle iron of size 25x25x3 mm, 1.6 m long, one at each corner and 8 nos flat iron of size 25x3 mm, 1.2 m long. The vertical members shall be welded to 4 nos 25x6 mm M. S. flats placed horizontally around the vertical member of the cage. The tree guard shall be painted with two or more coats of synthetic enamel paint of approved brand and manufacture over a coat of primer, complete in all respect.	each	2,096.00
39.39	Providing and fixing M. S. tree guard 50 cm square in plan, height 1.40 metre above ground level and 0.50 metre below ground level. The vertical members shall consist of four nos of angle iron of size 25x25x5 mm 1.9 long, one at each corner and 8 nos flat iron of size 25x5 mm 1.4 long. The vertical members shall be welded to 4 nos 25x6 mm M. S. flats placed horizontally around the vertical member of the cage. The tree guard shall be painted with two coats of paint of approved brand and manufacture over a coat of primer, complete in all respect.	each	3,270.00

Code No	Description	Unit	Rate Rs.
39.40	Planting trees as compensatory afforestation at the rate of 290 trees per hectare at a spacing of 6 m by grubbing and levelling the ground upto a depth of 150 mm, digging holes 0.9 m dia, 1 m deep, mixing farm yard/sludge manure with soil, planting of sapling 2 m high with 25 cm dia stem, backfilling the hole and watering.	hectare	1,68,200.00
39.41	Supply and planting following in poly bags / earthen pots well branched, well established & free from disease of 300 mm min. height ground covers at site in 0.3 m dia holes, 0.3 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, backfilling the hole watering etc as required.		
39.41.1	Wedelia trilobata (SunFlower Family)	sqm	247.00
39.41.2	Alternanthera green (Parrot Leaf)	sqm	427.00
39.41.3	Iresine herbstii (Blood Leaf)	sqm	247.00
39.41.4	Ophiopogon Black (Lily Turf, Mondograss)	sqm	268.50
39.41.5	Asparagus myerii (Fox Tail)	sqm	388.50
39.41.6	Lantana sellowiana	sqm	212.50
39.41.7	Rhoeo spathacea 'Compacta' (Oyster, Boat Lily)	sqm	139.50
39.41.8	Golden duranta	sqm	268.50
39.41.9	Pennisetum setaceum (Fountain Grass)	sqm	255.50
39.42	Supply and planting following in poly bags / earthen pots well branched, well established & free from disease of 900 mm min. height plants at site in 0.60 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, backfilling the hole watering etc as required.		
39.42.1	Ficus panda	each	676.00
39.42.2	Tecoma capensis (Ratanjot)	each	502.00
39.42.3	Clerodendron inermii (Choti Aari)	each	502.00
39.42.4	Tabernaemontana variegated (Chandni)	each	502.00
39.42.5	Hamelia patens (Firebush, Thal Kamal)	each	467.50
39.42.6	Hibiscus variegated (Guddal)	each	481.50
39.43	Supply and planting following in poly bags / earthen pots well branched, well established & free from disease of 600 mm min. height shrubs at site in 0.45 m dia holes, 0.45 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, backfilling the hole watering etc as required.		
39.43.1	Rhaphis excelsa with 3-4 suckers (Lady Palm)	each	1,215.00
39.43.2	Furcaria with 10-12 leaves (cactus)	each	1,415.00
39.43.3	Agave with 10-12 leaves (Kamal Cactus)	each	1,622.00
39.43.4	Phonenix sylvertris (Date Palm)	each	2,222.00

Code No	Description	Unit	Rate Rs.
39.44	Supply and planting following species best quality container grown healthy trees of 2 mt. min. height, well established & free from disease at site in 0.90 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, backfilling the hole watering etc as required.		
39.44.1	Plumeria alba (Champa)	each	1,433.00
39.44.2	Gulmohar(Delonix regia)	each	1,247.00
39.44.3	Neem(Azadirachta indica)	each	1,057.00
39.44.4	Jacaranda mimosifolia (Neelli Gulmohar)	each	1,057.00
39.44.5	Bauhinia blakeana (Arckid)	each	1,084.00
39.44.6	Erythrina variegata (Lantern Tree)	each	1,057.00
39.44.7	Bottle Brush(Callistemon Lanciolatous)	each	1,111.00
39.44.8	Mangifera indica (Mango)	each	1,137.00
39.44.9	Yucca	each	1,433.00
39.44.10	Bignonia Venusta	each	1,024.00
39.44.11	Quis quallis indica (Madhu Malti)	each	1,010.00
39.44.12	Morning glory (Ipomea)	each	1,024.00
39.44.13	Vernonium (Parda Bel)	each	1,024.00
39.44.14	Bougain villea	each	1,024.00
39.44.15	Green fucaria	Each	800.00
39.44.16	Table palm	Each	800.00
39.44.17	Euphorbla millii	Each	400.00
39.44.18	Acacia senegal	Each	1,150.00
39.44.19	Moringa concanensis	Each	550.00
39.44.20	Salvadora persica	Each	1,500.00
39.44.21	Topihari golden & bottle brush	Each	700.00
39.44.22	Tinospora cordiflia	Each	350.00
39.44.23	Pergularia daemia	Each	350.00
39.44.24	Crown -of -thorns	Each	400.00
39.45	Supply and planting following species best quality container grown healthy trees of 3 mt. min. height, well established & free from disease at site in 1.20 m dia holes, 1.20 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, backfilling the hole watering etc as required.		
39.45.1	Plumeria alba (Champa) 3 M height minimum	each	1,648.00
39.45.2	Gulmohar(Delonix regia)	each	1,566.00
39.45.3	Neem(Azadirachta indica)	each	1,566.00

Code No	Description	Unit	Rate Rs.
39.45.4	Jacaranda mimosifolia (Neelli Gulmohar)	each	1,566.00
39.45.5	Bauhinia blakeana (Arckid)	each	1,546.00
39.45.6	Erythrina variegata (Lantern Tree)	each	2,391.00
39.45.7	Bottle Brush(Callistemon Lanciolatous)	each	1,566.00
39.45.8	Mangifera indica (Mango)	each	1,557.00
39.45.9	Yucca	each	2,191.00
39.46	Providing & laying 1500 Microns thick 6 m wide HDPE Geo embrane, over the synthetic clay liner having Thickness 1.5mm, Density .94g/cm ³ , Tensile Strength at yield 23 Nmm/ width and at break 42 Nmm/ width, Elongation at Yield 13%, Elongation at Break 700%, Tear Resistance 175 N, Puncture Resistance 490 N, Carbon Black Content 2.5 and Carbon Black dispersion at Satisfactory level.	sqm	491.00
39.47	Providing & laying synthetic clay liner in excavated trench.	sqm	419.00
39.48	Supplying, erecting and fixing in position specified precast RCC bench made of RCC grade M-30 consisting of 2 Nos. "L" shaped base support of thickness 100 mm back height 1000mm, front height 450 mm, base width 420mm and 5 Nos. RCC planks of size of 1500x100 x 50 mm and 1 Nos RCC planks of 150x200x50mm including joining all parts with galvanised nuts and bolts of suitable size. All bolts to be sealed after assembly with nice finish and appearance and level complete in all respect as per direction of engineer in charge. Every bench should have a manufacture's logo of appropriate size Engraved at suitable place.	each	8,500.00
39.49	Supply and fixing different type of steel pre-fabricated garden bench/ jhula/ slides and other children play items made of steel duly painted as per approved design and specifications by engineer in charge made of MS pipe, Flats, rectangular hollow section or other steel sections duly welded and or nut bolted where ever required, rubbing and buffing welded joints to make safe for use of children and painted in approved pattern complete as required.	kg	81.40
39.50	Supply of different sized pots at site store including loading unloading & transportation etc. complete.		
39.50.1	Cement pot / Plastic pot 300 mm size	each	165.00
39.50.2	Cement pot / Plastic pot 350 mm size	each	237.50
39.50.3	Cement pot / Plastic pot 375 mm size	each	290.50
39.50.4	Cement pot / Plastic pot 450 mm size	each	512.00
39.50.5	Cement pot / Plastic pot 525 mm size	each	900.00
39.51	Supply of different sized earthen pots at site/store including loading unloading & transportation etc. complete		
39.51.1	Earthen pot 150 mm size	each	19.80
39.51.2	Earthen pot 225 mm size	each	33.00

Code No	Description	Unit	Rate Rs.
39.51.3	Earthen pot 300 mm size	each	47.30
39.51.4	Earthen pot 350 mm size	each	137.50
39.51.5	Earthen pot 225 mm size(Kundi shape)	each	33.00
39.51.6	Earthen pot 300 mm size(Kundi shape)	each	49.50
39.51.7	Earthen pot 350 mm size(Kundi shape)	each	137.50
39.52	Supply of different sized lawn mower including transportation etc. as store complete.		
39.52.1	300 mm size Hand Lawn Mower(Roller Type)	each	4,750.00
39.52.2	350 mm size Hand Lawn Mower(Roller Type)	each	5,280.00
39.52.3	300 mm Electric Lawn Mower	each	19,800.00
39.52.4	350 mm Electric Lawn Mower	each	22,000.00
39.52.5	400 mm Electric Lawn Mower	each	24,200.00
39.52.6	450 mm Electric Lawn Mower	each	27,500.00
39.52.7	500 mm Electric Lawn Mower	each	30,800.00
39.52.8	Electric Lawn Mower sarfex 16 EL	each	33,000.00
39.52.9	Electric Lawn Mower sarfex 18 EL	each	39,600.00
39.52.10	Electric Lawn Mower sarfex 21 EL	each	44,000.00
39.53	Supply of flower Garlands & Flower petal's including transportation at site.(Complete)		
39.53.1	Merigold Garland A Class (Big flowers) 2 feet long	each	82.50
39.53.2	Merigold Garland B Class (Small flowers) 1.5 feet long	each	55.00
39.53.3	Green Garland (Ashok Leaf) 2 feet long	each	16.50
39.53.4	Rose Garland 1.5 feet long	each	137.50
39.53.5	Jalusi Garland(VIP A Class) Double fold	each	550.00
39.53.6	Jalusi Garland(VIP B Class) Single fold	each	440.00
39.53.7	Mogra Garland 1.5 feet long	each	137.50
39.53.8	Kunj Garland 1.0 feet long	each	165.00
39.53.9	Rose petal's	kg	440.00
39.53.10	Merigold petal's	kg	275.00
39.53.11	Crisanthimum petal's	kg	330.00
39.53.12	Chandine flower	kg	330.00
39.53.13	Mogra Flower	kg	495.00
39.53.14	Kunj Flower	kg	522.00
39.54	Supply of Cut Flower at site including transportation Complete		
39.54.1	Tata Rose	each	16.50

Code No	Description	Unit	Rate Rs.
39.54.2	Carnation	each	19.80
39.54.3	Gladioli	each	22.00
39.54.4	Tube rose single	each	13.20
39.54.5	Tube rose double	each	16.50
39.54.6	Illum Asiatic	each	82.50
39.54.7	Illum Oriental	each	137.50
39.54.8	An thorium	each	82.50
39.54.9	Arched Mix	each	44.00
39.54.10	Zarbera	each	22.00
39.54.11	Dasy	each	27.50
39.54.12	Chrysanthemum	each	22.00
39.54.13	Candytuft	each	4.40
39.54.14	Aster	each	6.60
39.54.15	Lotus	each	44.00
39.55	Supply of Chemical Fertilizers at store in bags weighing 50 kg. each including loading unloading & transporation etc.		
39.55.1	Urea	bag	294.50
39.55.2	DAP	bag	993.00
39.55.3	Super Phosphate	bag	313.50
39.55.4	Murrate of Photash	bag	470.00
39.55.5	Straw Meal	bag	940.00
39.56	Supply of Insecticides & Pesticides at store in dust / liquid form complete.		
39.56.1	Methyl Prathion 2%. 50 kg bag	bag	522.00
39.56.2	Karathion (Liquid). 250ml packing	each	522.00
39.56.3	Metacid (Liquid).	Litre	386.50
39.56.4	Roger (Liquid).	Litre	292.50
39.56.5	Cholorophyriphos 20 Ec.	Litre	339.50
39.56.6	Bauiston 50 %. 100 grams packing	each	104.50
39.57	Supply of Graden Tools & Implements at store complete :		
39.57.1	Spade weighing 1.5 kg. with Handle.	each	130.50
39.57.2	Khurpa weighing 500 gm with Handle.	each	73.20
39.57.3	Gurvana weighing 800 gm. with Handle	each	83.60
39.57.4	Hedge Shear (kamani Steel)	each	522.00

Code No	Description	Unit	Rate Rs.
39.57.5	Secaetur	each	209.00
39.57.6	Garden Rack with Handle.	each	130.50
39.57.7	Pick - Axe.	each	125.50
39.58	Supply of P.V.C. hose pipe of different sizes at store including transportation etc complet :		
39.58.1	50 mm dia	metre	125.50
39.58.2	38 m dia	metre	104.50
39.58.3	25 mm dia	metre	62.70
39.58.4	17 mm dia	metre	52.20
39.58.5	12.5 mm dia	metre	39.70
39.59	Transplantation of trees with in a distance of 2km including excavation around existing tree, pruning of branches, lifting, loading and transportation of existing tree, digging pits for placing tree at new place, adding manure, sand, fertilizer, hormones and bio fertilizer to it. Levelled and neatly dressed and disposal of surplus materials from old existing and new sites to designated place. Each tree should be firmly secured to the stake so as to prevent excessive movement, flooding with water, treatment of roots, rope and gunny bags as per direction of the officer incharge. T&P and all required materials shall be arranged by the contractor and nothing extra shall be paid on this account. NOTE: Girth of tree shall be measured at a height of 1m above ground level.		
39.59.1	Girth of trees upto 50cm.	each	3,825.00
39.59.2	Girth of trees beyond 50cm and upto 90cm.	each	6,190.00
39.59.3	Girth of trees beyond 90cm and upto 150cm.	each	11,550.00
39.59.4	Girth of trees beyond 150cm.	each	26,900.00

40.0 HERITEGE WORK

Code No	Description	Unit	Rate Rs.
40.1	Excavation carefully by manual means up to 2.00 mtr. Depth without damaging the buried architectural parts of the monument/structure and stacking all the intact parts at proper place for reuse at the time of restoration work as per direction of Engineer in-charge with in 50mtr.lead.	cum	337.00
40.2	Lime Sand Mortar 1:2 (1 Lime putty : 2 Sand) including preparation of mortar by traditional practice (by grinding)	Cum	2,560.00
40.3	Lime Surkhi Mortar 1:2 (1 Lime putty : 2 Surkhi) including preparation of mortar by traditional practice (by grinding)	Cum	1,977.00
40.4	Cément Sand Mortar 1:3 (1 Cément : 3 Sand)	Cum	5,140.00
40.5	P & L Lime Surkhi Plaster lime surkhi mortar 1:2 (1 Lime : 2 Surkhi) including preparation of mortar by traditional practice (by grinding) in specified course for base coarse and subsequent course & Loi, tamping, beating, curing till the shrinkage cracks are disappear. The work is to be done with all lead as the work is of restoration nature as per Jaipur practice including adding gur, methi & gugal on old walls including removal of all old loose and decade plaster, each coat to be done after 3 days of previous coat.		
40.5.1	33 mm thick in four coats	sqm	377.50
40.5.2	45 mm thick in four coats	sqm	409.50
40.5.3	75 mm thick in seven coats	sqm	646.00
40.6	P & L Lime Sand Plaster with lime sand mortar 1:2 (1 Lime : 2 Sand) including preparation of mortar by traditional practice (by grinding) in specified course for base coarse and subsequent course & Loi, tamping, beating, till the shrinkage cracks are disappear. The work is done with all leads as the work is of restoration nature as per Jaipur practice including adding gur, methi & gugal on old walls including removal of all old loose and decade plaster, each coat to be done after 3 days of previous coat.		
40.6.1	25 mm thick in three coats	sqm	291.00
40.6.2	33 mm thick in four coats	sqm	392.50
40.6.3	45 mm thick in four coats	sqm	430.50
40.6.4	75 mm thick in seven coats	sqm	684.00
40.7	Making Mehrab's, Arches, pillars, highly decorative creepers, flower of small sizes etc.in lime Surkhi plaster (1:2) as per B248old traditional practices (Arches, Mehrab's) in three coats for base course and subsequent course and Loi tamping, beating till the shrinkage cracks are disappear than making ornamental flowering/design etc. The work is to done with all leads and lifts as per work of restoration nature as per Jaipur practice.	sqm	796.00

Code No	Description	Unit	Rate Rs.
40.8	Add extra over item no. 40.5 to 40.6 for Lime plaster work done over Spherical or groin ceiling/ladao ceiling of doms.	%	80.00
40.9	Add extra over item no. 40.5 to 40.6 for Lime plaster work done over flat ceiling.	%	20.00
40.10	Add extra over item no. 40.5 to 40.6 for Lime plaster work done over curved/circular masonry work (curved or circular surface.)	%	25.00
40.11	Deduct for plaster work over item no. 40.5 to 40.6 if lime kara is to be done on plaster as finishing coat.	%	5.00
40.12	Flush and ruled pointing in Cement Mortar 1:3 over joints of dressed stone cladding, chajjas, jali etc. with cement, sand & colour including racking the joints as per traditional practice including all leads and lifts.	sqm	175.00
40.13	Flush and ruled pointing over joints of dressed stone cladding, chajjas, jali etc. including racking the joints as per traditional practice including all leads and lifts with grinded mortar of lime putty and surkhi mixed in 1:2 ratio and gur, methi, gugal etc. are to be mixed as per traditional practice.	sqm	195.00
40.14	Flush and ruled pointing over joints of dressed stone cladding, chajjas, jali etc. including racking the joints as per traditional practice including all leads and lifts with grinded mortar of lime putty and fine sand mixed in 1:2 ratio and gur, methi, gugal etc. are to be mixed as per traditional practice	sqm	207.00
40.15	Araish plaster (as per Jaipur practice) 1:2 (1 lime : 2 Zikki) on lime plaster or plane back ground including preparation of lime for 6 months by slaking of lime with curd and changing the water every week. The Kara plaster of not more than 6 mm thick is to be left the maximum of 3 months to appear the shrinkage & temperature cracks. Over the Kara plaster 2mm layer of grinded lime putty is to be done and is to be rubbed Gently by Akik stone. Then adding Khoppra & Ghee and inserting the design of colour boarder all round.	sqm	3,195.00
40.16	Coloured plain Araish work 1:2 (1 lime : 2 zikki) on lime plaster or plane back ground including preparation of lime for 6 months by slaking of lime with curd and changing the water every week. The Kara plaster of not more than 6mm thick is to be left the maximum of 3 months to appear the shrinkage & temperature cracks. Over the Kara plaster 2mm layer of grinded lime putty is to be done and is to be rubbed Gently by Akik stone. Then adding Khoppra & Ghee and inserting the design of colour boarder all round including desired colour stone pigment to match the existing colour.	sqm	3,525.00
40.17	Khamira Colour Washing as per old traditional practice to prepare the Khamira the lime should be slaked at least for 7-10 days and regularly it should be stirred by adding cured, Gugal, for non-synthetic colour adding gum (babool gum) as per specification. Then applying prepared solution on walls three to four thin coats as desired finishing.	sqm	173.50

Code No	Description	Unit	Rate Rs.
40.18	Stucco work in lime, Surkhi, mortar (1:2) as per existing design work/ traditional practices by skilled craftsman, the stucco work should be done as per restoration nature, the mortar should be prepared by grinding mill adding gur, methi & gugal.. The thickness varies from 50 mm to 100mm as per the design (minimum rectangular surface area to be measured).	sqm	4,740.00
40.19	Providing & applying Lime kara 1:2 (1lime cream : 2 Zikki powder) grinding mortar with grinding mill/manually on lime base, on ceiling and all flat surface in two coats. First coat applying 3 mm to 4 mm thick and curing properly at least 7 days, second finishing coat done after 7 days of previous coat as per traditional practice.(thickness not more than 6 mm.)	sqm	641.00
40.20	Add extra for Lime Kara work (on lime plaster base) other than flat surface as per traditional practice with all lead & lift with fine finishing complete in all respect on :		
40.20.1	Domical surface/spherical/domical ceiling.	sqm	160.00
40.20.2	Curved surface.	sqm	64.10
40.21	Providing & applying "Lime Kara on stone work only" having carving stone work /decorative stone work (stone pillars, stone arches, railing etc.) as per traditional practice, as per specifications with grinded mortar in two coats with finishing complete in all respect.	sqm	1,269.00
40.22	Tuman masonry by brick bats/ stones in grinded mortar of Lime Surkhi mortar 1:2/lime sand mortar 1:2 including racking and removal of all old loose plaster and cleaning the wall surface properly as per direction of Engineer In-charge.	sqm	462.00
40.23	Making Kangura on top of the wall as per Jaipur traditional practice with tile brick bats/stones in grinded Lime Surkhi mortar 1:2 thickness of kangoora 15cm & height 45cm, finishing with lime Surkhi mortar 1:2 complete in all respect up to 10.00 meter from ground level including all scaffolding, lead & lift.	metre	1,600.00
40.24	Removing of old lime plaster up to 75 mm thick in patches with height up to 4.5 m. Disposal up to 100 meter lead	sqm	93.20
40.25	Scraping & Removing of white wash/ distemper/algli etc. from plain plaster & surfaces gently with care to keep intact the old designs.	sqm	51.10
40.26	Scraping & Removing of white wash/ distemper/oil paint /algli etc. from lime plaster highly decorative, ornamental and stucco work with at most care by using fine sand paper under the close supervision to keep intact the old designs.	sqm	159.50
40.27	Vaulted roofing (Ladao) with grinded lime sand/Surkhi mortar prepared as per traditional practice including centering shuttering (Dhoola) the layer of lime mortar and brick bats/stone should 25 cm thick and each layer should be done after 1 week complete with top finishing.	Sqm	8,200.00

Code No	Description	Unit	Rate Rs.
40.28	Providing and fixing stone Patties (slab) on roofing including removing broken patties carefully and replacement new slab with Kharanja, ralthal and lime dhar as per traditional practice. Span about 3.30 mtr. To 5.50 mtr. 100 mm to 150 mm thick of approved stone.	Sqm	5,440.00
40.29	Providing and laying lime Dhar on roofing as per Rajasthan, Jaipur traditional practice with lime, Surkhi, old lime powder, brick aggregate 12 to 20mm (1:2:2:2) and using Methi, Gur, Hemp, Belgiri etc. including beating and temping 100 to 150 mm thick as per specifications. Including dismantling of old deteriorated roofing	Sqm	1,633.00
40.30	Painting on Stucco work with stone colours including base coat of khameera as per traditional practice (minimum rectangular to be measured).	sqm	888.00
40.31	Rubbing / removal of lime plaster on stone works by abrasive method		
40.31.1	Up to 1" thick layer	sqm	540.00
40.31.2	above 1" thick layer	sqm	817.00
40.32	Cleaning of Araish by Tee pole	sqm	1,074.00
40.33	Washing Marble Stucco by Tee pole	sqm	764.00
40.34	De-vegetation from monument by removing bushes, trees including complete uprooting from the wall & roofs/structures carefully including suitable chemical treatment to roots to avoid further growth including disposal of rubbish with in 50 mtr. Lead as per direction of Engineer in-charge.	sqm	424.00
40.35	Providing and fixing double leaf door wooden shutters made of Ist grade wood as per traditional design (Deshi pattern) planks thickness 40mm and width of Binies, Andheri 50mm and 35mm, including Adwa etc. with fittings (nails, sankal, kunda, cheri, handle and patti etc.) as per existing matching/ as per approved design with moulding/ carving complete in all respect :		
40.35.1	M.P teak wood grade Ist	Sqm	8,280.00
40.35.2	Sheesham wood grade Ist	Sqm	6,890.00
40.35.3	Babool wood grade Ist	Sqm	4,390.00
40.36	Providing and fixing double leaf Window wooden shutters made of Ist grade wood as per traditional design (Deshi pattern) planks thickness 25mm and width of Binies, Andheri 35mm and 25mm, including Adwa etc. with fittings (nails, sankal, kunda, cheri, handle and patti etc.) as per existing matching/ as per approved design with moulding/ carving complete in all respect : Sheesham wood grade Ist.		
40.36.1	M.P teak wood grade Ist	Sqm	7,190.00
40.36.2	Sheesham wood grade Ist	Sqm	6,330.00
40.36.3	Babool wood grade Ist	Sqm	4,790.00

Code No	Description	Unit	Rate Rs.
40.37	Add extra for brass fittings inplace of M.S./ G.I fittings over item no. 20.35 & item no. 40.36		
40.37.1	For doors (deshi pattern double leaf shutters)	Sqm	434.50
40.37.2	For windows (deshi pattern double leaf window shutters)	Sqm	408.50
40.38	Providing and applying breathable, non-reactive, transparent, antifungal, UV resistant, alkaline stable, impregnable silane-siloxane or equivalent based water repellent coating on exposed absorbing substrate like stone surface/ concrete surface/ mineral painted surface / exposed brick surface / lime surface in two or more coats to give uniform finish surface in all heights, horizontal, inclined, vertical and on ceiling complete in all respect and making it complete water-proof as per direction of the Engineer-in charge.	Sqm	217.50
40.39	Providing and applying ceilent adhesive to existing cracks by suitable silicon or equivalent ceilent complete in all respect and making it complete water-proof as per direction of the Engineer-in charge.	metre	337.00
40.40	To expose the original surface of stone art / Chiseling work / Fresco paintings /tempera painting carefully by removing upper coatings of whitewash /paint / distemper / plastering / wooden and metal frames etc. without any harm to the original hidden art work & further strengthen the original art work with a suitable coating of preservative and making it water tight as per direction of Engineer-In charge.	Sqm	748.00
40.41	Water proofing with consolidation of basic substrata, making it complete water proof with Protekta series of compounds or equivalent as per manufacturers specifications and as per direction of engineer in charge	Sqm	531.00
40.42	Water proofing with consolidation of sand stone, making it complete water proof with Protekta series of compounds or equivalent as per manufacturers specifications and as per direction of engineer in charge	Sqm	364.50
40.43	Chemical treatment of sand stone to clean from yellowness, blackness, algal growth, dust, dirt oily accretions, lime & gypsum deposits, filling of cracks/ joining of gaps/ pointing, strengthening of weak stone, removal of salt effect and application of preservative coating to prevent algal growth and make the stone water proof.	Sqm	882.00
40.44	Chemical treatment of marble stone to clean from yellowness, blackness, algal growth, dust, dirt oily accretions, lime & gypsum deposits, filling of cracks/ joining of gaps/ pointing, strengthening of weak stone, removal of salt effect and application of preservative coating to prevent algal growth and make the stone water proof.	Sqm	953.00
40.45	Chemical treatment of arais surface to clean from yellowness, blackness, algal growth, dust, dirt oily accretions, lime & gypsum deposits, filling of gaps & cracks and application of preservative coating to prevent algal growth and make the surface water proof.	sqm	612.00

Code No	Description	Unit	Rate Rs.
40.46	Conservation of plain araish in monuments by cleaning of the painted surface from dust, dirt, greasy & oily all types of accretions with the help of suitable chemicals, removal of cracks and holes, consolidation of plaster, filling of the lacunae in the plaster, treatment of salt effect, restoration of the lost portions and providing a preservative coating.	sqm	2,067.00
40.47	Conservation of coloured araish with designs in fresco technique in monuments by cleaning of the painted surface from dust, dirt, greasy & oily accretions with the help of suitable chemicals, removal of cracks and holes, consolidation of plaster, filling of the lacunae in the plaster, treatment of salt effect, retouching of the lost portions and providing a preservative coating.	sqm	2,625.00
40.48	Conservation of fresco paintings in monuments by cleaning of the painted surface from all types of stains, dust, dirt, greasy & oily accretions etc. with the help of suitable chemicals, removal of cracks, consolidation of flaking paint layer and plaster, filling of the lacunae in the plaster, treatment of salt effect and altered paint layer retouching of the lost portions and providing a preservative coating.	sqm	6,770.00
40.49	Conservation of oil paintings & portraits in monuments by cleaning of the painted surface from all types of stains, dust, dirt, greasy & oily accretions etc. with the help of suitable chemicals, removal of cracks and holes, consolidation of flaking paint layer and plaster, filling of the lacunae in the plaster, treatment of salt effect, retouching of the lost portions and providing a preservative coating.	sqm	7,920.00
40.50	Exposition of the original surface of fresco paintings/tempra paintings by careful removal of upper coating of whitewash/paint/distemper/plaster, araish etc. without any harm to the original hidden art work, conservation of the paintings & strengthen the original art work with the preservative coating and making it water proof as per direction of the Chemist-in-charge.	sqm	8,470.00
40.51	Conservation of intricate carving work in Plaster of Paris by cleaning the surface from dust, dirt, greasy oily and all types of accretions etc. with the help of suitable chemicals, filling of lacunae, removal of cracks and holes, restoration of lost portions with the same designs & materials and providing a preservative coating.	sqm	2,142.00
40.52	Restoration of Jamia glass work by cleaning the surface with the help of chemicals, replacement of the broken/ lost glasses with the same type, filling of POP along the edges according to the designs and preserve (rates are upto 10% damages on wall excluding gold work)		
40.52.1	On wall	sqm	20,800.00
40.52.2	On Gardana	Sqm	22,900.00
40.52.3	On Ceiling.	Sqm	25,000.00
40.53	Conservation of oil paintings and portraits on glass by clearing with the help of suitable chemicals, retouching of the lost portions, providing mica sheet behind the glass and filling of POP along the edges according to the original designs preserve.	sqm	15,350.00

Code No	Description	Unit	Rate Rs.
40.54	Restoration of wooden doors with polychrome art in oil colour by cleaning the paintings with the help of suitable chemicals , consolidation of the wood and flecking paint layer, filling of the gaps and cracks in the wood, retouching of the paintings by the same technique and design wherever required with the help of same material (originally used) and provide of a preservative coating.	sqm	14,700.00
40.55	Control of infestation (Bio-deterioration) from termites, insects, rodents, micro-organism etc. in museums and monuments.	sqm	8.65
40.56	Removal , providing and re fixing of stone inverted lamcha (lattoo) with stone base and moulded as per existing design with fine finishing in grinded lime mortar 1:2 i/c all lead and lift complete in all respect. dia - 200 mm and Height 250mm	Each	1,650.00
40.57	Removal & fixing of stone base moulded as per existing design with fine finishing fixing in grinded lime mortar (1:2) i/c all lead a lift complete in all respect.- Extra for carving (Pan Patti) 100 mm thick to 150 mm thick	Metre	5,200.00
40.58	Removal/Clean Ornamental Stone with Diamond/Surgical tool Kits of the original surface of stone carving & traditinol Mewar work of Biradari including Todies ,lamcha ,etc by careful removal of upper coating of lime Khara /whitewash/paint/distemper/plaster, araish etc. without any harm to the original hidden art work, conservation of the traditinol & strengthen the original art work with the preservative coating and making it water proof as per direction of the Conservation.	Sqm	2,980.00
40.59	Providing and fixing fine dressed sand stone/approved stone Traditional work as per existing matching geometrical design including molding work with fine finishing, fixing with thambli by proper adhesive and white cement with pigment including making groove etc. complete in all respect.	Sqm	9,500.00
40.60	Lime concrete terracing on roofs with 25mm nominal size brick aggregate and 50% lime mortar 1:1:1:1 (1lime putty: 1coarse sand:1surkhi:1khakha/brick jeera) rammed and finished with gur and belgiri treatment complete including rounding of junctions with parpet wall shall be well in traditional lime chakki / grinding mill concrete shall be beating tamping for seven days including curing all lift and lead complete.	cum	1,000.00
40.61	Propping with steel to support the leaned structure (roof and wall) using pipes, channels, angles, girders , wooden wages to prevent further leaning/ collapse ,mode of measurement(1.the plan area of the propping shall be for payment purpose. 2. the payment will be made once only for execution of all item such work.)	Sqm	550.00
40.62	Removal of existing damaged/ deteriorated parts of Alcoves (ornamental stone mandir), providing & refixing of 'Alcoves' of approved sand stone with dressing complete as per existing design/ pattern/ approved design, fixing with lime mortar 1:2 with proper brass pinning and fixing including all lead and lift complete in all respect as per direction of engineer in charge.	Each	40,000.00

Code No	Description	Unit	Rate Rs.
40.63	Providing new /restoration of decorative sandstone columns as per the original details found on site of size around 2.1 to 2.5 metres in height & (square/ rectangular upto 200 mm x 400mm). The damaged portions of the original column to be carefully dismantled without damaging the adjacent areas, & replacing the same with new detail of the same size & design. Sample of the terra cotta column to be shown to the Engineer in charge for approvals before procuring & fixing the same on site. Item to include all necessary anchoring details, scaffolding if required etc. complete. Mode of Measurement: Item to be paid each restored/new column.for using plain	Each	22,250.00
40.64	Add extra for Decorative/Ornamental Stone Carving Work with fine finish making motifs, flowers, geometrical designs etc.as per direction of Engineer Incharge.	Sqm	1,805.50
40.65	Providing and fixing fine dressed sand stone " Gardana of sand Stone " on top of the wall at vrandha as per existing matching , fixing in grinded lime surkhi mortar 1:2 including pointing in cream and stone powder 1:1 with an admixture of pigment to match the shade of stone complete in all respect. above 100 mm to 150 mm thick plain with fine dressing.	Metre	3,100.00
40.66	Chissiling with surjical tools from existing Niches / Mehrab surface 75-100 mm depth with care on top of the Gate both side and making plain surface with Grove to fix the New Caurved Stone as per existing matcing with all respects	Sqm	4,410.00
40.67	Restoration & Retrofitting of Broken Stone slab or piece without removing the stone from its original place and realign the cracked & disturbed stone with the help of manual or mechanical jacking and support on both side of the crack up to 1 meter or as per the site condition. The crack stone should be carefully realigned by expert stone craftsmen considering its structural loading and place of installation within the structure and without damaging the adjacent areas. The stone crack further stitched by SS rod/clamp by cutting the groove on both side of the crack and after stitching finishing the groove by filling it matching stone dust and adhesive. The stone crack portion to be shown to the Architect/Engineer in charge for approvals before executing the same on site and should be completed in all respect. Mode of Measurement: Item to be paid for the length of clamp stitching groove and Cost of SS clamp to be paid extra as per BOQ.	Metre	5,000.00
40.68	Providing and fixing fine dressed Nimbaheda sand stone "Oranamental Todies" with ornamentation on both side & including lamcha as per existing matching stone with carving & moulding work with fine finishing , fixing in grinded lime surkhi mortar 1:2 including scaffolding, lead & lift complete in all respect.SIZE (0.72X0.55 X 0.20)	Each	17,900.00

Code No	Description	Unit	Rate Rs.
40.69	Removal , providing and fixing of stone pipe holder 150mm thick (Nimbahera) Stone (for railing , flag and canopy pipes ect)moulded as per existing design with fine finishing fixing in grinded lime mortar 1:2 i/c all lead and lift complete in all respect. as per direction of engineering incharge / architect complete	Each	1,650.00
40.70	Removal , providing and re fixing of stone dasa moulded as per existing design with fine finishing fixing in grinded lime mortar 1:2 i/c all lead and lift complete in all respect. extra for carving (pan patti)-100mm thick	Metre	5,200.00
40.71	Providing & fixing bamboo base deck at water surface level in lake to provide supporting platform for working and to support wall scaffolding above water level. The deck will include bamboo frame work under water. Horizontal MS frame and MS sheet covering to stop damage malba and other material to fall in water and maintaining in servicable condition for the required duration. The work includes provision of floating pontoon to carry material in and out of water, the bamboo base deck shall be stiffened with bracings, runners, connectors, with nearby structures etc. wherever location with essential safety features for the workmen etc. complete as per directions of engineer in charge	Sqm	876.00
40.72	Providing and fixing fine dressed Nimbaheda sand stone "Oranamental Todies" with ornamentation on both side & including lamcha as per existing matching stone with carving & moulding work with fine finishing , fixing in grinded lime surkhi mortar 1:2 including scaffolding, lead & lift complete in all respect. SIZE (0.72X0.55 X 0.20)	Each	17,900.00

41.0 TRAFFIC SIGNALS

Code No	Description	Unit	Rate Rs.
41.1	P & F 4.5 mm thick M.S. traffic post with outer dia. 114.3mm, medium class and confirming to IS:1239(P-I) 5Mtr. Long (0.8 Mtr. Below ground level) suitable for fiber cap and M.S. base plate 300 mm x 300 mm x 6 mm including excavation of pit and grouting with P.C.C. of ratio 1:3:6 from bottom of the pole and up to 30 cm. above the ground level and 40 cm. dia. Including painting with rubber paint below ground level and red oxide on exposed surface and finishing with traffic yellow enamel paint in two coats complete as required.	Each	4,107.00
41.2	P & F solid state blinker caution unit weather proof box and pole clips with flashing rate 40-60 flashes per minute.	Each	2,578.00
41.3	P&FM.S. Cantilever swaged pole suitable for mounting signal head assembly of overall height 9.0 Mtr. (1.5 meter. Below ground level) with M.S. based plate of size 400mm x 400mm x 7mm including excavation of pit and grouting with P.C.C. of Ratio 1:3:6 from the bottom of the pole and up to 50cm above the ground level of 40 cm dia. Including painting with rubber coat below ground level and red oxide on exposed surface and finishing with two coats of traffic yellow enamel paint complete in all respect as required. The pole shall confirm following specifications as per IS:(1239 P-I) Top, middle, bottom length 1.80 Mtr, 3.60 Mtr., 6.0 Mtr. Respectively, outer dia. 88.9 mm, 114.3 mm, 139.7 mm respectively, thickness 4.05 mm, 4.5mm, respectively.	Each	15,232.00
41.4	S.I.T.C. of programmable three digit digital countdown timer with 5mm dia. Red colored LEDs of high intensity (visible clearly at day time) of reputed make with digit size 150mm x 300mm approx. and quantity of LEDs be approx. 800 no.s including interconnection with traffic signal controller and housing the LED assembly in sheet metal box of size approx. 750mm x 550mm with detachable pole arms clamps etc. as required.	Each	11,283.00
41.5	S.I.T.C. of following colour retrofit LED matrices traffic light of modular size 300 mm dia, Covered with front clear acrylic sheet and back with aluminum body, InP/InGaN based 5mm dia. Coloured LEDs of ultra bright. Super intensity (visible clearly at day time up to distance 300-600 meter, viewing angle of 30 degree). The unit shall be suitable for working on A.C. supply (160-240 V) and life cycle approx. 10 yrs with power consumption below 24 watts, suitable for fast switching.		
41.5.1	Red/Amber Round (unit of 200-220 Nos LEDs)	Each	4,288.00
41.5.2	Green Arrow (Unit of 120-130 Nos LEDs)	Each	6,206.00
41.5.3	Red/Green pedestrian(Unit of 75- 80Nos LEDs)	Each	2,764.00
41.5.4	Add extra for SITC of M.S. housing for LED matrices	Each	1,343.00
41.6	All in all maintenance to keep up of complete traffic signal system in		

Code No	Description	Unit	Rate Rs.
	working order at a crossing including controller, posts, head assembly, bulbs/LED reflector, material (Consumables / Software of OEM of traffic signal to be used only) T&P etc. as required.		
41.6.1	With solid-state controller & GLS Signal Heads	P. Month	1,692.00
41.6.2	With solid-state controller & LED Signal Heads	P. Month	733.00
41.6.3	With microprocessor controller & GLS Signal Heads	P. Month	2,189.00
41.6.4	With UTCS controller & LED Signal Heads	P. Month	6,770.00
41.6.5	With microprocessor controller & controller & LED Signal Heads	P. Month	959.00
41.6.6	Only solid state controller	P. Month	1,196.00
41.6.7	Programmable Three Digit Countdown timer Big/ Small	P. Month	508.00
41.7	All in all maintenance to keep up blinker signal in working order at a crossing including controller, posts, head assembly, bulbs / LED reflector and material , T&P as required.	P. Month	508.00
41.8	All in all maintenance to keep up Crystal control solar road warning blinker signal with solar panel in working order at a crossing including controller, posts, head assembly, bulbs/ LED reflector and material , T&P as required.	P. Month	621.00
41.9	All in all maintenance to keep up each electric traffic bollard in working order including material, T&P as required.	Month	141.00
41.10	Refixing of standard traffic post including repair and transportation (within municipal limit) as required including excavation of pit and grouting with P.C.C. of ratio 1:3:6 from the bottom of pole (0.80 meter. Below ground level) and up to 30 cm above the ground level and 40 cm dia. Including painting with rubber coat below ground level as required.	Each	959.00
41.11	Refixing of cantilever traffic post including repair and transportation (with municipal limit) as required. Including excavation of pit and grouting with P.C.C. of ratio. 1:3:6 from the bottom of pole (1.40 meter. Below ground level) and up to 50 cm above the ground level and 40 cm dia. Including painting with rubber coat below ground level as required.	Each	2,821.00
41.12	Removing of exiting damaged standard traffic post(incl. Signal head assemble) and dismantling original foundation and refilling the same with earth and transportation of pole and signal head to store (within municipal limit) as required.	Each	395.00
41.13	Removing of exiting damaged cantilever traffic post (incl. Signal head) and dismantling original foundation and refilling the same with earth and transportation of pole and signal head to store (within municipal limit) as required.	Each	1,410.00
41.14	Removing of exiting damaged cantilever traffic post (incl. Signal head) and dismantling original foundation and refilling the same with earth and transportation of pole and signal head to store (within municipal limit) as required.	Each	451.00

Code No	Description	Unit	Rate Rs.
41.15	Fixing of cantilever traffic post at same site including repair and transportation (with municipal limit) as required. Including excavation of pit and grouting with P.C.C of ratio 1:3:6 from the bottom of pole (1.40 meter. Below ground level) and up to 50 cm above the ground level and 40 cm dia. Including painting with rubber coat below ground level as required.	Each	1,625.00
41.16	Painting of exiting traffic post/ cantilever pole/ signal head assembly/ controller box including removing of old rusted surface and applying red oxide finishing two coats of enamel paints as required.		
41.16.1	Traffic post	Each	254.00
41.16.2	Cantilever pole	Each	762.00
41.16.3	Controller box	Each	212.00
41.16.4	Signal head assembly 300mm dia.	Each	85.00
41.16.5	Signal head assembly 200mm dia.	Each	62.00
41.17	P & F of unbreakable polycarbonate colored lens of following size and colour.		
41.17.1	300mm, colored	Each	395.00
41.17.2	300mm, white	Each	169.00
41.18	P & F of pole cap on existing pole complete in all respect		
41.18.1	M.S. pole cap	Each	226.00
41.18.2	Fiber pole cap	Each	254.00
41.19	SITC of pelican controller for safety of pedestrians crossing the road at the push of button pedestrian stop vehicles flying on road and green period is 3 to 30 seconds. Pedestrian flashing green/ red pelican.	Each	22,566.00
41.20	Supply of following spare card		
41.20.1	Power supply/ Blinker/ Monitor/ Safety trip unit	Each	7,898.00
41.20.2	Blinker card		748.00
41.20.3	Microprocessor card	Each	16,925.00
41.20.4	Power supply card	Each	8,462.00
41.20.5	Keyboard card	Each	11,283.00
41.20.6	DB card	Each	5,642.00
41.21	SITC of Crystal control Road warning Blinker system with solar panel module with 300mm LED Module of minimum 190 Nos., Blinker Units, Charging circuit, suitable SMF Rechargeable Battery (12 Volt.), including wiring, connections etc. complete in all respect.	Each	14,104.00
41.22	SITC of Micro controller/ microprocessor base Pelican Traffic Controller with built in CPU and memory, solid state switching, capable of 8 signal plans and various modes of operation (actuated, automatic and flashing) with weather proof, vandal proof, dust & splash proof powder coated steel cabinet, push button switch, etc. complete in all respect.	Each	14,104.00

Code No	Description	Unit	Rate Rs.
41.23	SITC of 4.5 mm thick M.S traffic post with outer dia. 114.3mm, medium class and confirming to IS:1239 (P-1) 6 Mtr. Long (0.8 Mtr. Below ground level) suitable for mounting the signal head assembly with weather proof fiber cap and M.S base plate 300 mm x 6 mm including excavation of pit and grounding with P.C.C of ratio 1:3:6 from bottom of the pole and up to 30 cm above the ground level and 40 cm dia. Including painting with rubber paint below ground level and red oxide on exposed surface and finishing with traffic yellow enamel paint two coats complete as required.	Each	5,472.00
41.24	SITC of Programmable Three digit Digital Countdown timer with 5 mm dia. Red colored LED of High intensity (visible clearly at day time) digit PCB size 302mm x215mm approx and quantity of LED be approx 256 Nos. and housing the LED assembly in sheet metal box etc.	Each	6,318.00
41.25	SITC of Road separating indicator, Yellow LED flashing light + back lit white arrow.		
41.25.1	200mm, dia product size 320x202x 1063mm	Each	11,509.00
41.25.2	300mm, dia product size 480x230x 1440mm	Each	15,796.00
41.26	Supply & Fixing of Spare cards for UTCS microprocessor controller		
41.26.1	Microprocessor C.P.U Card	Each	23,976.00
41.26.2	Microprocessor Lamp Driver Card	Each	19,181.00
41.26.3	Microprocessor Loop Detector Card	Each	14,386.00
41.26.4	Microprocessor Vehicle Loop Detector Card	Each	6,770.00
41.26.5	Microprocessor mother board Card-Bottom	Each	6,770.00
41.26.6	Microprocessor mother board Card-Top	Each	6,770.00
41.27	SITC of SMPS input 100-250 V 1.6A AC 50/60 Hz or DC 120-300V-1Amp output + 5V/8V +12V/0.7A-12V/0.7 Amp Maximum output power 40V connection cooling 55 Watt with 30CFM forced Air LPT 43 Model	Each	7,193.00
41.28	SITC of crystal Control Solar Road warning Blinker system with Solar panel module, without LED module Blinker units charging circuit, suitable SMF Rechargeable Battery (12Volt) complete.	Each	10,741.00
41.29	SITC of solar panel Module 12 Volt 18 Watt with M.S Angle/Flat mounting Structure suitable to mount in the pole	Each	3,949.00
41.30	SITC of solar panel Module 12 Volt 55 Walt with M.S Angle/Flat mounting Structure suitable to mount in the pole	Each	12,073.00
41.31	SITC of solar panel Module 12 Volt 75 Walt with M.S Angle/Flat mounting Structure suitable to mount in the pole	Each	16,360.00
41.32	SITC of Cutting back up surface up to 2 Mtr. Depth by digging by Bogie including all layers of crust for laying pipe line etc. and making good to original condition (excluding cost bitumen)	Mtr.	406.00

Code No	Description	Unit	Rate Rs.
41.33	P/Laying P.V.C/XLPE insulated & P.V.C sheathed cable of 1.1 KV grade with Copper conductor of IS: 1554 P-I/IS: 7098 P-I in ground as per IS: 1255 including excavation of 30cm x 75cm size trench, 25cm thick under layer of sand, IInd class bricks covering, refilling earth, compaction of earth, making necessary connection, testing etc. as required of size.		
41.33.1	2.5sq mm. Armored 4 core	Mtr.	228.00
41.33.2	1.5 Sq.mm Armoured 6 Core	Mtr.	350.00
41.33.3	1.5 Sq.mm Armoured 12 Core	Mtr.	468.00
41.34	Supplying and making one end termination with heavy duty single compression brass gland SIBG type, heavy duty Copper lugs duly crimped with crimping tool, PVC tape etc. for following size of armored PVC insulated & PVC sheathed/ XLPE aluminum conductor cable of 1100 Volt grade as required of size.		
41.34.1	4 X 2.5 sq.mm.	Each	64.00
41.35	P & F in position frame made out of M.S. angle (riveted or welded) finished with two coat of red oxide and enamel paint including cutting, welding, holes etc. of following sizes as required.		
41.35.1	40mm X 40mm X 5mm	Mtr.	214.00
41.36	Pipe Ear thing as per IS: 3043 with perforated 3.0 Mtr. Long, 40 mm dia. 'B' class G.I. Pipe including all accessories like nut, bolts, reducer, nipple, wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300 mm and embodying the pipe complete with alternate layers salt and coke/charcoal, testing of earth resistance as required.	Set	1,862.00
41.37	Plate Earthling as per IS:3043 with copper Earth plate of size 600mm x 600 mm x 3.0mm by embodying 3 to 4 mtr. Below the ground level with 25 mm dia. G.I. 'B' class watering Pipe including all accessories like nut, bolts, reducer, nipple, wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300mm complete with alternate layers of salt and coke/charcoal, testing of earth resistance as required.	Set	8,101.00
41.38	S & Laying following size 'B' Class G.I. Pipe confirming to IS: 1239 P-1 (1990) with accessories for laying earth conductor/ strip/ cable in ground/ surface/ recess as required.		
41.38.1	50 mm dia.	Mtr	404.00
41.38.2	80 mm dia.	Mtr	625.00
41.38.3	100mm dia.	Mtr	753.00
41.38.4	125 mm dia.	Mtr	1,044.00
41.39	S.I.T.C of Programmable Two digit Digital Countdown timer with 5 mm dia. Red & Green colored LED of High intensity (visible clearly at day time) digit PCB size 300 mm Round Dia.	Each	9,929.00

Code No	Description	Unit	Rate Rs.
41.40	S.I.T.C of following colour retrofit LED matrices traffic light of modular size 300 mm dia, Covered with front clear acrylic sheet and back with aluminum body, InP/InGaN based 5mm dia. Coloured LEDs of ultra bright. Super intensity (visible clearly at day time up to distance 300-600 meter, viewing angle of 30 degree). The unit is suitable for working on A.C. supply (160-240 V) and life cycle approx. 10 yrs with power consumption below 12 watts, suitable for fast switching.		
41.40.1	Static Red man & walking Green man (two in one)	Each	8,688.00
41.40.2	Two in one (Red & Green for Cycles)	Each	7,447.00
41.41	Supply, Installation, Testing & Commissioning of 7.5M height galvanized polygonal signal pole with dia 350mm A/F, 4mm thickness with 6M cross arm with dia 90mm A/F, thickness 4mm fabricated from HT steel confirming to BS EN 10025, S-355 JO with 520x16mm base plate.	Each	1,63,604.00
41.42	SITC of microprocessor based logic type automatic electronic controller conforming to IS:7537 for traffic signals complete with electronic timer , control board, blinker unit for night operation and slip lane, day time peak hour operation, The controller shall have 12 Signal phases, 25 Signal plan, 24 cycle plan, 24 Signal split/ cycle, 4 Day plan, 32 Cycle switching/ day, 20 Selective Day plan/ annum, 16 Conflicting condition, 28 Signal Line, Solid-state relay switching, RS 422 Communication interphase, Manual override facility, up gradable vehicle actuated system, also have method of traffic control with fixed time isolated intersection and cable less/ cabled interlinking for synchronised operation. The controller unit shall be totally enclosed in 1.6 mm thick metal box including making connection.	Each	1,12,604.00
41.42.1	Add extra for upgrading the existing microprocessor based controller to vehicle actuated microprocessor controller.	Each	41,521.00
41.43	P & F one aspect signal head assembly of MS consisting of signal head optical system with unbreakable polycarbonate colored lens, aluminium reflector, 100 watt GLS brass holder with bulb ,300 mm dia. Signal vision with required supports for overhead mounting on pole etc. complete in all respect including wiring with 1.5 sq.mm (IS:694) copper conductor and connection complete in all respect confirming to IS:7537 (with left/ right/ straight/ or any other marking stencils if required.)	Each	1,839.00
41.44	P, Laying & Jointing R.C.C. class NP-2 (Non pressure) pipes (IS:458) with collars. Jointed with cement mortar of ratio 1:2 including excavation etc. as required.		
41.44.1	100 mm dia internal.	Mtr.	140.00
41.44.2	150 mm dia internal.	Mtr.	159.00
41.45	P & F of bollard having Traffic Caution for road divider made of unbreakable polycarbonate sheet placed on suitable CC platform complete with 4 number FTL fitting (Philips make), Fitting protected with frame and wire mesh complete in all respect.	Each	7,108.00

Code No	Description	Unit	Rate Rs.
41.46	Shifting of standard traffic post at same site including repair and transportation (within municipal limit) as required. Including excavation of pit and grouting with P.C.C. of ratio 1:3:6 from the bottom of pole (0.80 meter. Below ground level) and up to 30 cm above the ground level and 40 cm dia. including painting with rubber coat below ground level as required.	Each	733.00
41.47	P & F of unbreakable polycarbonate colored lens of following size and colour.		
41.47.1	200 mm, colored	Each	297.00
41.47.2	200 mm, white	Each	118.00
41.48	Supply of spare card		
41.48.1	Controller card	Each	3,739.00
41.48.2	Master card/ LLD card	Each	1,185.00
41.48.3	Phase cards up to 3 phase	Each	1,185.00
41.48.4	Relay card	Each	748.00
41.49	Supplying and drawing PVC insulated & sheathed solid/ stranded copper conductor multi core control cable ISI marked (IS:1554) of 1.1 kV grade of approved make as per chapter E11,in existing surface or recessed conduit/ casing capping including making connections etc. as required.		
41.49.1	1.5 sq. mm. unarmoured		
41.49.1.1	2 core	Each	38.00
41.49.1.2	4 core	Each	54.00
41.49.1.3	6 core	Each	78.00
41.49.1.4	8 core	Each	96.00
41.49.1.5	10 core	Each	115.00
41.49.1.6	12 core	Each	134.00
41.49.2	1.5 sq. mm. armoured		
41.49.2.1	2 core	Each	63.00
41.49.2.2	4 core	Each	83.00
41.49.2.3	6 core	Each	109.00
41.49.2.4	8 core	Each	129.00
41.49.2.5	10 core	Each	155.00
41.49.2.6	12 core	Each	159.00
41.49.3	2.5 sq. mm. unarmoured		
41.49.3.1	2 core	Each	50.00
41.49.3.2	4 core	Each	80.00
41.49.3.3	6 core	Each	115.00

Code No	Description	Unit	Rate Rs.
41.49.3.4	8 core	Each	143.00
41.49.3.5	10 core	Each	172.00
41.49.3.6	12 core	Each	204.00
41.49.4	2.5 sq. mm. armoured		
41.49.4.1	2 core	Each	79.00
41.49.4.2	4 core	Each	111.00
41.49.4.3	6 core	Each	148.00
41.49.4.4	8 core	Each	183.00
41.49.4.5	10 core	Each	203.00
41.49.4.6	12 core	Each	231.00
41.50	SITC of following colour retrofit LED matrices traffic light of modular size 300mm Dia. Covered with front clear acrylic sheet and back with aluminum body, InP / InGaN based 5 mm Dia coloured LEDs of ultra bright, super intensity (visible clearly at day time up to distance 300 to 600 Meter, viewing angle of 23 degree). The unit shall be suitable for working on AC supply (160-240 Volt) and life cycle minimum 10 years with power consumption maximum 12 watts, suitable for fast switching		
41.50.1	RED / Amber Round Unit of 190 Nos. LEDs	Each	3,791.00
41.50.2	Green Round Unit of 66 Nos. LEDs	Each	4,739.00

42.0 INSTRUMENTATION

Code No	Description	Unit	Rate Rs.
42.1	Providing, installation, testing and commissioning of followings instruments as per CBCP/SPCB guidelines.		
42.1.1	Online BOD & COD Analyser with Transmitter and Sensor complete with all accessories. COD: Measuring Range: 0-500 mg/L, Accuracy: $\pm 2\%$ or 5 mg/L, Resolution: 1 mg/L or better, Measurement Principle: Absorption - Double Beam UV vis with full spectrum scanning, Cleaning: Automatic Self-Cleaning using compressed Air. BOD: Measuring Range: 0-50 mg/L, Accuracy: ≤ 1 mg/L, Resolution: 1 mg/L or better, Measurement Principle: Absorption - Double Beam UV vis with full spectrum.	No.	20,87,756.00
42.1.2	TSS Analyser with Transmitter and Sensor Measuring Range: 0-10 mg/L, Accuracy: $\leq 3\%$, Resolution: ≤ 0.15 mg/L, Operating Temperature: 0- 40°C, Cleaning: Automatic Self-Cleaning using compressed Air.	No.	2,94,127.00
42.1.3	pH Analyser: Transmitter: Range: 0-14 pH, Power Supply 230 VAC, Input: One Digital Sensor, Output: 4-20mA HART, IP66 Protection / Tx protection cover required / Sensor Range 0-14 pH , able to transmit digital signal to transmitter, calibration data can be transferred to Transmitter , process temp: 65 deg cen/ flow through tee MOC SS.	Set	1,02,944.00
42.1.4	Chlorine Analyser : Transmitter : Range: 0.05 to 20 ppm, Power Supply 230 VAC, Input: 2 Digital Sensors - one for chlorine and second for pH, Output: 4-20mA HART, IP66/67 Protection / Tx protection cover required / Sensor Range 0-14 pH , able to transmit digital signal to transmitter, calibration data can be transferred to Transmitter , process temp: 65 deg cen/ Sensor range:0.05 to 20 mg/l.	Set	2,94,127.00
42.1.5	NH3 Analyser with Transmitter and Sensor Range: 0 - 100 ppm, Repeatability: $\pm 5\%$ of measured vaue, Protection class: IP 68, Accuracy: $\pm 5\%$ of measured value, Output: 4 - 20 mA DC (Isolated)	No.	7,79,736.00
42.1.6	NO3 Analyser with Transmitter and Sensor Range: 0 - 1000 mg/L, Repeatability: $\pm 5\%$ of measured vaue, Protection class: IP 68, Accuracy: $\pm 5\%$ of measured value, Output: 4 - 20 mA DC (Isolated)	No.	7,79,736.00
42.2	Providing, installation, testing and commissioning of Mixed Liquid Suspended Solid (MLSS) Analyser Range: 0.001 - 4000 NTU, Repeatability: $\pm 5\%$ of measured vaue, Protection class: IP 68, Accuracy: $\pm 1\%$ of measured value, Output: 4 - 20 mA DC (Isolated)	No.	3,12,337.00
42.3	Providing, installation, testing and commissioning of Turbidity Analyser : Range - Selective 0 to 4000 NTU, Accuracy: $\pm 2\%$ of reading or ± 0.02 NTU; Compliance to US EPA180.1, With inbuilt transmitter with 4-20 mA output , Relay contacts & Modbus communication.	No.	1,95,227.00

Code No	Description	Unit	Rate Rs.
42.4	Providing, installation, testing and commissioning of Sludge level meter with Transmitter and Sensor Range: 0 - 10 m, Accuracy: $\pm 5\%$, Output: 4 - 20 mA	No.	7,44,998.00
42.5	Providing, installation, testing and commissioning of Total Organic Carbon (TOC) Meter, Measuring Range: 0-25 mg/L, Accuracy: 3%, Resolution: ≤ 0.15 mg/L, Cleaning: Automatic Self-Cleaning using compressed Air	No.	3,72,499.00
42.6	Providing, installation, testing and commissioning of ORP Meter with Transmitter and Sensor, Measuring Range: -2000mV to 2000mV, Accuracy: ≤ 0.01 units of V, Resolution: ≤ 0.01 units of V, Response Time: ≤ 60 seconds, Operating Temperature: 0- 40°C, Repeatability: ± 0.05	No.	1,02,944.00
42.7	Providing, Installation, Testing and Commissioning of Pressure Transmitter : Range: 0-10 Bar / Power Supply: 24 V DC / Output: 4-20 mA with HART / Diaphragm: SS316L / Process Connection: 1/2 "NPT (M) / Accuracy: 0.15% Protection: IP67	No.	22,060.00
42.8	Providing, Installation, Testing and Commissioning of Differential Pressure transmitter sensor material and wetted parts MOC SS316, 4-20mA DC (Isolated) output, IP 65 of IS 13947 Part I, Overall Accuracy $\pm 0.5\%$ of measured value, Range: Adjustable over full span	No.	77,310.00
42.9	Providing, installation, testing and commissioning of Diaphragm Type Pressure Gauges Dial size 150 mm glycerine filled shatterproof glass, Over range protection: 125% of maximum pressure, Material of sensor and other wetted parts: SS type 316, Housing material: Die cast aluminium	No.	2,941.00
42.10	Providing, installation, testing and commissioning of Diaphragm type Pressure Switches Sensing Element: Bellows / Diaphragm, Material of sensor and other wetted parts: SS type 316, Housing: Die cast aluminium, Switch type: Microswitch, Repeatability: $\pm 1\%$ of span, Switch Contacts: 2 NO + 2 NC	No.	7,450.00
42.11	Providing, installation, testing and commissioning of Ultrasonic Differential Level Transmitter : Principle : Time of Flight / Sensor MOC PP / Process Connection 1 1/2 inch BSP or 2 inch BSP Threaded type / Power Supply: 24 V DC / Output: 4- 20mA / Display: Integral display for programming and Display Reading / IP 66 and as per direction of Engineer	No.	2,13,448.00
42.12	Providing, Installation, Testing and Commissioning of Ultrasonic Level Transmitter : Principle : Time of Flight / Sensor MOC PP / Power Supply: 24 V DC / Output: 4- 20mA / Display: Integral display for programming and Display Reading / IP 66/ Accuracy $\pm 1\%$		
42.12.1	0 - 5 Mtr.	No.	70,952.00
42.12.2	0 - 8 Mtr.	No.	1,02,944.00

Code No	Description	Unit	Rate Rs.
42.13	Providing, installation, testing and commissioning of Level Switch (Conductivity) Conductivity Probes, Probe insulation: Teflon, Probe head protection class: IP 65 of IS 13947 Part I, Probe head housing material: Aluminium		
42.13.1	Rigid for lengths of up to 3 Mtr.	No.	35,476.00
42.13.2	Rigid for lengths from 3 - 10 Mtr.	No.	58,040.00
42.14	Providing, installation, testing and commissioning of Capacitance Level Transmitter for tank /sump level Accuracy: ± 1.5 % of span, Probe type: Rod, Probe material: SS type 316, Weather Protection Class: IP 65 of IS 13947 Part I, Output: 4-20 mA DC (Isolated), Material of wetted parts: SS 316, Probe insulation material: Teflon, Stilling pipe: SS type 316 with perforations	No.	79,821.00
42.15	Providing, installation, testing and commissioning of Air Flow Transmitter (Annubar) Accuracy of measuring loop: ± 1 % of full scale, Temperature compensation: required, Weather protection: IP 65 of IS 13947 Part I, Output: 4-20 mA DC (Isolated), Annubar tube: SS 316, Air temperature range: -40° C to 85° C	No.	4,43,451.00
42.16	Providing, Installation, Testing and Commissioning of Electromagnetic Flow Meter : Liner: Polyurethane or Hard Rubber / Electrode MOC: SS316L or CS /Housing : Die Cast Aluminium or CS / Power Supply: 90-230 V AC / Output: 4-20mA with HART / Sensor Cable : 10 mt / Flow Tube or Sensor housing protection IP68 / Process Flange : SS316 / Display : 3 1/2 LCD Display / Cable Connection : 1/2"NPT /Accuracy : 0.5%		
42.16.1	50 mm	No.	1,02,703.00
42.16.2	65 mm	No.	1,05,896.00
42.16.3	80 mm	No.	1,09,976.00
42.16.4	100 mm	No.	1,19,412.00
42.16.5	150 mm	No.	1,39,953.00
42.16.6	200 mm	No.	1,63,545.00
42.16.7	250 mm	No.	2,40,883.00
42.16.8	300 mm	No.	2,77,423.00
42.16.9	350 mm	No.	3,47,764.00
42.16.10	400 mm	No.	3,74,835.00
42.16.11	450 mm	No.	3,89,803.00
42.16.12	500 mm	No.	4,04,770.00
42.16.13	600 mm	No.	4,45,508.00
42.16.14	700 mm	No.	5,61,863.00
42.16.15	800 mm	No.	6,59,997.00
42.16.16	900 mm	No.	7,40,691.00

Code No	Description	Unit	Rate Rs.
42.16.17	1000 mm	No.	8,49,237.00
42.16.18	1200 mm	No.	14,92,313.00
42.17	Providing, Installation, Testing and Commissioning of Ultrasonic Open Channel Flow Meter (Upto 5 metre Head rise): Principle : Time of Flight / Sensor MOC PP / Power Supply: 24 V DC / Output: 4-20mA / Display: Integral display for programming and Display Reading / IP 66/ Accuracy $\pm 1\%$	No.	1,56,181.00
42.18	Providing, Installation, Testing and Commissioning of Ultrasonic Flow Meter Clamp ON Type: Principle: Time of Flight / Type: Clamp on / Protection : IP68 / Power Supply: 230 V AC / Output : 4-20 mA with HART / Accuracy: 2 - 3%		
42.18.1	100-2000 mm	No.	4,36,356.00
42.18.2	100-4000 mm	No.	7,05,975.00
42.19	Providing, Installation, Testing and Commissioning of Ultrasonic Flow Meter Insertion Type: Principle: Time of Flight / Type: Insertion / Protection : IP68 / Power Supply: 230 V AC / Output : 4-20 mA with HART / Accuracy: 2 - 3%		
42.19.1	200 - 1000 mm	No.	7,31,251.00
42.19.2	1000 -4000 mm	No.	7,47,979.00
42.20	Dissolved Oxygen Analyser : Measuring range: 0 to 20mg/l, Optical fluorescence technology , Membrane free operation ;Accuracy:0.01mg/l or $\pm 1\%$ of measured value ; With digital transmitter having output: 4-20mA HART, IP66/67 Protection	Set	2,64,714.00
42.21	Providing, Installation, Testing and Commissioning of Loss of Head Indicator (DPT type) in Filter Beds: Measuring Range: 0 - 3 metre / Field mounted Transmitter with LCD Display / Power Supply: 230 VAC / Output : 4-20mA with HART / IP66 / Sensor 0-3 metre / Principle Time of Flight / Housing PVDF / IP68 Protection	Set	74,500.00
42.22	Providing, Installation, Testing and Commissioning of Rate of Flow Indicator in Inlet and Outlet Filter House: Measuring Range: 0 - 1 metre / Field mounted Transmitter with LCD Display / Power Supply: 230 VAC / Output : 4-20mA with HART / IP66 / Sensor 0-6 metre / Principle Time of Flight / Housing PVDF / IP68 Protection	Set	70,952.00
42.23	Providing, installation, testing and commissioning of ONLINE UPS SYSTEM, Single Phase 230 V, 50 Hz with 2 hour backup SMF battery bank as per specification		
42.23.1	1 KVA	No.	49,926.00
42.23.2	2 KVA	No.	79,128.00
42.23.3	3 KVA	No.	1,01,736.00
42.23.4	5 KVA	No.	1,23,716.00
42.23.5	6 KVA	No.	1,29,996.00
42.23.6	7.5 KVA	No.	1,70,188.00

Code No	Description	Unit	Rate Rs.
42.23.7	10 KVA	No.	1,87,458.00
42.24	Providing, installation, testing and commissioning of ONLINE UPS SYSTEM, 3 Phase 415 V, 50 Hz with 2 hour backup SMF battery bank as per specification		
42.24.1	7.5 KVA	No.	2,45,705.00
42.24.2	10 KVA	No.	2,66,115.00
42.24.3	15 KVA	No.	3,83,080.00
42.24.4	20 KVA	No.	5,05,540.00
42.25	Supply, Installation, testing and commissioning of Battery operated Inline Ultrasonic flow meter with built in GSM/GPRS based communication module with an accuracy of $\pm 1\%$ of measured value, ingress protection IP 66, MOC SS/MS/CS, battery life of min. 5 years, LCD display 7 digit for instantaneous flow and 8 digit for Totalized flow of following sizes:		
42.25.1	Single Path		
42.25.1.1	15 mm	No.	33,892.00
42.25.1.2	20 mm	No.	45,189.00
42.25.1.3	25 mm	No.	56,486.00
42.25.1.4	32 mm	No.	72,302.00
42.25.1.5	40 mm	No.	90,378.00
42.25.1.6	50 mm	No.	1,12,973.00
42.25.1.7	65 mm	No.	1,16,486.00
42.25.1.8	80 mm	No.	1,20,974.00
42.25.1.9	100 mm	No.	1,31,353.00
42.25.1.10	125 mm	No.	1,32,486.00
42.25.1.11	150 mm	No.	1,53,948.00
42.25.1.12	200 mm	No.	1,79,900.00
42.25.1.13	250 mm	No.	2,64,971.00
42.25.1.14	300 mm	No.	3,05,165.00
42.25.2	Double Path		
42.25.2.1	350 mm	No.	3,82,540.00
42.25.2.2	400 mm	No.	4,12,319.00
42.25.2.3	450 mm	No.	4,28,783.00
42.25.2.4	500 mm	No.	4,45,247.00
42.25.2.5	600 mm	No.	4,90,059.00

Code No	Description	Unit	Rate Rs.
42.26	Supply, Installation, testing and commissioning of Battery operated Inline Ultrasonic flow meter + pressure transmitter with built in GSM/GPRS based communication module with an accuracy of $\pm 1\%$ of measured value, ingress protection IP 66, MOC SS/MS/CS, battery life of min. 5 years, LCD display 4 digit for instantaneous flow and pressure in scrolling mode and 8 digit for Totalized flow of following sizes:		
42.26.1	Single Path		
42.26.1.1	15 mm	No.	35,125.00
42.26.1.2	20 mm	No.	46,833.00
42.26.1.3	25 mm	No.	58,541.00
42.26.1.4	32 mm	No.	74,932.00
42.26.1.5	40 mm	No.	93,665.00
42.26.1.6	50 mm	No.	1,17,081.00
42.26.1.7	65 mm	No.	1,20,721.00
42.26.1.8	80 mm	No.	1,25,373.00
42.26.1.9	100 mm	No.	1,36,130.00
42.26.1.10	125 mm	No.	1,37,304.00
42.26.1.11	150 mm	No.	1,59,546.00
42.26.1.12	200 mm	No.	1,86,441.00
42.26.1.13	250 mm	No.	2,74,607.00
42.26.1.14	300 mm	No.	3,16,262.00
42.26.2	Double Path		
42.26.2.1	350 mm	No.	3,96,451.00
42.26.2.2	400 mm	No.	4,27,312.00
42.26.2.3	450 mm	No.	4,44,375.00
42.26.2.4	500 mm	No.	4,61,438.00
42.26.2.5	600 mm	No.	5,07,879.00
42.27	Supply, Installation, testing and commissioning of Battery Operated Ultrasonic Level Transmitters with an accuracy of $\pm 0.25\%$ of full scale, ingress protection IP 65, MOC electronic enclosure Aluminium die cast/SS316, battery life of min. 5 years, LCD display 8 X 1 character as per technical specifications		
42.27.1	0 to 6 Mtr.	No.	78,047.00
42.28	Supply, Installation, testing and commissioning of Battery powered Electromagnetic flow meters with GSM/GPRS based with an accuracy of $\pm 1\%$ of measured value, ingress protection Electronics IP 66 and flow tube IP 68, MOC: lining Neoprene rubber/Hard rubber/PTFE, Flange - SS316/SS304/MS/CS, Electrode - SS		

Code No	Description	Unit	Rate Rs.
	316/Hastalloy, Coil Housing - SS, battery life of min. 5 years, LCD display 5 digit for instantaneous flow and 9 digit for Totalized flow as per technical specifications of following sizes:		
42.28.1	15 mm	No.	33,738.00
42.28.2	20 mm	No.	44,984.00
42.28.3	25 mm	No.	56,230.00
42.28.4	32 mm	No.	71,974.00
42.28.5	40 mm	No.	89,968.00
42.28.6	50 mm	No.	1,12,460.00
42.28.7	65 mm	No.	1,15,956.00
42.28.8	80 mm	No.	1,20,424.00
42.28.9	100 mm	No.	1,30,756.00
42.28.10	125 mm	No.	1,31,884.00
42.28.11	150 mm	No.	1,53,249.00
42.28.12	200 mm	No.	1,79,082.00
42.28.13	250 mm	No.	2,63,767.00
42.28.14	300 mm	No.	3,03,778.00
42.28.15	350 mm	No.	3,80,802.00
42.28.16	400 mm	No.	4,10,444.00
42.28.17	450 mm	No.	4,26,834.00
42.28.18	500 mm	No.	4,43,223.00
42.28.19	600 mm	No.	4,87,831.00
42.29	Supply, Installation, Testing and Commissioning of Online Multi-parameter COD, BOD & TSS Analyzer with data transmission facility as per CPCB/SPCB guidelines.		
	CON-CUBE TERMINAL: High-end IoT (Internet of Things) terminal based on an industrial PC, IP65, widescreen colour graphical display (9") and touch screen, 4xLED functional indicators. Main Memory 2 GB RAM, On-board Memory- 8 GB, highly intuitive use, informative visualization & easy operation: time series, optical spectra and all events in clear text sensor and station management of up to 64 parameters: automatic cleaning, data logging, sample & calibration including history and multipoint calibration, sensor function check, user management and easy data transfer via USB-stick low power operation with less than 3 watts (@ 15 min. measuring interval): wide range AC and DC variants available IoT (Internet of Things) and M2M (Machine to Machine) connectivity: 100 Mb/s Ethernet, 300 Mb/s WLAN and optional worldwide WCDMA 4G interface, remote control (http) and data transfer into "Cloud" via FTP, SSH and TML Process interface to SCADA via Modbus RTU/TCP, SDI-12, Profibus DP, analogue 0/4-20 mA and relay outputs (state) Integration of third-party sensors via antilog 0/4-20 mA and digital	Set	22,79,484.00

Code No	Description	Unit	Rate Rs.
	(solid state) inputs, Modbus RTU/TCP		
42.30	Supply, Installation, Testing and Commissioning of Online Multi-parameter of Ammonia & pH Sensor with data transmission facility as per CPCB/SPCB guidelines. Measuring principle: ISE (ion selective electrodes), automatic cleaning with compressed air unique, non-porous / non-leaking reference electrode for technically unrivalled and consistent performance automatically temperature & potassium compensation Power supply-10 ... 30 VDC, power consumption- 0.72 W Protection class- IP 68	Nos.	5,14,722.00
42.31	Supply, Installation, Testing and Commissioning of Online Multichannel and Multiparameter Transmitter/Converter for Liquid Analysis Sensors as per CPCB/SPCB guidelines.		
42.31.1	Dual Channel (2 Sensor Input)	Nos.	2,06,159.00
42.31.2	Four Channel (4 Sensor Input)	Nos.	4,14,532.00
42.31.3	Six Channel (6 Sensor Input)	Nos.	4,86,376.00
42.31.4	Eight Channel (8 Sensor Input)	Nos.	5,14,878.00
42.31.5	COD/BOD/TSS Sensor Range :- COD - 0-600 mg/l ; BOD - 0-90 mg/l ; TSS 0-1000 mg/l	Nos.	19,34,046.00
42.31.6	TSS Sensor Range :- 0-4 g/l	Nos.	3,94,618.00
42.31.7	NH3 Sensor Range :- 0.1-1000 mg/l	Nos.	6,26,027.00
42.31.8	NO3 Sensor Range :- 0.1-1000 mg/l	Nos.	6,26,027.00
42.31.9	MLSS Sensor Range :- 0-300 g/l	Nos.	3,94,618.00
42.31.10	TOC Sensor Range :- 0-240 mg/l	Nos.	19,34,046.00
42.31.11	ORP Sensor Range :- -1500 to +1500 mV	Nos.	44,251.00
42.31.12	pH Sensor Range :- 0-14	Nos.	47,506.00
42.31.13	FRC Sensor Range :- 0.05 to 20 mg/l	Nos.	1,95,487.00
42.31.14	Turbidity Sensor Range :- 0-4000 FNU	Nos.	3,00,259.00
42.31.15	DO Sensor Range :- 0-20 mg/l	Nos.	2,18,133.00

43.0 MOTOR STARTERS

Code No	Description	Unit	Rate Rs.
43.1	Upto 3.7 KW DOL Starter Feeder with MCB, Main and Aux Contactor, O/L Relay, L/R Selector Switch,3 Indicating lamps, Start-Stop Push Button ,Control MCB Size : 600 (W) x 400 (H) x 600 (D)	Each	22,862.00
43.2	From 3.3 KW to 7.5 KW DOL Starter Feeder with MCB, Main and Aux Contactor, O/L Relay, L/R Selector Switch,3 Indicating lamps, Start-Stop Push Button ,Control MCB (Size : 600 (W) x 400 (H) x 600 (D)	Each	22,862.00
43.3	S & F of Star delta Starter with MCB, Main and Aux Contactor, O/L Relay, L/R Selector Switch,3 Indicating lamps, Start-Stop Push Button ,Control MCB with panel with all accessories with following rating		
43.3.1	7.5 KW to 9.3KW	Each	11,521.00
43.3.2	11 KW	Each	11,521.00
43.3.3	15 KW	Each	12,882.00
43.3.4	18.5 KW	Each	12,882.00
43.3.5	22 KW	Each	21,194.00
43.3.6	30 KW	Each	34,033.00
43.3.7	37KW	Each	34,033.00
43.3.8	45 KW	Each	56,405.00
43.3.9	55 KW	Each	56,405.00
43.4	S & F of STAR DELTA STARTER IN THE EXISTING PANEL WITH FOLLOWING RATING		
43.4.1	7.5 KW to 9.3KW	Each	11,707.00
43.4.2	11 KW	Each	12,605.00
43.4.3	15 KW	Each	15,320.00
43.4.4	18.5 KW	Each	17,068.00
43.4.5	22 KW	Each	25,230.00
43.4.6	30 KW	Each	25,230.00
43.4.7	37KW	Each	35,232.00
43.4.8	45 KW	Each	50,059.00
43.4.9	55 KW	Each	61,170.00
43.5	55 KW to 90 KW Soft Starter Feeder without Soft Starter with 3 phase Size: 600 (W) x 900 (H) x 600 (D)	Each	70,344.00

Code No	Description	Unit	Rate Rs.
43.6	SITC of Soft Starters with panel supplied by manufacturer conforming to applicable standards with logic inputs & outputs, relay outputs and analogue outputs, plug in I/O connections, display of electrical parameters, state of load & operating time, RS 485 serial link for connections to Modbus.		
43.6.1	22 KW	Each	93,160.00
43.6.2	30 KW	Each	1,03,704.00
43.6.3	37 KW	Each	1,13,555.00
43.6.4	45 KW	Each	1,26,619.00
43.6.5	55 KW	Each	1,49,852.00
43.6.6	75 KW	Each	1,74,568.00
43.6.7	90 KW	Each	1,96,964.00
43.6.8	110 KW	Each	2,18,067.00
43.6.9	125 KW	Each	2,67,308.00
43.6.10	160 KW	Each	3,13,031.00
43.6.11	200KW	Each	3,42,928.00
43.6.12	225 KW	Each	3,92,169.00
43.7	PROVIDING AND FIXING OF SOFT STARTER IN EXISTING PANEL		
43.7.1	22 KW	Each	58,226.00
43.7.2	30 KW	Each	64,815.00
43.7.3	37 KW	Each	70,972.00
43.7.4	45 KW	Each	85,556.00
43.7.5	55 KW	Each	93,658.00
43.7.6	75 KW	Each	1,09,105.00
43.7.7	90 KW	Each	1,37,191.00
43.7.8	110 KW	Each	1,52,315.00
43.7.9	125 KW	Each	2,13,630.00
43.7.10	160 KW	Each	2,38,553.00
43.7.11	200KW	Each	2,84,840.00
43.7.12	225 KW	Each	3,24,939.00
43.8	SITC of Variable Frequency Drives with panel supplied by manufacturer conforming to applicable standards with logic inputs & outputs, relay outputs and analogue outputs, plug in I/O connections, display of electrical parameters, state of load & operating time, RS 485 serial link for connections to Modbus.		
43.8.1	0.75 KW	Each	22,308.00

Code No	Description	Unit	Rate Rs.
43.8.2	1.1 KW	Each	22,740.00
43.8.3	1.5 KW	Each	23,171.00
43.8.4	2.2 KW	Each	26,520.00
43.8.5	3 KW	Each	27,033.00
43.8.6	4/3.7 KW	Each	27,546.00
43.8.7	5.5 KW	Each	28,519.00
43.8.8	7.5 KW	Each	42,346.00
43.8.9	11 KW	Each	47,802.00
43.8.10	15 KW	Each	55,201.00
43.8.11	18.5 KW	Each	65,409.00
43.8.12	22 KW	Each	85,286.00
43.8.13	30 KW	Each	1,09,363.00
43.8.14	37 KW	Each	1,27,956.00
43.8.15	45 KW	Each	1,53,474.00
43.8.16	55 KW	Each	1,69,178.00
43.8.17	75 KW	Each	1,91,096.00
43.8.18	90 KW	Each	2,25,570.00
43.8.19	110 KW	Each	2,59,101.00
43.8.20	132 KW	Each	3,42,928.00
43.8.21	160 KW	Each	4,03,892.00
43.8.22	200 KW	Each	4,55,919.00
43.8.23	250 KW	Each	5,53,080.00
43.8.24	250 KW	Each	5,97,925.00
43.8.25	315 KW	Each	7,17,511.00

44.0 DISMANTLING OF EXISTING STRUCTURE/ MISC. ITEMS

Code No	Description	Unit	Rate Rs.
44.1	Dismantling of existing LT/HTelectric lines including poles/towers, ACSR conductors, guard wires, stay wire, insulators and other electrical items of the pole coming along the alignment of the road or in the plant premises and removal and transportation as well as disposal of all the items as per the direction of engineer in charge.(Serviceable material or can-dum material.)		
44.1.1	Dismantling of 33KV Lattice Tower (580 kg/450kg) with all accessories brackets, tophamper, chakri, V-Cross arms guard bracket, stay, insulators (pin /disc) etc.	Each	3,789.00
44.1.2	Dismantling of 33KV Rail /any type of pole with all accessories brackets, tophamper, chakri, V-Cross arms guard bracket, stay, insulators (pin /disc) etc.	Each	2,111.00
44.1.3	Dismantling of 11KV Lattice Tower with all accessories brackets, tophamper, chakri, V-Cross arms guard bracket, stay, insulators (pin /disc) etc.	Each	2,379.00
44.1.4	Dismantling of 11KVRail/cement Pole /joist/(RSJ - 9 or 10 mtr height with earth wire and brackets, tophamper, chakri, V-Cross arms guard bracket, stay, insulators (pin /disc) etc.	Each	2,025.00
44.1.5	Dismantling of Composite line pole with 11KV and LT (RSJ 10/9 mtr height pole) ACSR conductors, V-Cross arms, top hamper, brackets, insulators, stay etc.	Each	1,738.00
44.1.6	Dismantling of LT line /joist/rail pole (PCC 8/9 mtr height) with existing street light fixtures, brackets, top hamper, earth guarding bracket, insulators, stay etc with ACSR conductor, 3 phase/ single phase, one neutral one earth wire and one street light phase)	Each	1,484.00
44.1.7	Dismantling of LT line pole (PCC - 8/9 mtr height) single phase/3 phase & 5 wires bracket, top hamper, insulators(pin or disc) earth wire and conductors.	Each	981.00
44.1.8	Dismantling and rerolling of 33KV conductor any type	Rmt	11.00
44.1.9	Dismantling and rerolling of 11KV conductor any type	Rmt	8.00
44.1.10	Dismantling and rerolling of LT conductor any type	Rmt	5.00
44.1.11	Dismantling and rerolling of earth conductor any type	Rmt	2.00
44.1.12	Dismantling of Telephone pole (Tubular Type).	Nos	578.00
44.1.13	Dismantling and reinstallation of 11KV Feeder pillar box any type	Each	4,176.00
44.1.14	Dismantling and re installation of LT Feeder pillar box any type	Each	3,642.00

Code No	Description	Unit	Rate Rs.
44.1.15	Dismantling of the Double Pole structure with mounted transformers, distribution boards G.O, D.O, street light panel, stays, earthing wire pipe, cabling, etc & installing the same transformer on the structure newly erected along with distribution board along with erection, testing and commissioning.	Each	5,955.00
44.1.16	Dismantling of the four pole structure with mounted transformers along with distribution boards G.O, D.O, street light panel, stays, earthing wire pipe, cabling etc & installing the same transformer on the structure newly erected along with distribution board along with erection, testing and commissioning.	Each	24,117.00

45.0 SHIFTING of OVER-HEAD LINES (Dismantling & Re-erecting the Same)

Code No	Description	Unit	Rate Rs.
45.1	Dismantling and re - erection of P.C.C./R.C.C. pole as per REC manual no 15/1979 conforming to IS: 2905/1966 as per requirement of sec3 in alignment, including excavation of pit and back filling with stone aggregate/boulders and soil in 0.45m consolidating each deposited layer of 0.45m by ramming and watering etc complete in all respect		
45.1.1	8.0 Mtr (200 Kg) long as per Discom specification	Each	885.00
45.1.2	9.0 Mtr (200 Kg) long as per Discom specification	Each	1,083.00
45.1.3	9.0 Mtr (400 Kg) long as per Discom specification	Each	1,274.00
45.1.4	11.0 Mtr (400 Kg) long as per Discom specification	Each	1,435.00
45.2	Dismantling and re - erection of GI stay set as per Discom specification complete with long stay rod with anchor plate including stay clamps turn buckle and G.I stay wire tightened through strain insulator, in cement concrete 1:3:6 including excavation of pit-re-filling etc as reqd.		
45.2.1	Stay set of dia 20mm,2.4m long stay rod and anchor plate 380x380x6.4mm	Each	654.00
45.2.2	Stay set of dia 16mm,1.8m long stay rod and anchor plate 300x300x6.4mm	Each	568.00
45.3	Dismantling and re- fixing of cross arms as per Discom specification, made out from angle iron 50mmx 50mmx6mm having 'D' support for each insulator including all necessary nuts, bolts, holding clamp of 50x6mm flat etc as reqd. on existing pole or on wall and special accessories for XLPE insulated ABC overhead cable like I- hook, Dead End clamp assembly, Suspension clamp assembly as required		
45.3.1	LT Bracket with clamp 1200 mm long	Each	37.00
45.3.2	LT Bracket with clamp 600 mm long	Each	33.00
45.3.3	Suspension clamp with eye hook (REC Standard) & pole clamp	Each	97.00
45.3.4	Dead clamp with eye hook (REC Standard) & pole clamp	Each	97.00
45.3.5	Type A/B LT connectors (REC Standard) suitable for ABC Cable	Each	48.00
45.4	Dismantling and re - fixing of LT porcelain pin insulator as per IS 1445-1997 suitable for working voltage 1100 volts including all accessories like hot dip GI forged spindle of 260mm long and nuts etc as reqd as per Discom specification.		
45.4.1	105mm x 65mm	Each	8.00
45.4.2	105mm x 80mm	Each	12.00
45.4.3	120mm x 85mm	Each	15.00

Code No	Description	Unit	Rate Rs.
45.5	Dismantling and re - fixing of porcelain shackle insulator as per IS:1443 1979 suitable for working on 1100 volts including hot dipped GI accessories and heavy duty hardwares etc as required as per Discom specification.		
45.5.1	75mm x 90mm	Each	19.00
45.5.2	100mm x 110mm	Each	25.00
45.6	Labour cost for re-painting over the existing poles above ground level including overhang making surface well clean and apply two coats of aluminium/ enamel paint as approved with required T & P etc as required.		
45.6.1	Pole of 7 to 9 mtr long		
45.6.1.1	with one overhang	Each	20.00
45.6.1.2	with two overhang	Each	23.00
45.6.2	Pole of 10 to 12 mtr long		
45.6.2.1	with one overhang	Each	30.00
45.6.2.2	with two overhang	Each	34.00
45.7	Dismantling and re - drawing overhead steel core Aluminium conductor (ACSR) ISI marked (IS 398 part II-1996) on existing cross arms through insulator with all necessary T&P required including binding and twisting etc. complete in all respect as required as per Discom specification.		
45.7.1	30 Sqmm of (6+1) 2.59mm (Weasel)	Mtr	3.00
45.7.2	50 Sqmm of (6+1) 3.35 mm (Rabbit)	Mtr	4.00
45.7.3	50 Sqmm of (6+1) 3.35 mm (Insulated Rabbit)	Mtr	5.00
45.7.4	80 Sqmm of (6+1) 4.09 mm (Raccon)	Mtr	4.00
45.7.5	100 sqmm of (6/4.72 mm+1/1.57 mm) (Dog)	Mtr	5.00
45.8	Dismantling and re fixing of fuse box size 250(H) x 200(W) x 150(D) mm with base shape accommodating the pole partly, fabricated of 1.6mm MS sheet with hinged cover, dust and vermin proof, rubber gasket, locking arrangement, duly holded with 2 nos pole clamps of 25mm x 3mm flat with nut and bolts, complete with anticorrosive treatment, finished with two coat of approved enamel paint. The box shall be provided with 2/ 4 nos copper bus bar 150 x 20 x 3mm with brass screws suitable supports, earth terminal, inter connection, brass cable gland upto 10 Sqmm size cable, 2nos 16 Amp KitKat fuse complete in all respect.	Each	90.00
45.9	Dismantling and re - fixing of 'V' type cross arms made of MS channel on the existing poles complete including all necessary nut and bolt etc with clamps as per Discom specification.		
45.9.1	11kV cross arms (75 x 40 x 6.8 kg/mtr)	Each	60.00
45.9.2	11kV cross arms (75 x 40 x 5.7 kg/mtr)	Each	51.00

Code No	Description	Unit	Rate Rs.
45.10	Dismantling and re - fixing of top hamper on the existing pole complete including nut bolts etc as required.		
45.10.1	Vertical type		
45.10.1.1	11 kV (7m long) (65 x 65 x6mm angle)	Each	23.00
45.10.1.2	11 kV (50 x 6 mm flat)	Each	7.00
45.11	Dismantling and re - fixing of Cross arms made out from 100 x 50 x 6mm MS channel complete in all respect as required including nuts and bolts and clamp as per Discom specification etc as required.		
45.11.1	1.3 m long	Each	60.00
45.11.2	2 x 1.3 m long	Each	120.00
45.12	Dismantling and re - fixing of 50 x 6mm MS strip having two holes of 5/8" dia with cut for providing 6/8 SWG GI wire.		
45.12.1	100 mm long	Each	2.00
45.12.2	80 mm long	Each	1.00
45.13	Dismantling and re - fixing of a set of 4 nos V cross arm made out of MS angle with bracing of MS flat 50 x 6 mm with nuts and bolts (as per specification of Discom) for 11 kV made up of 65 x 65 x6mm MS angle.	Each	331.00
45.14	Dismantling and re - fixing of pilot patti made from MS flat (as per specification of Discom) and suitable for PCC pole (50 x 6mm)/ R.S. joist (50 x 6mm).	Each	4.00
45.15	Dismantling and re - fixing 11kV pin insulator(IS 731/ 1971) with minimum creepage distance of 300mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc (as per specification of Discom).	Each	19.00
45.16	Dismantling and re-fixing 11kV Disc insulator (IS 731/ 1971) with minimum creepage distance of 300mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc (as per specification of Discom).		
45.16.1	B & S type insulator with hardware	Each	63.00
45.16.2	T & C type insulator with hardware	Each	63.00
45.17	Dismantling and re- fixing of PG clamps on overhead lines/jumpers, made of aluminium alloy 4600 of IS 617-1994 (with latest amendment if any) with steel nut and bolts conforming to IS 1363-1992 & IS 1367/1979-80 (with latest amendments if any) all ferrous metal parts intended for outdoor use except those made of stainless steel shall be protected by hot dip galvanising in accordance with IS 2633-1986 complete in all respect as required for ACSR conductor.		
45.17.1	Dog	Each	9.00
45.17.2	Racoon	Each	9.00
45.17.3	Weasel/Rabbit	Each	9.00

Code No	Description	Unit	Rate Rs.
45.18	Dismantling and re-laying earth conductor from electrode to source in ground/ floor/ wall on iron saddles etc as required including making connection duly soldered or crimped 7/3.15 mm hot dipped stay wire.	Mtr	3.00
45.19	Dismantling and re-fixing of straight type 1.5 mtr long cross arms made out from MS angle of size 50 x 50 x 6mm for guarding on existing poles complete including 2 nos 150mm long MS flat of size 50 x 6mm bend into shape at both the ends duly welded clamps, nut and bolt etc as required.	Each	170.00
45.20	Dismantling and re - fixing of pillar box made of 2mm CRCA MS sheet of 415 volts 3 phase 4 wire triple pole and neutral type, complete in all respect as required. Including knife switch, HRC fuses with copper one piece U contacts base, brass studs and nuts, copper busbar for main and interconnection, MS angle frame of 50 x 50 x 6 mm grouted with C.C. of M-10 grade to achieve the height of 1.5 feet above the road level suitable for four outgoing.(400Amp capacity)	Each	4,119.00
45.21	Dismantling and re - fixing 100 Amp, 11kV Horn gap fuse set IS 9385 on existing DP structure with 6 nos 24kV/22kV post insulator (IS:5350 part III), hot dipped hard ware, fuse wire of required size etc. complete in all respect as per specification given by Discom. (Type tested by ERDA/CPRI)	Each	828.00
45.22	Dismantling and re - fixing of 11kV, 400 Amp 3pole, central pot rotating double break type isolator (IS:9921 part I toV) without earth blade operating mechanism with GI spring loaded reverse loop type fixed contact, solid hard drawn electrolytic copper tubular moving contact with silver/ nickel plated at end points, 9 nos post insulator of 12 kV (IS:2554 & IS 5350 part III), hot dipped galvanising hard ware, nut, bolts etc complete in all respect as per specification of Discom.(Type tested by ERDA/CPRI.)	Each	1,794.00
45.23	Dismantling and re - fixing of distribution type Lightning arrestor 9 kV, 5 kA (IS:3070) with mounting breaking to be installed on existing DP structure. (Type tested by ERDA/CPRI.)	Each	828.00
45.24	Dismantling and re - fixing double pole structure for 11/0.4 Kv substation as per Discom specification complete in all respect as required including nuts and bolts etc (excluding the cost of poles) made of MS channel of 4 nos 100 x 50 x 6mm and 4 nos 75 x 40 x 6mm and MS flat 50 x 6mm as per Discom specifications.	Each	1,156.00
45.25	Dismantling and re - fixing of 11 kV Danger plates as per specification of Discom on the existing poles complete in all respect as per Discom specification.	Each	14.00
45.26	Dismantling and re- fixing of single pole mounted structure set for isolator as per Discom specification complete in all respect with nuts and bolts as required MS flat 50 x 6mm, MS angle 65 x 65 x6mm, MS channel 100 x 50 x 6mm. (Excluding cost of pole).	Each	376.00
45.27	Dismantling and re - erection of RS joist of 116 x 100 mm, 11Meter	Each	1,435.00

Code No	Description	Unit	Rate Rs.
	long with the welded/ bolted top hamper 65 x 65 x 6mm (0.7 Mtr long) making necessary arrangement for fixing 11 kV 'V' cross arm, LT bracket and guard wire bracket, grouted in ground 1/6 th of its length and fixed with cement, coarse and grit in 1:3:6 ratio in 1/5th of its length (40cm dia) from the bottom including two coats of aluminium paint over the complete length of joist.		
45.28	Dismantling and re - drawing of XLPE insulated LT bunched Aluminium conductor cable confirming to IS 14255/1995 and IS 398 (Pt-4)/ 1994 on existing cross arms through I hook with all necessary T&P required including binding and twisting etc. complete in all respect as required as per Discom specification.		
45.28.1	1X16 sq. mm. (insulated)	Mtr	4.00
45.28.2	1 X 25 sq. mm. + 1X25 sq. mm. (Bared)	Mtr	4.00
45.28.3	1 X 25 sq. mm. + 1X25 sq. mm. (insulated)	Mtr	4.00
45.28.4	3 X 16 sq. mm. + 1X16 sq. mm. (Bared)	Mtr	4.00
45.28.5	3 X 16 sq. mm. + 1X16 sq. mm. (insulated)	Mtr	4.00
45.28.6	3 X 25 sq. mm. + 1X25 sq. mm. (Bared)	Mtr	6.00
45.28.7	3 X 25 sq. mm. + 1X25 sq. mm. (insulated)	Mtr	6.00
45.28.8	3 X 50 sq. mm. + 1X35 sq. mm. (Bared)	Mtr	13.00

46.0 PLC & SCADA

Code No	Description	Unit	Rate Rs.
46.1	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 800 mm X 500 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:	Lot	6,14,460.00
	DI	No. 30	
	DO	No. 26	
	AI	No. 6	
	AO	No. 2	
	MCB 16A DP	No. 2	
	MCB 6A DP	No. 6	
	SMPS 100-240VAC/ 4.5A / 24 VDC	No. 1	
	Selector Switch (Auto/Manual) & Local / Remote	No. 2	
	Control Relays	Lot 1	
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	No. 1	
	Electronic Hooter	No. 1	
	Control Transformer 200VA	No. 1	
	Emergency STOP Push Button	No. 1	
	Panel Cooling Fan & Filter	No. 2	
	Panel Light with Door Switch, 7W	No. 1	
	Control Indication Lamp for 24VDC, 220VAC	No. 3	
	Push Button	No. 3	
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	Lot 1	
	Panel Hardware, lugs, terminations, ferrules, name plate Etc.	Lot 1	
	UTILITY SOCKET 16A, 3 PIN	No. 2	
	HMI Display 10 Inch, Colour	No. 1	
	Isolators Dual Output, 24VDC	Lot 1	

Code No	Description	Unit	Rate Rs.
46.2	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 800 mm X 500 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:	Lot	8,23,935.00
	DI	No. 46	
	DO	No. 42	
	AI	No. 10	
	AO	No. 4	
	MCB 16A DP	No. 2	
	MCB 6A DP	No. 6	
	SMPS 100-240VAC/ 4.5A / 24 VDC	No. 1	
	Selector Switch (Auto/Manual) & Local / Remote	No. 2	
	Control Relays	Lot 1	
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	No. 1	
	Electronic Hooter	No. 1	
	Control Transformer 200VA	No. 1	
	Emergency STOP Push Button	No. 1	
	Panel Cooling Fan & Filter	No. 2	
	Panel Light with Door Switch, 7W	No. 1	
	Control Indication Lamp for 24VDC, 220VAC	No. 3	
	Push Button	No. 3	
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	Lot 1	
	Panel Hardware, lugs, terminations, ferrules, name plate Etc.	Lot 1	
	UTILITY SOCKET 16A, 3 PIN	No. 2	
	HMI Display 10 Inch, Colour	No. 1	
	Isolators Dual Output, 24VDC	Lot 1	
46.3	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 800 mm X 500 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:	Lot	10,82,288.00
	DI	No. 62	

Code No	Description	Unit	Rate Rs.
	DO	No. 58	
	AI	No. 14	
	AO	No. 6	
	MCB 16A DP	No. 2	
	MCB 6A DP	No. 6	
	SMPS 100-240VAC/ 4.5A / 24 VDC	No. 1	
	Selector Switch (Auto/Manual) & Local / Remote	No. 2	
	Control Relays	Lot 1	
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	No. 1	
	Electronic Hooter	No. 1	
	Control Transformer 200VA	No. 1	
	Emergency STOP Push Button	No. 1	
	Panel Cooling Fan & Filter	No. 2	
	Panel Light with Door Switch, 7W	No. 1	
	Control Indication Lamp for 24VDC, 220VAC	No. 3	
	Push Button	No. 3	
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	Lot 1	
	Panel Hardware, lugs, terminations, ferrules, name plate Etc.	Lot 1	
	UTILITY SOCKET 16A, 3 PIN	No. 2	
	HMI Display 10 Inch, Colour	No. 1	
	Isolators Dual Output, 24VDC	Lot 1	
46.4	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 800 mm X 500 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:	Lot	12,14,955.00
	DI	No. 86	
	DO	No. 82	
	AI	No. 18	
	AO	No. 10	
	MCB 16A DP	No. 2	
	MCB 6A DP	No. 6	

Code No	Description	Unit	Rate Rs.
	SMPS 100-240VAC/ 4.5A / 24 VDC	No. 1	
	Selector Switch (Auto/Manual) & Local / Remote	No. 2	
	Control Relays	Lot 1	
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	No. 1	
	Electronic Hooter	No. 1	
	Control Transformer 200VA	No. 1	
	Emergency STOP Push Button	No. 1	
	Panel Cooling Fan & Filter	No. 2	
	Panel Light with Door Switch, 7W	No. 1	
	Control Indication Lamp for 24VDC, 220VAC	No. 3	
	Push Button	No. 3	
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	Lot 1	
	Panel Hardware, lugs, terminations, ferrules, name plate Etc.	Lot 1	
	UTILITY SOCKET 16A, 3 PIN	No. 2	
	HMI Display 12 Inch, Colour	No. 1	
	Isolators Dual Output, 24VDC	Lot 1	
46.5	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 800 mm X 500 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:	Lot	13,82,535.00
	DI	No. 102	
	DO	No. 98	
	AI	No. 22	
	AO	No. 16	
	MCB 16A DP	No. 2	
	MCB 6A DP	No. 6	
	SMPS 100-240VAC/ 4.5A / 24 VDC	No. 1	
	Selector Switch (Auto/Manual) & Local / Remote	No. 2	
	Control Relays	Lot 1	
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	No. 1	

Code No	Description	Unit	Rate Rs.
	Electronic Hooter	No. 1	
	Control Transformer 200VA	No. 1	
	Emergency STOP Push Button	No. 1	
	Panel Cooling Fan & Filter	No. 2	
	Panel Light with Door Switch, 7W	No. 1	
	Control Indication Lamp for 24VDC, 220VAC	No. 3	
	Push Button	No. 3	
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	Lot 1	
	Panel Hardware, lugs, terminations, ferrules, name plate Etc.	Lot 1	
	UTILITY SOCKET 16A, 3 PIN	No. 2	
	HMI Display 12 Inch, Colour	No. 1	
	Isolators Dual Output, 24VDC	Lot 1	
46.6	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 1000 mm X 600 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:- Programmable Logic Controller (PLC) with Dual Hot Redundant CPU, Power supply, Communication Module, IO & Processor rack (Standard DC), Back up Interface/Expansion Module, Rack (Backplane) 10 slots for IO and Processor. SCADA software shall have facility VPN, OPC, Smart Client, Web Enabled, Automation Report Generation, Archiving, Trends, Data Logging, etc.	Lot	30,72,300.00
	DI	No. 118	
	DO	No. 114	
	AI	No. 24	
	AO	No. 12	
	MCB 16A DP	No. 2	
	MCB 6A DP	No. 6	
	SMPS 100-240VAC/ 4.5A / 24 VDC	No. 1	
	Selector Switch (Auto/Manual) & Local / Remote	No. 2	
	Control Relays	Lot 1	
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	No. 1	
	Electronic Hooter	No. 1	

Code No	Description	Unit	Rate Rs.
	Control Transformer 200VA	No. 1	
	Emergency STOP Push Button	No. 1	
	Panel Cooling Fan & Filter	No. 2	
	Panel Light with Door Switch, 7W	No. 1	
	Control Indication Lamp for 24VDC, 220VAC	No. 3	
	Push Button	No. 3	
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	Lot 1	
	Panel Hardware, lugs, terminations, ferrules, name plate Etc.	Lot 1	
	UTILITY SOCKET 16A, 3 PIN	No. 2	
	HMI Display 15 Inch, Colour	No. 1	
	Isolators Dual Output, 24VDC	Lot 1	
	Ethernet Switch (Managed)	No. 2	
	Operator Station including, Core i5 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	No. 2	
	Engineering Station including, Core i7 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	No. 2	
	Run Time & Development Programming and Troubleshooting software for PLC, HMI, SCADA, VPN, Web Client - OWS	No. 1	
	Black and white, A4 Size Laser Printer , copier, Scan.	No. 2	
	Hi-Speed USB 2.0 port; built-in Fast Ethernet 10/100Base-TX network port; built-in WIFI 802.11b/g/n		
	Online UPS 3 KVA with 60 min Backup time.	No. 1	
46.7	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 1000 mm X 600 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:- Programmable Logic Controller (PLC) with Dual Hot Redundant CPU, Power supply,	Lot	37,70,550.00

Code No	Description	Unit	Rate Rs.
	Communication Module, IO & Processor rack (Standard DC), Back up Interface/Expansion Module, Rack (Backplane) 10 slots for IO and Processor. SCADA software shall have facility VPN, OPC, Smart Client, Web Enabled, Automation Report Generation, Archiving, Trends, Data Logging, etc.		
	DI	No.	166
	DO	No.	162
	AI	No.	24
	AO	No.	16
	MCB 16A DP	No.	2
	MCB 6A DP	No.	6
	SMPS 100-240VAC/ 4.5A / 24 VDC	No.	1
	Selector Switch (Auto/Manual) & Local / Remote	No.	2
	Control Relays	Lot	1
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	No.	1
	Electronic Hooter	No.	1
	Control Transformer 200VA	No.	1
	Emergency STOP Push Button	No.	1
	Panel Cooling Fan & Filter	No.	2
	Panel Light with Door Switch, 7W	No.	1
	Control Indication Lamp for 24VDC, 220VAC	No.	3
	Push Button	No.	3
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	Lot	1
	Panel Hardware, lugs, terminations, ferrules, name plate Etc.	Lot	1
	UTILITY SOCKET 16A, 3 PIN	No.	2
	HMI Display 15 Inch, Colour	No.	1
	Isolators Dual Output, 24VDC	Lot	1
	Ethernet Switch (Managed)	No.	2
	Operator Station including, Core i5 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	No.	2
	Engineering Station including, Core i7	No.	2

Code No	Description	Unit	Rate Rs.
	processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.		
	Run Time & Development Programming and Troubleshooting software for PLC, HMI, SCADA, VPN, Web Client - OWS	No. 1	
	Black and white, A4 Size Laser Printer , copier, Scan.	No. 2	
	Hi-Speed USB 2.0 port; built-in Fast Ethernet 10/100Base-TX network port; built-in Wi-Fi___33 802.11b/g/n		
	Online UPS 3 KVA with 60 min Backup time.	No. 1	
46.8	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 1200 mm X 800 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:- Programmable Logic Controller (PLC) with Dual Hot Redundant CPU, Power supply, Communication Module, IO & Processor rack (Standard DC), Back up Interface/Expansion Module, Rack (Backplane) 10 slots for IO and Processor. SCADA software shall have facility VPN, OPC, Smart Client, Web Enabled, Automation Report Generation, Archiving, Treands, Data Logging, etc.	Lot	47,48,100.00
	DI	No. 230	
	DO	No. 226	
	AI	No. 32	
	AO	No. 24	
	MCB 16A DP	No. 2	
	MCB 6A DP	No. 6	
	SMPS 100-240VAC/ 4.5A / 24 VDC	No. 1	
	Selector Switch (Auto/Manual) & Local / Remote	No. 2	
	Control Relays	Lot 1	
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	No. 1	
	Electronic Hooter	No. 1	
	Control Transformer 200VA	No. 1	
	Emergency STOP Push Button	No. 1	
	Panel Cooling Fan & Filter	No. 2	

Code No	Description	Unit	Rate Rs.
	Panel Light with Door Switch, 7W	No. 1	
	Control Indication Lamp for 24VDC, 220VAC	No. 3	
	Push Button	No. 3	
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	Lot 1	
	Panel Hardware, lugs, terminations, ferrules, name plate Etc.	Lot 1	
	UTILITY SOCKET 16A, 3 PIN	No. 2	
	HMI Display 15 Inch, Colour	No. 1	
	Isolators Dual Output, 24VDC	Lot 1	
	Ethernet Switch (Managed)	No. 2	
	Operator Station including, Core i5 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	No. 2	
	Engineering Station including, Core i7 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	No. 2	
	Run Time & Development Programming and Troubleshooting software for PLC, HMI, SCADA, VPN, Web Client - OWS	No. 1	
	Black and white, A4 Size Laser Printer , copier, Scan.	No. 2	
	Hi-Speed USB 2.0 port; built-in Fast Ethernet 10/100Base-TX network port; built-in Wi-Fi___33 802.11b/g/n		
	Online UPS 3 KVA with 60 min Backup time.	No. 1	
46.9	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 1200 mm X 800 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:- Programmable Logic Controller (PLC) with Dual Hot Redundant CPU, Power supply, Communication Module, IO & Processor rack (Standard DC), Back up Interface/Expansion Module, Rack (Backplane) 10 slots for IO and Processor. SCADA software shall have facility VPN, OPC, Smart Client, Web Enabled, Automation Report Generation, Archiving, Treands, Data Logging, etc.	Lot	54,46,350.00

Code No	Description	Unit	Rate Rs.
	DI	No.	310
	DO	No.	306
	AI	No.	40
	AO	No.	24
	MCB 16A DP	No.	2
	MCB 6A DP	No.	6
	SMPS 100-240VAC/ 4.5A / 24 VDC	No.	1
	Selector Switch (Auto/Manual) & Local / Remote	No.	2
	Control Relays	Lot	1
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	No.	1
	Electronic Hooter	No.	1
	Control Transformer 200VA	No.	1
	Emergency STOP Push Button	No.	1
	Panel Cooling Fan & Filter	No.	2
	Panel Light with Door Switch, 7W	No.	1
	Control Indication Lamp for 24VDC, 220VAC	No.	3
	Push Button	No.	3
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	Lot	1
	Panel Hardware, lugs, terminations, ferrules, name plate Etc.	Lot	1
	UTILITY SOCKET 16A, 3 PIN	No.	2
	HMI Display 15 Inch, Colour	No.	1
	Isolators Dual Output, 24VDC	Lot	1
	Ethernet Switch (Managed)	No.	2
	Operator Station including, Core i5 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	No.	2
	Engineering Station including, Core i7 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	No.	2

Code No	Description	Unit	Rate Rs.
46.10	Run Time & Development Programming and Troubleshooting software for PLC, HMI, SCADA, VPN, Web Client - OWS	No. 1	
	Black and white, A4 Size Laser Printer , copier, Scan.	No. 2	
	Hi-Speed USB 2.0 port; built-in Fast Ethernet 10/100Base-TX network port; built-in WIFI 802.11b/g/n		
	Online UPS 3 KVA with 60 min Backup time.	No. 1	
	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 1200 mm X 800 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:- Programmable Logic Controller (PLC) with Dual Hot Redundant CPU, Power supply, Communication Module, IO & Processor rack (Standard DC), Back up Interface/Expansion Module, Rack (Backplane) 10 slots for IO and Processor. SCADA software shall have facility VPN, OPC, Smart Client, Web Enabled, Automation Report Generation, Archiving, Trends, Data Logging, etc.	Lot	65,63,550.00
	DI	No. 438	
	DO	No. 434	
	AI	No. 48	
	AO	No. 24	
	MCB 16A DP	No. 2	
	MCB 6A DP	No. 6	
	SMPS 100-240VAC/ 4.5A / 24 VDC	No. 1	
	Selector Switch (Auto/Manual) & Local / Remote	No. 2	
	Control Relays	Lot 1	
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	No. 1	
	Electronic Hooter	No. 1	
	Control Transformer 200VA	No. 1	
	Emergency STOP Push Button	No. 1	
	Panel Cooling Fan & Filter	No. 2	
	Panel Light with Door Switch, 7W	No. 1	
	Control Indication Lamp for 24VDC, 220VAC	No. 3	
	Push Button	No. 3	

Code No	Description	Unit	Rate Rs.
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	Lot 1	
	Panel Hardware, lugs, terminations, ferrules, name plate Etc.	Lot 1	
	UTILITY SOCKET 16A, 3 PIN	No. 2	
	HMI Display 15 Inch, Colour	No. 1	
	Isolators Dual Output, 24VDC	Lot 1	
	Ethernet Switch (Managed)	No. 2	
	Operator Station including, Core i7 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	No. 2	
	Engineering Station including, Core i7 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	No. 2	
	Run Time & Development Programming and Troubleshooting software for PLC, HMI, SCADA, VPN, Web Client - OWS	No. 1	
	Black and white, A4 Size Laser Printer , copier, Scan.	No. 2	
	Hi-Speed USB 2.0 port; built-in Fast Ethernet 10/100Base-TX network port; built-in WIFI 802.11b/g/n		
	Online UPS 5 KVA with 60 min Backup time.	No. 1	
46.11	Design, Manufacture, Supply, Installation, Testing and Commissioning of Indoor type PLC Panel of size approx. 1200 mm X 800 mm X 2000mm (LBH) , Fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration, necessary programming software for PLC & SCADA and comprising of all accessories not limited to the following:- Programmable Logic Controller (PLC) with Dual Hot Redundant CPU, Power supply, Communication Module, IO & Processor rack (Standard DC), Back up Interface/Expansion Module, Rack (Backplane) 10 slots for IO and Processor. SCADA software shall have facility VPN, OPC, Smart Client, Web Enabled, Automation Report Generation, Archiving, Treands, Data Logging, etc.	Lot	93,56,550.00
	DI	No. 662	
	DO	No. 658	
	AI	No. 56	

Code No	Description	Unit	Rate Rs.
	AO	No.	32
	MCB 16A DP	No.	2
	MCB 6A DP	No.	6
	SMPS 100-240VAC/ 4.5A / 24 VDC	No.	1
	Selector Switch (Auto/Manual) & Local / Remote	No.	2
	Control Relays	Lot	1
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with	No.	1
	Electronic Hooter	No.	1
	Control Transformer 200VA	No.	1
	Emergency STOP Push Button	No.	1
	Panel Cooling Fan & Filter	No.	2
	Panel Light with Door Switch, 7W	No.	1
	Control Indication Lamp for 24VDC, 220VAC	No.	3
	Push Button	No.	3
	Power Wiring+Control Wiring + Control TB/ Fuse 2A,TB etc	Lot	1
	Panel Hardware, lugs, terminations, ferrules, name plate Etc.	Lot	1
	UTILITY SOCKET 16A, 3 PIN	No.	2
	HMI Display 15 Inch, Colour	No.	1
	Isolators Dual Output, 24VDC	Lot	1
	Ethernet Switch (Managed)	No.	2
	Operator Station including, Core i7 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	No.	2
	Engineering Station including, Core i7 processor, 8 GB RAM, 1TB SSD, DVD RW Drive, RS-232/485/RJ45 Port, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, Optical mouse, 32" LED monitor, Latest windows professional, Anti Virous, etc.	No.	2
	Run Time & Development Programming and Troubleshooting software for PLC, HMI, SCADA, VPN, Web Client - OWS	No.	1
	Black and white, A4 Size Laser Printer , copier,	No.	2

Code No	Description	Unit	Rate Rs.
	Scan. Hi-Speed USB 2.0 port; built-in Fast Ethernet 10/100Base-TX network port; built-in WIFI 802.11b/g/n		
	Online UPS 5 KVA with 60 min Backup time.	No. 2	
46.12	Compact RTU complete with DI, DO, AI and modbus communication ports and power supply. // Compact RTU for variable power supply using batteries, rechargeable batteries, solar or 10.8 V DC to 28.8 V DC with integrated modem; connection to control center via Tele Control Basic, DNP3, IEC60870-5-104 and Communication protocols, on-board I/O (8 DI, 4 DQ, 4 AI), configuration and diagnostics per web interface, RJ45 port, mobile communications antenna (GSM/UMTS), Mini SIM card, with adapter Micro SIM card also, GPRS (Multi-slot Class 10), 35 mm DIN rail mounting, TCP/IP, DNP 3, Open VPN-Client. Panel Enclosure for Compact RTU Location, wall/floor mounted along with wiring and related accessories and arrangement of mounting of RTU, Modem and having IP-5X Protection. Panels shall be self-fabricate type only with Canopy.	Lot	1,17,306.00
46.13	Modular RTU complete with DI, DO, AI and modbus communication ports and power supply 24 VDC or for variable power supply using batteries, rechargeable batteries, solar or 10.8 V DC to 28.8 V DC with integrated modem; connection to control center via Tele Control Basic, DNP3, IEC60870-5-104 and Communication protocols, on-board I/Os min. (8 DI, 4 DQ, 2 AI), configuration and diagnostics per web interface, RJ45 port, mobile communications antenna (GSM/UMTS), Mini SIM card, with adapter Micro SIM card also, GPRS (Multi-slot Class 10), 35 mm DIN rail mounting, TCP/IP, DNP 3, Open VPN-Client. Panel Enclosure for Compact RTU Location, wall/floor mounted along with wiring and related accessories and arrangement of mounting of RTU, Modem having IP-5X Protection. Panels shall be self-fabricate type only with Canopy.	Lot	1,00,548.00
46.14	Supply, Installation, testing and commissioning of SCADA System at Master Control Centre complete with PC server, monitor, communication modules, printers, 2 Nos. of 60"LED Display of latest resolution and configuration, 4 Nos of 32" Operator console (1 No. of Engineering, 1 No. of operator console, 1 No. of Historical and 1 No. of Web Server) including control desk, chairs, storage racks etc., required hardware, software complete with all accessories and in line with Technical Specification.	Lot	41,19,675.00

47.0 SMART SOLUTIONS

Code No	Description	Unit	Rate Rs.
47.1	Smart lighting system		
47.1.1	SITC of street light controller (SLC) along with necessary software and hardware, 140-270 Vac, Inbuilt Surge protection of 10KVA, Capacity up to 300W, ON/OFF/Dimming of Individual streetlight/floodlight, Ingress protection IP65		
47.1.1.1	1 Channel	each	11,611.00
47.1.1.2	2 Channel	each	12,271.00
47.1.2	SITC of street light controller (SLC) based on PLC, including software and hardware, 140-270 Vac, Inbuilt Surge protection of 10KVA, Capacity up to 300W, ON/OFF/Dimming of Individual streetlight/floodlight, Ingress protection IP65		
47.1.2.1	1 Channel	each	13,463.00
47.1.2.2	2 Channel	each	16,013.00
47.1.3	SITC of GPRS/ISDN/OFC gateway along with necessary software and hardware, Controls 50 nos. SLC, 140-270Vac, CE/FCC certified communication module, On-board 2 nos. current (4-20mA), and 2 nos. analogue voltage channel(1-10V), On-board RS485 Modbus interface	each	47,978.00
47.1.4	SITC of GPRS gateway PLC based along with necessary software and hardware, Controls 50 nos. SLC, 140-270Vac, CE/FCC certified communication module, Battery backup up to 24 hours, On-board 2 nos. current (4-20mA), and 2 nos. antilog voltage channel(1-10V), On-board RS485 Modbus interface		
47.1.4.1	Single phase	each	47,978.00
47.1.4.2	Three phase	each	70,367.00
47.1.5	SITC of Smart LED luminaire with integrated SLC and 0-10V dimmable driver, 140-270V AC, 10 KV built-in surge protector, Ingress protection IP66 of following ratings:		
47.1.5.1	Smart LED luminaire 72 W	each	15,572.00
47.1.5.2	Smart LED luminaire 90 W	each	16,693.00
47.1.5.3	Smart LED luminaire 100W	each	17,378.00
47.1.5.4	Smart LED luminaire 120W	each	19,309.00
47.1.5.5	Smart LED luminaire 150W	each	20,119.00
47.1.5.6	Smart LED luminaire 170W	each	21,552.00
47.1.6	P & L of IP66 protected high power high power LED linear flood light system. Fixture made of powder coated extruded aluminium housing with UV stabilized PC/toughened glass cover and appropriate lens to		

Code No	Description	Unit	Rate Rs.
	be used to achieve various beam angle pattern. fixture suitable for input 12vDC, power consumption should be 6W/0.5A per feet with system CRI- 70, colour red/ green / blue/ /RGB /W/WW. the fixture must have IP66 protected 5mm Round female connector for input, the fixture must have provision to extend further . system life of 50000burning hours with 70% of initial lumens maintained . light output in red, green, blue, cool, white or warm white colour as per requirement. fixtures shall be CE complete series of linear flood light.		
47.1.6.1	linear LED strip 1 feet (with driver)	each	9,379.00
47.1.6.2	Linear LED Strip 2 Feet (with Driver)	each	14,068.00
47.1.7	Server setup and software maintenance for 1 year	per light point	621.00
47.1.8	Supply & laying of 0.9 mm Teflon copper wire (Fire And Water Resistant) with sleeves ,taping including Grove cutting ,Zirri cutting in plaster stone wall ,column, roof with Scaffolding , filling chemical epoxy Araldite ,pvc clips, finished with lime mortar etc.	Rmtr	183.00
47.1.9	Providing, laying, fixing charges included commissioning of each fixture. Light output in red, green, blue, cool, white or warm white colour as per requirement. fixtures shall be complete with all accessories.		
47.1.9.1	1W PLATINA or equivalent model	Each	1,507.00
47.1.9.2	2W LLO-139C or equivalent model	Each	3,183.00
47.1.9.3	2W LLO-179C or equivalent model	Each	2,736.00
47.1.9.4	3W LEO-035 or equivalent model	Each	3,183.00
47.1.9.5	4W LLO-139D or equivalent model	Each	5,305.00
47.1.9.6	6W LLWW-001A or equivalent model.	Each	10,889.00
47.1.10	P & F of IP68, IK10 protected LED Buried marker light /Step Light Fixture. Fixture made of powder coated die cast aluminium with Toughened Glass cover and appropriate beam angle lens to be used as per requirement. The System level Luminous efficacy must be >90 Lumen/W. High Power LEDs at 1W/2W per LED. The driving current should be Minimum 350 mA per LED. CRI>70, CCT: 3000/6500 K. The integral SMPS based electronic driver must be constant current and surge protection of min. 4KV(L-N) and efficiency >85%, PF>0.9 and input Voltage range of 90-270V AC at 50Hz. System life of 50000 Burning hours with 70% of Initial Lumens maintained. Light should include quick connecting cable coupled with various mounting accessories. Light output in Cool white or Warm White Colour as per engineers choice. Fixture must be in compliance with IS/CE Standards.		
47.1.10.1	Burial Light - 5W L-7 MODEL	Each	4,513.00
47.1.10.2	Rectangular LED Marker Light	Each	3,103.00
47.1.11	P & F of IP65 IK10 rated LED bulk head type light fixture made from		

Code No	Description	Unit	Rate Rs.
	CRCA sheet steel housing suitable for mounting LED tube system (integral driver), Power consumption of 10-15W , 500-600 lumens system lumen efficiency 70 lm/ watt output suitable for 1x100 W GLS/9W CFL bulk head fixtures, life time of 50000 burning hours with 70% initial lumen maintained. CCT 3000° K, 4000° K and 6000° K. Fixture shall be in compliance with CE & KEMA standards.		
47.1.11.1	LED Bulk head luminaire 6/7W	Each	1,255.00
47.1.11.2	LED Bulk head luminaire 9/10W	Each	1,434.00
47.1.12	P & F Of Mechanical /digital time switch having following day/week programme and minimum 100 hours reserve and AC 1 rating of 16-20 amperes including making connection	Each	4,513.00
47.2	Environmental and Continuous Ambient Air Quality Monitoring System		
47.2.1	Sulphur Dioxide (SO ₂) Analyzer based on UV -Fluorescence Principle Model AF22 e suitable for 230V, 50 Hz. power supply, built-in solenoid valve for manual/ auto calibration, built-in zero air scrubber for zero calibration & RS 232 port for Serial communication with Data Acquisition System (US -EPA Approval No. EQSA-0802-149)	each	12,96,226.00
47.2.2	Oxide of Nitrogen (NO _x) Analyzer based on Chemiluminescence principle Model AC32 e suitable for 230 V, 50 Hz. power supply, built-in solenoid valve for 230 V, 50 Hz. power supply, built-in solenoid valve for 230 V, 50 Hz. power supply, built-in solenoid valve communication with Data Acquisition System (US - EPA Approval No. RFNA-0202-146)	each	14,70,662.00
47.2.3	CO Analyser based on Non Dispersive IR Principle with Gas Filter Co-relation Model CO 12 e suitable for 230 V, 50 Hz. power supply, built-in solenoid valve for manual/ auto calibration, built-in zero air scrubber for zero calibration & RS 232 port for Serial communication with Data Acquisition System (US EPA Approval No. RFCA-0915-228)	each	11,52,938.00
47.2.4	PM2.5 Analyser based on Beta Ray Attenuation principle Model MP101M LCD suitable for 230V AC, 50 Hz. Power supply with C-14 Radioactive source, Pump, PM2.5 Inlet, Standard foil for calibration. RS 232 & Ethernet port for Serial communication with Data Acquisition System	each	20,85,587.00
47.2.5	PM10 Analyser based on Beta Gauge detection principle Model MP101M LCD suitable for 230V AC, 50 Hz. Power supply with C-14 Radioactive source, Pump, PM10 Inlet & Standard foil for calibration.	each	19,28,623.00
47.2.6	Ozone Analyser based on UV Photometry Principle Model O3 42 e suitable for 230 V, 50 Hz. Power supply, & RS 232 port for Serial communication with Data Acquisition System	each	11,60,237.00
47.2.7	VOC Analyser based on PID with Gas Chromatographic Column Separation Model VOC72M suitable for measurement of Benzene, Toluene, o-m-p Xylene, 230 V, 50 Hz. power supply, built-in solenoid valve for manual/ auto calibration, built-in zero air scrubber for zero calibration & RS 232 port for Serial communication with Data Acquisition System	each	34,13,156.00

Code No	Description	Unit	Rate Rs.
47.2.8	Nitrogen Cylinder 47 Litres Capacity, Carbon Steel with Regulator for Carrier Gas for PID	each	94,349.00
47.2.9	Multipoint, Multi-Gas Calibrator, Model MGC 101 suitable for 230V AC, 50 Hz. with the following: - Mass Flow Controller based for Dilution air & Span Gas - Inlet ports for external span gases - RS 232 interface - In built Zero air generator	each	9,50,724.00
47.2.10	Calibration Gas Cylinder made of Aluminium with SS regulator & valve (1 Cylinder for each Gas) for following Gases:		
47.2.10.1	SO ₂	each	48,194.00
47.2.10.2	NO	each	48,194.00
47.2.10.3	CO	each	48,194.00
47.2.10.4	Benzene	each	89,241.00
47.2.11	Gas Sampling System & Hood Gas Sampling system consisting of SS gas sample inlet, peltier based moisture removal facility, manifold & tubings to the analyzers.	each	68,842.00
47.2.12	Standard 19" Rack Cabinet (Double Bay Rack) with Telescopic slides, Overload protection, Power Distribution box, Cooling fans, Dust filters & pneumatic plumbing to accommodate Analyzer, Calibrator & Accessories	each	1,37,691.00
47.2.13	Weather Monitoring Station consisting of the following Parameters: Combined Wind speed and direction, Combined Temperature & Relative Humidity, Liquid Precipitation (Rainfall) Sensor, Solar radiation, Meteorological Mast - 10 Meters, Interface unit	each	4,90,794.00
47.2.14	Analyzer Shelter as below: Size - 3mtr(W) x 3 mtr (L) x 2.7 mtr(H), MOC - 1.2mm thick GI sheet (external walls), & 1.2mm thick GI sheet (internal walls), Door - One main door, Insulation Thickness - 0mm with PUF insulation, Roof thickness - 100mm with PUF, Flooring - anti slip sheet, Lighting inside shelter at minimum of 300lux, External dome lighting shall be under the overhangs.	each	27,53,832.00
47.2.15	4' X 8' (RGB/ Full Colour) 7 Line Display Board (Power Supply: 230V AC from UPS)	each	2,44,608.00
47.2.16	Local Data Logger - PC based Data Acquisition System with SAM WI License Software suitable for Storing, Logging, Reporting, Printing data from above offered Analysers. PC with specifications as under: Intel Core i5 5th Generation Processor, 8 GB RAM, 1 TB HDD+250 GB SSD, CD/DVD Combo Drive, 32" Monitor, Minimum 6 USB ports (USB 3.0/2.0), WINDOWS-7 or higher Compatible Operating System, standard keyboard, mouse with pad and with A3 & A4 Colour Laser printer.	each	4,25,714.00

Code No	Description	Unit	Rate Rs.
47.2.17	Central Data Logger - PC based Data Acquisition System with XR Premium License Software suitable for Storing, Logging, Reporting, Printing data, Validation and communicating with above offered Local DAS. PC with specifications as under: Intel Core i5 5th Generation Processor, 8 GB RAM, 2 TB HDD+250 GB SSD, CD/DVD Combo Drive, 32" Monitor, Minimum 6 USB ports (USB 3.0/2.0), WINDOWS-7 or higher Compatible Operating System, standard keyboard, mouse with pad and with A3 & A4 Colour Laser printer.	each	6,65,638.00
47.3	Smart City Surveillance with vehicle Identification & Counting		
47.3.1	Supply, installation, testing and commissioning of Monitoring software video surveillance all channels real-time live monitoring simultaneously The VMS shall support client applications including System client, Web client, Video wall management client and mobile client, The VMS shall support login by user name and password. It shall also manage all user information, permissions, license, operation information and system information, The VMS shall support unified time synchronization among all devices in the system and daily user and maintenance information management, The video recording management shall support several types of storage device such as DAS, NAS, IPSAN, direct storage etc. It shall enable centrally management of NVR, storage devices offering video searching, playback, managing and downloading, The video recording management shall support several types of storage device such as DAS, NAS, IPSAN, direct storage etc. It shall enable centrally management of NVR, storage devices offering video searching, playback, managing and downloading, Shall have Network management server which regularly acquires the status of video devices such as NVR, Network camera, storage boxes and running status of servers of system, Shall have Network management server which regularly acquires the status of video devices such as NVR, Network camera, storage boxes and running status of servers of system, Shall have an Alarm management server which provides alarm events and maintains the logs of alarm management. It shall also receive I/O alarms triggered by alarm host such as recorder, camera and so on. IT shall also be responsible to trigger linked actions like push alarm notification to clients, sending e mail, calling presents in PTZ, video wall linkages etc., Shall have an Alarm management server which provides alarm events and maintains the logs of alarm management. It shall also receive I/O alarms triggered by alarm host such as recorder, camera and so on. IT shall also be responsible to trigger linked actions like push alarm notification to clients, sending e mail, calling presents in PTZ, video wall linkages etc.	per channel	9,555.00
47.3.2	8ch Network Video Recorder- Connect Up to 8 IP Cameras, Dual OS, Up to 8 Megapixels Resolution, HDMI and VGA independent outputs provided, HDMI Video output at up to 4K (3840 × 2160) resolution , VGA upto 1920 × 1080, Support H.265, MJPEG, Incoming Bandwidth 80 Mbps, 4 SATA Hard Disks, ANR	Nos.	14,700.00

Code No	Description	Unit	Rate Rs.
	Technology, 4 SATA interfaces for 4 HDDs and capacity of each HDD upto 6TB, 3× USB at least 1 × USB with 3.0, Alarm I/O 16/4, RS-485, RS-232, 2 RJ-45 10 /100/1000 Mbps self-adaptive Ethernet interface, Multiple network monitoring: Web viewer, CE, FCC, BIS certified.		
47.3.3	16ch Network Video Recorder- Connect Up to 16 IP Cameras, Dual OS, Up to 8 Megapixels Resolution, HDMI and VGA independent outputs provided, HDMI Video output at up to 4K (3840 × 2160) resolution , VGA upto 1920 × 1080, Support H.265, MJPEG, Incoming Bandwidth 160 Mbps, 4 SATA Hard Disks, ANR Technology, 4 SATA interfaces for 4 HDDs and capacity of each HDD upto 6TB, 3× USB at least 1 × USB with 3.0, Alarm I/O 16/4, RS-485, RS-232, 2 RJ-45 10 /100/1000 Mbps self-adaptive Ethernet interface, Multiple network monitoring: Web viewer, CE, FCC, BIS certified.	Nos.	30,029.00
47.3.4	32ch Network Video Recorder- Connect Up to 32 IP Cameras, Dual OS, Up to 8 Megapixels Resolution, HDMI and VGA independent outputs provided, HDMI Video output at up to 4K (3840 × 2160) resolution , VGA upto 1920 × 1080, Support H.265, MJPEG, Incoming Bandwidth 256 Mbps, 4 SATA Hard Disks, ANR Technology, 4 SATA interfaces for 4 HDDs and capacity of each HDD upto 6TB, 3× USB at least 1 × USB with 3.0, Alarm I/O 16/4, RS-485, RS-232, 2 RJ-45 10 /100/1000 Mbps self-adaptive Ethernet interface, Multiple network monitoring: Web viewer, CE, FCC, BIS certified.	Nos.	36,750.00
47.3.5	128ch Network Video Recorder- Connect Up to 128 IP Cameras, Dual OS, Up to 12 Megapixels Resolution, Two independent HDMI outputs of 4K resolution, 1 VGA output with output upto 1920 × 1080, Support H.265, MJPEG, Supports N+1 hot spare system, Supports RAID0, RAID1, RAID5, RAID6 and RAID10, Supports HDD hot swap, Supports Dual Power-Redundant, Incoming Bandwidth 512 Mbps, 16 SATA Hard Disks, ANR Technology, 16 SATA interfaces for 16 HDDs and capacity of each HDD upto 8TB, 4× USB at least 2 × USB with 3.0, Alarm I/O 16/8, RS-485, RS-232, 4 RJ-45 10 /100/1000 Mbps self-adaptive Ethernet interface, Multiple network monitoring: Web viewer, CE, FCC, UL certified.	Nos.	4,26,300.00
47.3.6	Supply Installation, Testing & Commissioning of Intel i7 4th Generation processor 3Ghz or latest, 4GB RAM with 2TB hard disk, DVD-RW/keyboard/optical mouse/LAN card/24" LED monitor. Minimum 6 USB ports. With pre-loaded licensed Windows 10 or latest software PC	each	69,818.00
47.3.7	SITC of 55" 4k Resolution or Better LED TV with remote control and wall mount unit / floor stand complete with making connections etc. as required.	each	73,500.00
47.3.8	Supply, Installation, Testing & Commissioning of Traffic Management Software	each	16,92,300.00
47.3.9	Supply, Installation, Testing & Commissioning of Traffic Control & Monitoring Software	each	16,92,300.00

Code No	Description	Unit	Rate Rs.
47.3.10	Installation of OFC Network Connectivity (One Time Coast) Per NODE	each node	14,667.00
47.3.11	OFC Network Connectivity Maintenance and Rent Charges Per year Each NODE	each node	88,000.00
47.3.12	Supply, installation, testing and commissioning of colour high resolution or better LED Video wall of comprising of 4 nos. 40 inch display, full HD complete with all accessories.	each	2,35,200.00
47.3.13	SITC of Intelligent Manageable Ethernet Switches providing 24 x 10/100/1000 Fast Ethernet ports- and 2 dual purpose uplink (provision for Copper / Fibre Giga connectivity) with LAN based Software. The LAN based S/W supports enhanced integrated security, including Network Admission Control (NAC), advanced quality of service (QoS), availability and scalable management to enable new converged applications	each	23,520.00
47.3.14	16 port Unmanaged Network PoE Switch: 16 port PoE Switch with PoE standard of IEEE 802.3af , IEEE 802.3at, PoE port, Uplink ports	Nos.	17,640.00
47.3.15	SITC of Intelligent Ethernet POE Switches providing 24 x 10/100/1000 Fast Ethernet POE ports- 370W or better and 4 dual purpose uplink (provision for Copper / Fibre Giga connectivity) with LAN based Software. The LAN based S/W supports enhanced integrated security, including Network Admission Control (NAC), advanced quality of service (QoS), availability and scalable management to enable new converged applications	each	23,520.00
47.3.16	Supply Installation Testing & Commissioning of 1000 Base-SX, SFP, MMF, LC connector, Multimode Fibre Giga module	each	17,454.00
47.3.17	Supply, Installation, Testing & Commissioning of 5 MP IR Fixed Dome Network Camera -1/2.7 inch Progressive Scan CMOS, 2592 × 1944 at 25fps, 2.8 mm Fixed lens, 0.003 Lux at F1.4, 0 Lux with IR on, ICR, ONVIF (PROFILE S, PROFILE G, PROFILE T), support H.265, H.264, MJPEG, 120db WDR, 3D Digital Noise Reduction, BLC, HLC, Three individually configurable stream, 12 VDC & PoE, IR range: 40m, Support on-board storage up to 256 GB (SD card not included), IP67, IK10, Edge Analytics- Line crossing detection, Intrusion detection, Motion detection, Region entrance detection, Region exiting detection, Scene change detection, Face capture, Video tampering, audio exception detection, False alarm reduction through human and vehicle target classification based on deep learning CE, FCC, BIS certified	each	12,495.00
47.3.18	Supply, Installation, Testing & Commissioning of 5 MP IR Fixed Bullet Network Camera -1/2.7 inch Progressive Scan CMOS, 2592 × 1944 at 25fps, 2.8 mm Fixed lens, 0.003 Lux at F1.4, 0 Lux with IR on, ICR, ONVIF (PROFILE S, PROFILE G, PROFILE T), support H.265, H.264, MJPEG, 120db WDR, 3D Digital Noise Reduction, BLC, HLC, Three individually configurable stream, 12 VDC & PoE, IR range: 40m, Support on-board storage up to 256 GB (SD card not	each	12,789.00

Code No	Description	Unit	Rate Rs.
	included), IP67, Alarm 1 inputs, 1 outputs, Audio 1 inputs, 1 outputs, Edge Analytics- Line crossing detection, Intrusion detection, Motion detection, Region entrance detection, Region exiting detection, Scene change detection, Face capture, Video tampering, audio exception detection, False alarm reduction through human and vehicle target classification based on deep learning CE, FCC, BIS certified		
47.3.19	Supply, Installation, Testing & Commissioning of 5 MP Varifocal Bullet Network Camera complete with all required specification and supporting accessories.	each	33,310.00
47.3.20	Supply, Installation, Testing & Commissioning of 8 MP Varifocal Bullet Network Camera complete with all required specification and supporting accessories.	each	44,100.00
47.3.21	Supply, Installation, Testing & Commissioning of 4MP IR Outdoor PTZ Camera-1/1.8" Progressive Scan CMOS, 2560 × 1440 at 25fps, 5.9 mm to 188 mm, 32× Optical, 16x digital zoom, Colour: 0.005 Lux at F1.5, B/W: 0.001Lux at F1.5, ICR, ONVIF, support H.265,MJPEG, 120 dB WDR, 3D Digital Noise Reduction, HLC, BLC, Defog, EIS, Triple individually configurable stream, 24 VAC & PoE, IR range: 200m, Pan: 360° endless, Tilt: From -15° to 90° (auto-flip), Pan Speed - from 0.1°/s to 160°/s, Pre-set Speed: 240°/s, Tilt Speed- from 0.1°/s to 120°/s, present Speed: 200°/s, Pre-sets- 300, Alarm Input-2-ch alarm input, Alarm Output-1-ch alarm output, Audio-1 channel input & output, Support on-board storage up to 256 GB (SD card not included), IP66, Line crossing detection, intrusion detection, CE, FCC, BIS certified.		1,17,600.00
47.3.22	Supply, Installation, Testing & Commissioning of 2MP IR Outdoor PTZ Camera with 32X Zoom complete with all required specification and supporting accessories.	each	95,550.00
47.3.23	Supply, Installation, Testing & Commissioning of ONVIF, IP based 4d PTZ control Joystick complete with all required specification and supporting accessories.	each	36,750.00
47.3.24	RAID box for recording video image 20 TB	each	2,94,000.00
47.3.25	RLVD Workstation	each	95,897.00
47.3.26	Supply Installation Testing & Commissioning of Intel® Xeon™ E3-2124, Microsoft® Windows Server 2012 R2, 16G x 1 DDR4, 2400MT/s UDIMMS, 1T SATA × 2, 3.5" Enterprise SATA 7.2k HDDs, H330 RAID Controller with RAID 1, up to 4 x 3.5" SAS/SATA HDD, up to 4 x 3.5" SAS/SATA HDD, 1GbE × 2, 1U, Rack Mount, CR-2032 Coin Cell/Lithium/0.0032kg, 250W Cabled PSU, iDRAC8, Express, 2 VGA Ports: one each on the front and back panels. 5 total USB ports: • Rear: 2 x USB 3.0 ports • Front: 2 x USB 2.0 ports • Internal: 1 x USB 3.0 port Support upto 3000 cameras and 300 preloaded channel license including	each	11,02,500.00

Code No	Description	Unit	Rate Rs.
47.3.27	S & F of PVC Trunking for cable management.		
47.3.27.1	32 mm x 16 mm	each	99.00
47.3.28	Supply, Installation, Testing & Commissioning of ANPR (Automatic number Plate Recognition Camera + 1 illuminator Hardware accelerated, built-in motion detection Auto day & night switch; adaptive settings to environmental settings Automatic time synchronization (NTP) Adjustable image compression for max LPR performance Still images (JPEG) and compressed live video streams (MJPEG) Powerful IR illumination while low power consumption Extreme operation environments: IP67 rating. including power supply & suitable mounting clamp, etc. complete,	each	2,24,399.00
47.3.29	Supply, Installation, Testing & Commissioning of 9MP Automatic number Plate Recognition (ANPR) Camera covering 3 lanes complete with all required specification and supporting accessories. Features only for 4 wheelers & Trucks. Without client Server.	each	5,68,399.00
47.3.30	Supply, Installation, Testing & Commissioning of Red Light Violation Detection (RLVD) Controller with 32 optically isolated RED light inputs and 48 Vehicle Detection inputs I/O module suitable for automatic detection of RED LIGHT including industrial based PC of following specs-Intel core i5, Windows 7 or higher- 64 bit OS, 16GB RAM, 1TB HDD, 4 USB ports, /1 Gbps Ethernet, VGA port, Separate Cooling fan attached to encloser, Din rail mountable connectors, MCB and required power supplies for the system all housed in a pole mountable encloser including necessary mounting clamps and hardware etc. complete. without client software	each	3,88,419.00
47.3.31	Supply, Installation, Testing & Commissioning of Red Light Violation Detection System (RLVD) & Automatic Number Plate Detection System (ANPR)- monitoring 2 Lanes with same direction having 9MP complete with all required specification and supporting accessories. Without client Server.	each	8,38,488.00
47.3.32	Supply, Installation, Testing & Commissioning of Signal Light Detector system complete with all required specification and supporting accessories. Without client Server.	each	1,32,300.00
47.3.33	Supply, Installation, Testing & Commissioning of Speed Violation Detection Solution (SVDS) Single Location having 9MP Capture Unit Camera (supporting to 3 Lane) with all required specification and supporting accessories. Features only for 4 wheelers & Trucks. Without client Server.	each	5,68,399.00
47.3.34	Supply, Installation, Testing & Commissioning of Speed Violation Detection Solution (SVDS) for Single Location Radar type (Multilane supported) with all required specification and supporting accessories. Features only for 4 wheelers & Trucks. Without client Server.	each	7,64,400.00
47.3.35	Supply, Installation, Testing & Commissioning of Strobe Light for single Lane type, supporting to ANPR/RLVD/SVDS complete with all required specification and supporting accessories. Without client Server.	each	1,47,000.00

Code No	Description	Unit	Rate Rs.
47.3.36	Supply, Installation, Testing & Commissioning of Terminal/Client Server supporting for ANPR/RLVD/SVDS complete with all required specification and supporting accessories.	each	4,33,650.00
47.3.37	SITC of Safespace series SPEED RADAR SIGN of AC or solar operated SP-100 or equivalent Model	each	2,71,950.00
47.3.38	Supply, Installation, Testing & Commissioning of Automatic Over Speed Violation Detection The SpeedCAM SmartCam should be a pre-built ANPR/LPR system, including- ANPR camera- PC- Radar- ANPR software. Also should be combination of FXCAMd camera, an embedded industrial computer with installed FreeFlow software and radar. The camera module provides ideal images for the embedded PC which processes the images with license plate recognition technology. The image capturing should be triggered by the radar and the motion detection together. Full processing should be performed inside the unit (like time stamp application). Images, license plate texts, location, speed and time should stored in the camera database with easy access through a built-in web-server. with Vehicle Registration Number Plate Recognition and Prosecution System with other related equipment including installation & outstation communication, UPS etc.	each	29,09,070.00
47.3.39	SITC of battery bank comprising SMF/VRLA batteries, inter-connection wiring etc. as required complete in all respect.		
47.3.39.1	12 V 26 Ah	each	3,588.00
47.3.39.2	12 V 42 Ah	each	5,263.00
47.3.39.3	12 V 65 Ah	each	7,335.00
47.3.39.4	12 V 100 Ah	each	10,843.00
47.3.40	SITC of Solar Charge Controller MPPT/ PWM charger to charge 12 V (nominal) battery with not less than 94% Solar charge controller efficiency with indications for charger, full charge and charge disconnected of cap. Upto 50 Amp.	each	4,073.00
47.3.41	Installation ,Testing & Commissioning of OS, database Application Software Configuration and Fine tuning including one year warranty support	each	20,18,657.00
47.3.42	RLVD Application (CDAC) up to 50 Nodes	each	16,92,300.00
47.3.43	ANPR Software	each	8,46,150.00
47.3.44	All in all maintenance to keep up of complete ATCS in working order. The system is based on CDAC Technology working on composite signal control strategy (CoSiCoSt) software installed at Control Room without network connectivity. (Excluding Traffic Signals, U.P.S. & A.Cs)	each per point per year	12,423.00
47.3.45	All in All Maintenance of U.P.S. (5KV) to Keep up in Working Order.	each per year	952.00
47.3.46	All in All Maintenance of Air Conditioners to Keep up in Working Order	each per year	508.00

Code No	Description	Unit	Rate Rs.
47.3.47	Rent for 100Mbps for connectivity for operation of ATCS	each per year	4,877.00
47.3.48	All in All Maintenance to keep up Traffic-cam Cameras with Software & Hardware Complete in all respect.		
47.3.48.1	Cameras with Power Supply	each per month	1,128.00
47.3.48.2	Modules	each per month	592.00
47.3.49	SITC of microprocessor based UTCS type automatic electronic controller conforming to IS: 7537 for traffic signals complete with electronic timer, G.P.S. based control board, blinker unit for night operation and slip lane, day time peak hour's operation. The controller shall have 32 signal phases, 25 Signal Plan, 24 Cycle Plan, 32 Signal Split Plan, 32 Cycle conditions, 32 signal line, solid state relay switching R.S 485 communication and 4 hurry call inter phase, manual override facility up gradable vehicle actuated system, also have method of traffic control with fixed time isolated intersection and cable less/cabled interlinking for synchronized operation. The unit shall be totally enclosed in 2.00mm thick metal sheet box size 99 cm x 61.5 cm x 35.5 cm including making connection	each	1,69,230.00
47.3.50	Add extra for upgrading the exiting microprocessor based controller to ATCS (area Traffic Control System) controller.	each	56,410.00
47.3.51	SITC Traffic Cam X-Stream Integrated I.P. Based Camera for vehicle presence detection & video use for traffic monitoring, use can configuration view and control and system both side and remotely having following key Functionalities: (1) All in one Sensor (Camera Detector), (2) MPEG-4 Image Compression (3) Real Time Verification & Monitoring (4) Up to 24 "Virtual" Detection Zones.		
47.3.51.1	Camera Only.	each	1,28,563.00
47.3.51.2	Module only	each	69,787.00
47.3.52	SITC of Surveyor VFT (IP Dome) APTZ Camera with 360 degree rotation and digital zoom facility, which is also a transmitter. It can be connected straight to the network, video transmission via IP Coaxial, Fibre Optic or twisted Pair (UTP) in ceiling or pendant configurations for indoor or outdoor installation with Ex view 23 x or 35 x high resolution colour on day/night camera with Vandal proof and pressurized housings and privacy masking.	each	2,38,050.00
47.3.53	S.I.T.C of WiTraC 32Bit Microcontroller based Solar Power / PWM Automatic electronic controller, conforming to IEC- 60068(ERTL) for Traffic Signals complete with electronic timer, G.P.S. based control board, blinker unit for night operation and slip lane, day time peak hours operation, The controller shall have 32 signal phase, Signal Switching and feedback on wireless medium, 24 Cycle Plan, 32 Signal Split Plan, 24 Cycle switching/days, 20 selective days/annum, 4 – Week Plan, 16 optically isolated solid state lamp driving outputs, 16 optically isolated vehicle detector, 20 X 4 LED backlit LCD and 5		

Code No	Description	Unit	Rate Rs.
	X 4 keypad 8 Auxiliary I/O interface, USB, CAN, R.S.232 communication and 4 hurry call inter phase, manual override facility up gradable vehicle actuated system, also have method of traffic control with fixed time isolated intersection and cable less/ cabled interlinking for synchronized operation, including additional features such as (a) facility to enter traffic volume,(b) Provision for 3 to 5 second Red/ Green flash before starting of stage, (c) Red Light violation data from all the approaches and (d) Using External Ethernet adapter to USB for using 4G or higher dongle/ router for networking and making connections.		
47.3.53.1	Master Controller (Size L -607 X W- 298 X D-176 mm.) o 12 V DC $\pm$ 10% 3.6 W	each	1,22,503.00
47.3.53.2	Slave Controller (L - 400 X W - 298 X D - 176 mm) o 12 V DC $\pm$ 10% 3.0 W	each	71,343.00

48.0 LIFTS

Code No	Description	Unit	Rate Rs.
48.1	Supplying, installation, Testing and commissioning of the passenger/goods/Stretcher or Bed elevator having following main features: (a) MOTOR : Gearless lift drive comprising of high starting torque lift duty , 3 phase 440 Volts A.C. permanent magnetic synchronous motor of proper rating with high efficiency shall be used. (b) Operation / Drive : Microprocessor based /PLC, AC Variable Voltage variable frequency variable speed (V3F) vector control drive with encoder feedback closed loop system shall be used for lift car and door operation which shall be full collective selective operation hall call demand response , UP/Down hall stops , main , Up/Down contactor with overload and phase reversal relay and safety controls. (c) Traction Media: main hoist flat coated steel belt / rope . Thimbles of spring permit adjustment of uniform tension for smooth operation of the elevator Pulse belt monitoring system to avoid the cut in the belt. (d) Car : car should be with M S platform with bracings of adequate size and to sustain the impact load cabin plus passengers with safety factor of fire for steel with Anti-skid PVC flooring and side panels should be of Stainless steel with hair line finish of sheet of grade 304 duty with S.S. handrails . Car ceiling shall be steel finish with aesthetic appearances with LED ceiling lights .The size of the car shall be taken as per available lift well size and relevant BIS code of lifts. Car panel will also be of S S 304 grade finished with emergency stop device, emergency alarm, mechanical door safety device, full length infra-red curtain in car door, facility of auto/attended mode. All car panel buttons and all floor switches must be with brail language as per lift act. Agency shall also provide & install one No. 2 MP , IR , IP based ceiling mounted Dome Camera in the car complete with connecting cables & accessories (To be connected with existing CCTV system in the Building) .The inspection unit shall be provided at the top of the car. (e) Landing Doors: All landing door shall be fully automatic centre opening / telescopic made of hair line finish stainless steel grade 304 with key holes and infrared curtains with unlocking facility from outside. (f) Emergency light: Appropriate rechargeable battery operated LED emergency light in the car and along with alarm switch shall be provided. (g) ARD: Automatic rescue Device (ARD) shall be provided according to passenger capacity with SMF batteries of approved brands as per BSR.		

Code No	Description	Unit	Rate Rs.
	(h) Audio-Visual Indication: Audio visual indication in the lift car, showing over loading such that doors kept open till excess load is removed.		
	(i) Scrolling Indicators: Digital scrolling indicator system for up-down arrow with floor position indicator shall be provided inside the car and at all stops/floors.		
	(j) Buffers: Spring buffers/PU Buffers shall be provided.		
	(k) Car Fan: ENERGY EFFICIENT Car fan/blower with automatic sleep timer shall be provided.		
	(l) Voice Annunciator: Voice annunciator with suitable music shall be provided in lift car.		
	(m) Self diagnostics system for operational and safety parameters shall be provided in control panel.		
	(n) Mechanical/Electronic over speed governor, door key holes in the floor doors, fireman switch shall be provided.		
	(o) Lift machine hoisting arrangement in the lift machine room, counter balance to promote smooth and economic operation complete with steel guide rails for the car & counter weight, Trap Door, Lifting hooks as required and monkey ladders for lift pit should be provided by the agency along with all other steel structure works, foundations for the machine etc as required.		
	(p) Permanent wiring in lift machine room and in lift well with providing and fixing of electrical distribution board complete with SP & TP MCB's , proper numbers of light points, with LED fixtures , exhaust fan , 2 nos copper plate /chemical earthing with 8 SWG copper earth wire and plug points shall be provided by the agency . (Power supply of 3 phase 440 V shall be made available by department in lift machine room.)		
	(q) All civil work related to installation of lift like finishing, cleaning and levelling of lift pit , white wash of lift well and in machine room shall be done by the lift erecting agency without any extra cost.		
	(r) Granite or marble cladding around all landing door openings shall be in the scope of lift installation agency and additional payment shall be made according to the actual measurement / schedule by the department to the lift agency.		
	(s) Agency has to provide all working drawings and documents to comply latest BIS specifications and make proper liaison services for obtaining all necessary permissions.		
48.1.1	6 passengers/408 Kg , 3 stops , rated speed adjustable up to 1.0 mtr /sec with 2 years comprehensive maintenance / DLP .	Job	12,71,011.00
48.1.2	8 passengers/544 Kg , 3 stops , rated speed adjustable up to 1.0 mtr /sec with 2 years comprehensive maintenance / DLP .	Job	13,66,977.00
48.1.3	10 passengers/680 Kg , 3 stops , rated speed adjustable up to 1.0 mtr /sec with 2 years comprehensive maintenance / DLP .	Job	14,62,943.00

Code No	Description	Unit	Rate Rs.
48.1.4	13 passengers/884 Kg , 3 stops , rated speed adjustable up to 1.0 mtr /sec with 2 years comprehensive maintenance / DLP . Note : Add Rs 65,000/- per stop in the above rate for elevator up to 13 passenger and 10 stops (For Item no.E280101 to E280104) .	Job	16,69,639.00
48.1.5	15/16 passengers/1020/1088 Kg , 3 stops , rated speed Adjustable up to 1.0 mtr /sec with 2 years comprehensive maintenance / DLP . Note 1 : Add Rs 90,000/- per stop in the above rate for elevator up to 10 stops . Note 2 : Add Rs 50000/- extra for equivalent bed elevator in place of normal passenger elevator .	Job	19,61,881.00
48.1.6	20 passengers/1360 Kg , 3 stops , rated speed Adjustable up to 1.0 mtr /sec with 2 years comprehensive maintenance / DLP . Note 1 : Add Rs 90,000/- per stop in the above rate for elevator up to 10 stops . Note 2 : Add Rs 75000/- extra for equivalent bed elevator in place of normal passenger elevator .	Job	23,38,364.00
48.1.7	26 passengers/1768 Kg , 3 stops , rated speed Adjustable up to 1.0 mtr /sec with 2 years comprehensive maintenance / DLP . Note 1 : Add Rs 90,000/- per stop in the above rate for elevator up to 10 stops . Note 2 : Add Rs 100000/- extra for equivalent bed elevator in place of normal passenger elevator .	Job	32,24,205.00
48.1.8	Goods Elevator /1000 Kg , 2 stops , rated speed adjustable up to 1.0 mtr /sec with 2 years comprehensive maintenance / DLP . Note : Add Rs 90,000/- per stop in the above rate for elevator up to 10 stops .	Job	19,47,117.00
48.1.9	Goods Elevator /1500 Kg , 2 stops , rated speed adjustable up to 1.0 mtr /sec with 2 years comprehensive maintenance / DLP . Note : Add Rs 90,000/- per stop in the above rate for elevator up to 10 stops . Note 1: The above rates are for the all elevators having gearless drive with machine room Note2: Rates for Geared drive of all Elevator with machine room shall be deducted @ Rs. 50000/- each up to 13 Passenger and Rs 75000/- each for Above 13 Passenger capacity. Note 3: Rates for Machine room less (MRL) Elevator shall be added @ Rs 50,000/- for each up to 13 passenger and Rs 75000/- each for above 13 passenger capacity. Note 4: Add Extra for all elevators with Honeycomb / moonrock finish S. S. car @ Rs 40000/- for Car & Rs 10000/- per stop for landing doors.	Job	23,16,218.00

Code No	Description	Unit	Rate Rs.
48.2	All in all comprehensive maintenance after defect liability period of the passenger /bed cum stretcher /goods elevator having various speed as per OEM guidelines and maintenance manual including car with all car accessories , hoist way accessories and complete with machine room accessories but excluding replacement of diffused battery bank of ARD system as per following details .		
48.2.1	6 Passenger , 408 Kg Elevator up to 5 Stops with Machine Room	Job P. Month	7,125.00
48.2.2	8 Passenger , 544 Kg Elevator up to 5 Stops with Machine Room	Job P. Month	7,673.00
48.2.3	10 Passenger , 680 Kg Elevator up to 5 Stops with Machine Room	Job P. Month	8,221.00
48.2.4	13 Passenger , 884 Kg Elevator up to 5 Stops with Machine Room	Job P. Month	9,317.00
48.2.5	15/16 Passenger , 1020/1088 Kg Elevator up to 5 Stops with Machine Room	Job P. Month	10,962.00
48.2.6	20 Passenger , 1360 Kg Elevator up to 5 Stops with Machine Room	Job P. Month	13,976.00
48.2.7	26 Passenger , 1768 Kg Elevator up to 5 Stops with Machine Room	Job P. Month	18,087.00
48.2.8	1000 Kg Goods Elevator up to 5 Stops with Machine Room	Job P. Month	10,688.00
48.2.9	1500 Kg Goods Elevator up to 5 Stops with Machine Room	Job P. Month	12,606.00
	NOTE :- Add @ Rs 350/- per stop per month for more than 5 stops and up to 10 stops for AMC of Elevators .		

ELECTRICAL SECTOR

Office of the Chief Engineer (Electrical), PWD, Rajasthan has issued Basic Schedule of Rates for electrical works vide no. CE(Elect.)/BSR/2020-21/D-1025 dated 30.03.2021 which is effective from 1/4/2021. RUIDP has adopted the same with the modification as under for its SoR-2022 for electrical sector:

- (i) Some sub items have been added in the items of existing PWD BSR in the respective chapter which are found to be appropriate for inclusion. Rates has been derived by interpolation /extrapolation from relevant item;
- (ii) Some items have been added in the existing chapter of PWD BSR which are found to be appropriate for inclusion;
- (iii) As PWD BSR is effective from 1/4/2021, rates of each item of PWD BSR have been increased considering price index issued by office of the Economic Adviser, Ministry of Commerce and Industry, GoI to make the rates of electrical items at par with the rates of other items of RUIDP SoR-2022.

NOTE-1: Errata/corrigendum & Addendum in PWD Electric BSR 2021 issued vide no D-224 dated 21-09-2021 by Chief Engineer (Electrical) PWD, Rajasthan, Jaipur has been incorporated in respective items.

NOTE-2: Items in addendum are added in separate chapter E-27

NOTE-3: Amendments/corrigendum to be issued from time to time by Chief Engineer's office, PWD, Rajasthan, Jaipur with regards to Electric BSR-2021 shall form the part of RUIDP SOR-2022 for which no separate order will be issued

E-01 PVC Insulated wiring in PVC Conduit

Code No	Description	Unit	Rate Rs.
E010100	Wiring of light point/ fan point/ exhaust fan point/ call bell point as per PWD specification for electrical Works with ISI marked 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade (IS:694) and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked MMS (IS:9537 P - III) vergin material PVC conduit & it's all accessories(J.B. , Bends etc.) , round tiles,18 SWG G.I. box with earth terminal, 6 A switch , 3 pin ceiling rose/ Lamp holder / 3 point Connector, 3.0 mm thick ISI marked phenolic laminated sheet (IS : 2036 - 1995), Al. alloy/ cadmium plated iron screws 20 mm cup washers etc. all as per pre approved by Engineer in charge, making connections, testing etc. complete as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter E - 04, E - 05 & E - 07 . For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E010101	Short point (up to 3 mtr.)	P. point	190.00
E010102	Medium point (up to 6 mtr.)	P. point	320.00
E010103	Long point (up to 10 mtr..)	P. point	431.00
E010200	Wiring of twin control light / fan / call bell point as per PWD specification for electrical Works with ISI marked 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade (IS:694) and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked MMS (IS:9537 P - III) vergin material PVC conduit & it's all accessories(J.B. , Bends etc.) , round tiles,2 nos. 18 SWG G.I. box with earth terminal, 2 Nos 6 A two way switch,3 pin ceiling rose/ Lamp holder / 3 point Connector, 3.0 mm thick ISI marked phenolic laminated sheet (IS : 2036 - 1995), Al. alloy/ cadmium plated iron screws 20 mm cup washers etc. all as per pre approved by Engineer in charge, making connections, testing etc. complete as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter E - 04, E - 05 & E - 07. . For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E010201	Short point (up to 3 mtr.)	P. point	331.00
E010202	Medium point (up to 6 mtr.)	P. point	577.00
E010203	Long point (up to 10 mtr..)	P. point	788.00
E010300	Wiring of 3/5 pin 6 amp. Light plug point as per PWD specification for electrical Works with ISI marked 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade		

Code No	Description	Unit	Rate Rs.
	(IS:694) and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked MMS (IS:9537 P - III) vergin material PVC conduit & it's all accessories(J.B. , Bends etc.) , round tiles,18 SWG G.I. box with earth terminal of required size, 6 A switch, 3/5 pin 6 A socket, 3.0 mm thick ISI marked phenolic laminated sheet (IS : 2036 - 1995), Al. alloy/ cadmium plated iron screws 20 mm cup washers etc. all as per pre approved by Engineer in charge, making connections, testing etc. complete as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter E - 04, E - 05 & E - 07. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E010301	On board	P. point	89.00
E010302	Short point (up to 3 mtr.)	P. point	203.00
E010303	Medium point (up to 6 mtr.)	P. point	331.00
E010304	Long point (up to 10 mtr..)	P. point	442.00
E010400	S&F following sizes (dia.) of ISI marked MMS (IS:9537 P - III) vergin material PVC conduit as per PWD specification for electrical Works along with its accessories (IS: 3419) as required in recess including cutting the wall, covering conduit and making good the same as required. All relative and latest acceptance tests reports by any NABL accredited lab for the conduit shall be submitted before execution & All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E010410	MMS (IS:9537 P - III) PVC conduit		
E010411	20 mm	R. mtr.	31.00
E010412	25 mm	R. mtr.	37.00
E010413	32 mm	R. mtr.	62.00
E010414	40 mm	R. mtr.	80.00
E010415	50 mm	R. mtr.	113.00
E010500	Wiring of light point/ fan point/ exhaust fan point/ call bell point as per PWD specification for electrical Works with ISI marked 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade (IS:694) and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked MMS (IS:9537 P - III) vergin material PVC conduit & it's all accessories(J.B. , Bends etc.) , round tiles,18 SWG Hot Dipped Galvanized Modular Box with earth terminal, 6 A Modular switch, Modular face plate with grid plate, 3 pin ceiling rose / lamp Holder/ 3 pin connector , screws etc, making connections,all as per pre approved by Engineer in charge, testing etc. complete as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer		

Code No	Description	Unit	Rate Rs.
	Chapter E - 04, E - 05 & E - 07 . For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E010501	Short point (up to 3 mtr.)	P. point	245.00
E010502	Medium point (up to 6 mtr.)	P. point	370.00
E010503	Long point (up to 10 mtr..)	P. point	478.00
E010600	Wiring of twin control light point as per PWD specification for electrical Works with ISI marked 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade (IS:694) and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked MMS (IS:9537 P - III) vergin material PVC conduit & it's all accessories(J.B. , Bends etc.) , round tiles,2 nos. 18 SWG Hot Dipped Galvanized Modular Box with earth terminal ,2 Nos 6 A two way Modular switch, 3 pin ceiling rose / lamp holder/ 3 pin connector ,Modular face plate with grid plate, screws etc.,all as per pre approved by Engineer in charge, making connections, testing etc. complete as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter E - 04, E - 05 & E - 07. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E010601	Short point (up to 3 mtr.)	P. point	469.00
E010602	Medium point (up to 6 mtr.)	P. point	686.00
E010603	Long point (up to 10 mtr.)	P. point	876.00
E010700	Wiring of 3/5 pin 6 amp. Light plug point as per PWD specification for electrical Works with ISI marked 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade (IS:694) and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked MMS (IS:9537 P - III) vergin material PVC conduit & it's all accessories(J.B. , Bends etc.) , round tiles, 18 SWG Hot Dipped Galvanized Modular Box with earth terminal, 6 A modular switch, 3/ 5 pin 6 A modular socket, Modular face plate with grid plate, screws etc.,all as per pre approved by Engineer in charge, making connections, testing etc. complete as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter E - 04, E - 05 & E - 07. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E010701	On board	P. point	253.00
E010702	Short point (up to 3 mtr.)	P. point	324.00
E010703	Medium point (up to 6 mtr.)	P. point	444.00
E010704	Long point (up to 10 mtr..)	P. point	547.00
Note: 1	These rates are for recess wiring, rates shall be decreased for point wiring / piping work by 10 % for surface wiring in place of recess wiring .		

E-02 PVC Insulated wiring in Steel Conduit

Code No	Description	Unit	Rate Rs.
E020100	Wiring of light point/ fan point/ exhaust fan point/ call bell point as per PWD specification for electrical Works with ISI marked 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade (IS: 694) and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked (IS:9537 P - II) rigid steel conduit & it's all accessories, round tiles, 18 SWG G.I. box with earth terminal, 6 A switch, 3 pin ceiling rose/ Lamp holder / 3 point Connector, 3.0 mm thick ISI marked phenolic laminated sheet, pvc bushes, check nuts, Al. alloy/ cadmium plated iron screws 20 mm cup washers etc. All as per pre approved by Engineer in charge, making connections, testing etc. complete as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter E - 04, E - 05 & E - 07 . For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E020101	Short point (up to 3 mtr.)	P. point	252.00
E020102	Medium point (up to 6 mtr.)	P. point	476.00
E020103	Long point (up to 10 mtr..)	P. point	666.00
E020200	Wiring of twin control light / Fan / Call bell point with 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade (IS:694) and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked (IS:9537 P - II) rigid steel conduit & it's all accessories, round tiles, 2 Nos 18 SWG G. I. box with earth terminal, 2 Nos 6 A two way switch, 3 pin ceiling rose/ Lamp holder / 3 point Connector, 3.0 mm thick ISI marked phenolic laminated sheet, pvc bushes, check nuts, Al. alloy/ cadmium plated iron screws 20 mm cup washers etc , All as per pre approved by Engineer in charge, making connections, testing etc. complete as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter E - 04, E - 05 & E - 07. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E020201	Short point (up to 3 mtr.)	P. point	447.00
E020202	Medium point (up to 6 mtr.)	P. point	877.00
E020203	Long point (up to 10 mtr..)	P. point	1244.00
E020300	Wiring of 3/5 pin 6 amp. Light plug point as per PWD specification for electrical Works with ISI marked 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade (IS:694) and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed		

Code No	Description	Unit	Rate Rs.
	ISI marked (IS:9537 P - II) rigid steel conduit & it's all accessories, required size 18 SWG, G.I. box with earth terminal, 6 A switch, 3/5 pin 6 A socket, 3.0 mm thick ISI marked phenolic laminated sheet, pvc bushes, check nuts, Al. alloy/ cadmium plated iron screws 20 mm cup washers etc. all as per pre approved by Engineer in charge, making connections, testing etc. complete as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter E - 04, E - 05 & E - 07 . For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E020301	On board	P. point	89.00
E020302	Short point (up to 3 mtr.)	P. point	263.00
E020303	Medium point (up to 6 mtr.)	P. point	486.00
E020304	Long point (up to 10 mtr..)	P. point	678.00
E020400	S&F following sizes (dia.) of ISI marked (IS:9537 P - II) rigid steel conduit of appropriate thickness related to its dia as per PWD specification for electrical Works along with accessories in recessed using saddles, clamps, fasteners, pvc bushes, check nuts, screws etc. as required including cutting the wall and making good the same as required all as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E020401	20 mm	R. mtr.	81.00
E020402	25 mm	R. mtr.	102.00
E020403	32 mm	R. mtr.	144.00
E020404	40 mm	R. mtr.	234.00
E020405	50 mm	R. mtr.	321.00
E020500	Wiring of light point/ fan point/ exhaust fan point/ call bell point as per PWD specification for electrical Works with ISI marked 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade (IS:694) and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked (IS:9537 P - II) rigid steel conduit & it's all accessories, round tiles, Hot Dipped Galvanized Modular Box of 18 SWG with earth terminal, 6 A Modular switch, 3 pin ceiling rose / lamp holder/ 3 point connector ,Modular face plate with grid plate, pvc bushes, check nuts, screws etc, all as per pre approved by Engineer in charge, making connections, testing etc. complete as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter E - 04, E - 05 & E - 07 . For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E020501	Short point (up to 3 mtr.)	P. point	306.00
E020502	Medium point (up to 6 mtr.)	P. point	528.00

Code No	Description	Unit	Rate Rs.
E020503	Long point (up to 10 mtr..)	P. point	714.00
E020600	Wiring of twin control light / Fan / Call bell point as per PWD specification for electrical Works with ISI marked 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade (IS :694) and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked (IS:9537 P - II) rigid steel conduit & it's all accessories, round tiles, 2 Nos Hot Dipped Galvanized Modular box of 18 SWG with earth terminal, 2 Nos 6 A two way Modular switch, 3 pin ceiling rose / lamp holder/ 3 point connector ,Modular face plate with grid plate, pvc bushes, check nuts,screws etc, all as per pre approved by Engineer in charge, making connections, testing etc. complete as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter E - 04, E - 05 & E - 07. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR.		
E020601	Short point (up to 3 mtr.)	P. point	584.00
E020602	Medium point (up to 6 mtr.)	P. point	1006.00
E020603	Long point (up to 10 mtr..)	P. point	1364.00
E020700	Wiring of 3/5 pin 5 amp. Light plug point as per PWD specification for electrical Works with ISI marked 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade (IS:694) and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) in recessed ISI marked (IS:9537 P - II) rigid steel conduit & it's all accessories, Hot Dipped Galvanized Modular box of 18 SWG with earth terminal, 6 A modular switch, 3/5 pin 6 A modular socket, Modular face plate with grid plate, pvc bushes, check nuts, screws etc.all as per pre approved by Engineer in charge, making connections, testing etc. complete as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter E - 04, E - 05 & E - 07 . For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR.		
E020701	On board	P. point	253.00
E020702	Short point (up to 3 mtr.)	P. point	387.00
E020703	Medium point (up to 6 mtr.)	P. point	602.00
E020704	Long point (up to 10 mtr.)	P. point	783.00
Note: 1	These rates are for recess wiring, rates shall be decreased for point wiring / piping work by 10 % for surface wiring in place of recess wiring . This note is applicabe only If already mensioned in Schedule "G" at the time of tender.		

E-03 PVC Insulated wiring in PVC Casing Capping

Code No	Description	Unit	Rate Rs.
E030100	Wiring of light point/ fan point/ exhaust fan point/ call bell point as per PWD specification for electrical Works with ISI marked 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade (as per IS:694) and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (as per IS:694) on surface ISI marked (IS:14927 P - II) UPVC casing capping & it's accessories like coupler, inner, outer, elbow, square box, tee, end cap etc., recessed 18 SWG G. I. box with earth terminal/surface UPVC Box with earth terminal, 6 A switch 3 pin ceiling rose / lamp holder/ 3 point connector , 3.0 mm thick ISI marked phenolic laminated sheet (IS : 2036 - 1995), Al. alloy/ cadmium plated iron screws 20 mm cup washers etc. , all as per pre approved by Engineer in charge,making connections, testing etc. complete as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter E - 04, E - 05 & E - 07 . For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E030101	Short point (up to 3 mtr.)	P. point	183.00
E030102	Medium point (up to 6 mtr.)	P. point	299.00
E030103	Long point (up to 10 mtr..)	P. point	400.00
E030200	Wiring of twin control light / fan / call bell point as per PWD specification for electrical Works with ISI marked with 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade (IS:694) and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694)on surface ISI marked (IS:14927 P - II) UPVC casing capping & it's accessories like coupler, inner, outer, elbow, square box, tee, end cap etc., 2 Nos recessed 18 SWG G I box with earth terminal/surface UPVC Box with earth terminal, 2 Nos 6 A two way switch, 3 pin ceiling rose / lamp holder/ 3 point connector , 3.0 mm thick ISI marked phenolic laminated sheet (IS : 2036 - 1995), Al. alloy/ cadmium plated iron screws 20 mm cup washers etc. , all as per pre approved by Engineer in charge,making connections, testing etc. complete as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter E - 04, E - 05 & E - 07 . For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E030201	Short point (up to 3 mtr.)	P. point	303.00
E030202	Medium point (up to 6 mtr.)	P. point	524.00
E030203	Long point (up to 10 mtr..)	P. point	713.00

Code No	Description	Unit	Rate Rs.
E030300	Wiring of 3/5 pin 6 amp. Light plug point as per PWD specification for electrical Works with ISI marked 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade (IS:694) and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) on surface ISI marked (IS:14927 P - II) UPVC casing capping & it's accessories like coupler, inner, outer, elbow, square box, tee, end cap etc., recessed 18 SWG suitable G. I. box with earth terminal/ surface UPVC Box with earth terminal, 6 A switch, 3/5 pin 6 A socket, 3.0 mm thick ISI marked phenolic laminated sheet (IS : 2036 - 1995), Al. alloy/ cadmium plated iron screws 20 mm cup washers etc.all as per pre approved by Engineer in charge,making connections, testing etc. complete as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter E - 04, E - 05 & E - 07 . For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E030301	On board	P. point	89.00
E030302	Short point (up to 3 mtr.)	P. point	195.00
E030303	Medium point (up to 6 mtr.)	P. point	312.00
E030304	Long point (up to 10 mtr..)	P. point	411.00
E030400	S&F following sizes of ISI marked (IS:14927 P - II) UPVC casing capping as per PWD specification for electrical Works along with all accessories like coupler, inner, outer, elbow, square box, tee, end cap etc. on surface with screws, expansion fasteners , All as per pre approved by Engineer in charge, making connections, testing etc. complete as required. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E030401	20 mm x 12 mm	R. mtr.	23.00
E030402	25 mm x 12 mm	R. mtr.	26.00
E030403	32 mm x 12 mm	R. mtr.	35.00
E030404	25 mm x 16 mm	R. mtr.	38.00
E030405	38 mm x 16 mm	R. mtr.	59.00
E030406	38 mm x 25 mm	R. mtr.	81.00
E030407	38 mm x 38 mm	R. mtr.	98.00
E030408	50 mm x 16 mm	R. mtr.	88.00
E030409	50 mm x 50 mm	R. mtr.	145.00
E030500	Wiring of light point/ fan point/ exhaust fan point/ call bell point as per PWD specification for electrical Works with ISI marked 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade (IS:694) and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) on surface ISI marked (IS: 14927 P - II) UPVC		

Code No	Description	Unit	Rate Rs.
	casing capping & it's accessories like coupler, inner, outer, elbow, square box, tee, end cap etc., Hot Dipped Galvanized Modular box of 18 SWG with earth terminal / surface Moulded UPVC Modular Box earth terminal , 6 A Modular switch , Modular face plate with grid plate, 3 pin ceiling rose/lamp holder/ 3 point connector , screws, , all as per pre approved by Engineer in charge,making connections, testing etc. complete as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter E - 04, E - 05 & E - 07. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E030501	Short point (up to 3 mtr.)	P. point	238.00
E030502	Medium point (up to 6 mtr.)	P. point	351.00
E030503	Long point (up to 10 mtr..)	P. point	447.00
E030600	Wiring of twin control light point as per PWD specification for electrical Works with ISI marked 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) on surface ISI marked (IS:14927 P - II) UPVC casing capping & it's accessories like coupler, inner, outer, elbow, square box, tee, end cap etc.,Hot Dipped Galvanized Modular box of 18 SWG with earth terminal/ surface 2 Nos moulded UPVC Modular box , 2 Nos 6 A two way Modular switch, 3 pin ceiling rose / lamp holder/ 3 point connector , Modular face plate with grid plate, screws, , all as per pre approved by Engineer in charge,making connections, testing etc. complete as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter E - 04, E - 05 & E - 07. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E030601	Short point (up to 3 mtr.)	P. point	441.00
E030602	Medium point (up to 6 mtr.)	P. point	652.00
E030603	Long point (up to 10 mtr..)	P. point	832.00
E030700	Wiring of 3/5 pin 6 amp. Light plug point as per PWD specification for electrical Works with ISI marked 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq. mm nominal size FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade(IS:694) on surface ISI marked (IS:14927 P - II) UPVC casing capping & it's accessories like coupler, inner, outer, elbow, square box, tee, end cap etc., Hot Dipped Galvanized Modular box of 18 SWG with earth terminal/ surface moulded UPVC Modular box, 3/5 pin 6 A modular switch, 6 A modular socket, Modular face plate with grid plate, screws, , all as per pre approved by Engineer in charge, making connections, testing etc. complete as required. For specification of copper Conductor, Phenolic Laminated sheet's & Electrical/ Wiring accessories refer Chapter E - 04, E - 05 & E - 07. For additional		

Code No	Description	Unit	Rate Rs.
	technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E030701	On board	P. point	253.00
E030702	Short point (up to 3 mtr.)	P. point	317.00
E030703	Medium point (up to 6 mtr.)	P. point	425.00
E030704	Long point (up to 10 mtr..)	P. point	517.00

E-04 Drawing of Wires and Submains

Code No	Description	Unit	Rate Rs.
E040100	Supplying and drawing FR PVC insulated & unsheathed flexible copper conductor as per PWD specification for electrical Works with ISI marked (IS:694) and as per IS 8130 : 2013 of 1.1 kV grade . Wire should be made from 99.99% purity copper, class 5 stranding in acc. to IEC 60228 for lower watt loss , oxygen free (<10 ppm) for less chances of oxidization and higher silver content for gives better conductivity , insulation PVC type A or C ,flame retardant as per IS 10810-53, better amperage rating as per VDE 0298 part 4, , in existing surface or recessed PVC/ MS conduit/casing capping including all as per pre approved by Engineer in charge,making connections, etc. as required. OEM Must have its own in house NABL lab setup for all testing facilities for wires. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E040101	1 x 1.5 sq.mm	Mtr.	12.00
E040102	2 x 1.5 sq.mm	Mtr.	25.00
E040103	3x 1.5 sq.mm	Mtr.	37.00
E040104	4 x 1.5 sq.mm	Mtr.	48.00
E040105	1 x 2.5 sq.mm	Mtr.	20.00
E040106	2 x 2.5 sq.mm	Mtr.	39.00
E040107	2 x 2.5 sq. mm. + 1x1.5sqmm	Mtr.	51.00
E040108	3 x 2.5 sq.mm	Mtr.	59.00
E040109	4 x 2.5 sq.mm	Mtr.	77.00
E040110	1 x 4.0 sq.mm	Mtr.	27.00
E040111	2 x 4.0 sq.mm	Mtr.	53.00
E040112	3 x 4 sq. mm.	Mtr.	80.00
E040113	4 x 4.0 sq.mm	Mtr.	106.00
E040114	2 x 4.0 sq. mm. + 1 x 2.5 sq. mm.	Mtr.	73.00
E040115	1 x 6.0 sq.mm	Mtr.	42.00
E040116	2 x 6.0 sq.mm	Mtr.	83.00
E040117	3 x 6.0 sq. mm.	Mtr.	123.00
E040118	4 x 6.0 sq.mm	Mtr.	165.00
E040119	2 x 6.0 sq. mm. + 1 x 2.5 sq. mm.	Mtr.	103.00
E040120	2 x 6.0 sq. mm. + 1 x 4.0 sq. mm.	Mtr.	110.00
E040121	1 x 10.0 sq.mm	Mtr.	72.00

Code No	Description	Unit	Rate Rs.
E040122	2 x 10.0 sq.mm	Mtr.	142.00
E040123	4 x 10.0 sq.mm	Mtr.	282.00
E040124	1 x 16.0 sq.mm	Mtr.	123.00
E040125	2 x 16.0 sq.mm	Mtr.	242.00
E040126	4 x 16.0 sq.mm	Mtr.	478.00
E040200	Supplying and drawing RoHS compliance, 75 ohm coaxial cable with 18 AWG Copper Covered Steel conductor/ 14 AWG Copper Covered Steel , Foam FEP insulated shielding (typically aluminum foil, and 95% copper braid), and tolerances are more tightly controlled, to improve impedance stability and protected with PVC sheath, Flame Rating -NFPA 262 , in existing surface or recessed conduit/casing capping including , all as per pre approved by Engineer in charge,making connections, as required. For technical terms and conditions , refer Annexure "A" attached with this BSR .		
E040201	RG - 6	Mtr.	17.00
E040202	RG -11	Mtr.	34.00
E040300	Supplying and drawing PVC/ Polythene insulated and PVC sheathed unarmoured telephone cable with 0.5 mm dia. Tinned / annealed copper conductor taped & confirming to latest TEC specification , GR / WIR/06-03 March 2002 of following pair in existing surface or recessed PVC/MS conduit/casing capping including all as per pre approved by Engineer in charge, making connections, as required. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E040301	1 pair	Mtr.	8.00
E040302	2 pair	Mtr.	12.00
E040303	3 pair	Mtr.	17.00
E040304	4 pair	Mtr.	24.00
E040305	5 pair	Mtr.	28.00
E040306	10 pair	Mtr.	55.00
E040307	20 pair	Mtr.	102.00
E040308	50 pair	Mtr.	230.00
E040309	100 pair	Mtr.	427.00
E040400	Supply and Laying of 0.6 mm Jelly filled (PIJF) telephone cable confirming to TEC specifications GR/CUG-01/03 in existing conduit/ pipe / open trench or on Cable tray / on surface (by Saddles) including making necessary connection, testing etc. all as per pre approved by Engineer in charge, making connections, as required. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E040410	Unarmoured		

Code No	Description	Unit	Rate Rs.
E040411	5 pair	Mtr.	78.00
E040412	10 pair	Mtr.	128.00
E040413	20 pair	Mtr.	217.00
E040414	50 pair	Mtr.	496.00
E040415	100 pair	Mtr.	914.00
E040416	200 pair	Mtr.	1,573.00
E040420	Armoured		
E040421	5 pair	Mtr.	132.00
E040422	10 pair	Mtr.	189.00
E040423	20 pair	Mtr.	272.00
E040424	50 pair	Mtr.	492.00
E040425	100 pair	Mtr.	919.00
E040426	200 pair	Mtr.	1,747.00
E040500	Supply & drawing Wiring for sub mains as per PWD specification for electrical Works with ISI marked (IS:694) , 1100 Volts grade PVC insulated flat twin core sheathed solid aluminium conductor with 10 SWG G.I. Support wire duly clipped including all as per pre approved by Engineer in charge, making connections, as required. OEM Must have its own in house NABL lab setup for all testing facilities for wires. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E040501	4.0 sq.mm	Mtr.	39.00
E040502	6.0 sq.mm	Mtr.	56.00
E040503	10.0 sq.mm	Mtr.	81.00
E040600	Supplying and Laying ISI marked P.V.C. insulated submersible cable as per PWD specification for electrical Works confirming to IS:694 and as per IS 8130 : 2013 of 1.1 kV grade .Wire should be made from 99.99% purity copper, class 5 stranding in acc. to IEC 60228 for lower watt loss , oxygen free (<10 ppm) for less chances of oxidization and higher silver content for gives better conductivity , insulation PVC type A or C ,flame retardant as per IS 10810-53, better amperage rating as per VDE 0298 part 4 including making connection etc. as required. OEM Must have its own in house NABL lab setup for all testing facilities for wires. All as per pre approved by Engineer in charge, making connections. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E040601	1.5 Sq.mm 3 core flat / Round	Mtr.	57.00
E040602	2.5 Sq.mm 3 core flat / Round	Mtr.	92.00
E040603	4.0 Sq.mm 3 core flat / Round	Mtr.	132.00

Code No	Description	Unit	Rate Rs.
E040604	6.0 Sq.mm 3 core flat / Round	Mtr.	189.00
E040605	10.0 Sq.mm 3 core flat / Round	Mtr.	302.00
E040606	16.0 Sq.mm 3 core flat / Round	Mtr.	484.00
E040700	Supplying and drawing FRLS PVC insulated & unsheathed flexible copper conductor as per PWD specification for electrical Works with ISI marked (IS:694) and as per IS 8130 : 2013 of 1.1 kV grade . Wire should be made from 99.99% purity copper, class 5 stranding in acc. to IEC 60228. FRLS PVC insulation which provides better fire retardant properties than normal PVC & also emits Low Smoke in case of fire & use type A or C insulation PVC, in existing conduit including , all as per pre approved by Engineer in charge,making connections, etc. as required. OEM Must have its own in house NABL lab setup for all testing facilities for wires. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E040701	1 x 1.5 sq.mm	Mtr.	14.00
E040702	2 x 1.5 sq.mm	Mtr.	28.00

E-05 G.I. /M. S./ Wooden boxes & Laminates

Code No	Description	Unit	Rate Rs.
E050100	Providing & Fixing of 18 SWG G. I. / M .S. Sheet boxes as per PWD specification for electrical Works, duly finished with two coats of red oxide and with earthing terminal of following sizes (nominal size) in recessed/surface as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E050110	18 SWG M. S. Sheet boxes		
E0501101	75mm x 75mm x 60mm	Each	34.00
E0501102	100mm x 100mm x 60mm	Each	45.00
E0501103	150mm x 75mm x 60mm	Each	53.00
E0501104	175mm x 100mm x 60mm	Each	58.00
E0501105	150mm x 150mm x 60mm	Each	63.00
E0501106	225mm x 100mm x 60mm	Each	65.00
E0501107	200mm x 150mm x 60mm	Each	79.00
E0501108	200mm x 125mm x 75mm	Each	93.00
E0501109	200mm x 250mm x 75mm	Each	103.00
E0501110	200mm x 250mm x 100mm	Each	115.00
E0501111	250mm x 300mm x 75mm	Each	149.00
E0501112	250mm x 300mm x 100mm	Each	156.00
E0501113	300mm x 375mm x 75mm	Each	171.00
E0501114	300mm x 375mm x 100mm	Each	181.00
E0501115	250mm x 100mm x 60mm	Each	74.00
E0501116	300mm x 100mm x 60mm	Each	86.00
E0501117	300mm x 300mm x 75mm	Each	160.00
E050120	18 SWG G I boxes		
E0501201	75mm x 75mm x 60mm	Each	42.00
E0501202	100mm x 100mm x 60mm	Each	56.00
E0501203	150mm x 75mm x 60mm	Each	63.00
E0501204	175mm x 100mm x 60mm	Each	68.00
E0501205	150mm x 150mm x 60mm	Each	72.00
E0501206	225mm x 100mm x 60mm	Each	76.00
E0501207	200mm x 150mm x 60mm	Each	94.00
E0501208	200mm x 125mm x 75mm	Each	101.00

Code No	Description	Unit	Rate Rs.
E0501209	200mm x 250mm x 75mm	Each	112.00
E0501210	200mm x 250mm x 100mm	Each	129.00
E0501211	250mm x 300mm x 75mm	Each	158.00
E0501212	250mm x 300mm x 100mm	Each	171.00
E0501213	300mm x 375mm x 75mm	Each	181.00
E0501214	300mm x 375mm x 100mm	Each	195.00
E0501215	250mm x 100mm x 60mm	Each	86.00
E0501216	300mm x 100mm x 60mm	Each	104.00
E0501217	300mm x 300mm x 75mm	Each	178.00
E050200	Providing & Fixing in position frame made out of M.S. angle (riveted or welded) as per IS: 2062-2011 finished with two coats of red oxide and two coats of enamel paint including cutting, welding, holes etc. of following sizes as required. All drawing as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E050201	25mm x 25mm x 3mm	Mtr.	95.00
E050202	25mm x 25mm x 5mm	Mtr.	148.00
E050203	35mm x 35mm x 5mm	Mtr.	210.00
E050204	40mm x 40mm x 5mm	Mtr.	242.00
E050205	50mm x 50mm x 6mm	Mtr.	357.00
E050300	Providing & Fixing of Powder coated CRCA sheet on existing angle iron frame by means of nuts and bolts and making holes , etc. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E050301	1.0 mm thick	Sqm.	1,165.00
E050302	1.6 mm thick	Sqm.	1,579.00
E050303	2.0 mm thick	Sqm.	1,910.00
E050304	2.5 mm thick	Sqm.	2,246.00
E050400	Providing & Fixing of M.S. flat as per Is:2062-2011 on existing angle iron frame and making required no. of holes for fixing accessories including one coat of red oxide paint and two coats of enamel paint etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E050401	25 mm x 3 mm	Mtr.	53.00
E050402	25 mm x 5 mm	Mtr.	84.00
E050403	32 mm x 5 mm	Mtr.	107.00
E050404	40 mm x 6 mm	Mtr.	131.00

Code No	Description	Unit	Rate Rs.
E050405	50 mm x 6 mm	Mtr.	193.00
E050406	50 mm x 10 mm	Mtr.	308.00
E050500	Providing & Fixing of paper phenolic resin bonded laminates confirming to IS : 2036 - 1995 for boxes/ frames including making holes for switches etc, with brass/ zinc plated screws, washers, nut and bolts as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E050501	3.0 mm thick	Sq.m	785.00
E050502	4.8 mm thick	Sq.m	928.00
E050503	6.4 mm thick	Sq.m	1,049.00
E050504	9.0 mm thick	Sq.m	1,336.00
E050505	12.0 mm thick	Sq.m	1,779.00
E050506	19.0 mm thick	Sq.m	2,769.00
E050507	25.0 mm thick	Sq.m	4,997.00
E050600	Providing & Fixing of phenolic laminated sheet 2.0 mm thick of following size . Including screws, cup washer as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E050601	75 mm dia	Each	7.00
E050602	100 mm dia.	Each	12.00
E050700	Providing & Fixing of P.V.C. sheet 2.0 mm thick of following size Including screws, cup washer as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E050701	75 mm dia.	Each	4.00
E050702	100 mm dia.	Each	7.00
E050800	Providing & Fixing of Aluminium sheet 1.0 m thick of following size dia. Including screws, cup washer as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E050801	75 mm dia.	Each	5.00
E050802	100 mm dia.	Each	8.00
E050900	Providing & Fixing of surface/recessed type 10 mm thick wood board duly antitermite treated, varnished and fixed by using gutties/ PVC fasteners of following size as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E050901	150 mm x 75 mm	Each	22.00

Code No	Description	Unit	Rate Rs.
E050902	100 mm x 100 mm	Each	23.00
E050903	100 mm x 175 mm	Each	30.00
E050904	200 mm x 250 mm	Each	45.00
E050905	250 mm x 300 mm	Each	57.00
E050906	300 mm x 375 mm	Each	67.00
E050907	375 mm x 450 mm	Each	85.00
E050908	450 mm x 600 mm	Each	119.00
E051000	P & F 18 swg M.S. Recessed fan box, hexagonal/ round of size 130 mm dia, depth 75mm, 12 mm dia rod fan hook with 100 mm length extended on each side . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	94.00
E051100	P & F 20 swg M.S. Recessed concealed box, round of size 150 mm dia, depth 100 mm complete as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	76.00
E051200	Labour charges for dismantling of surface PVC/ Steel conduit including wiring in conduit, conduit fittings and depositing the same with listing of material in store.	R. Mtr.	8.00
E051300	Labour charges for dismantling of surface/ recessed switch board of any size and depositing the same with listing of material in store.	Each	5.00
E051400	Labour charges for dismantling of switch accessories like switch, socket, ceiling rose, holder and depositing the same with listing of material in store.	Each	3.00
E051500	Labour charges for dismantling of wiring in existing conduit of following size and depositing the same with listing of material in store.		
E051501	up to 2.5 sq. mm. wire	R. Mtr.	2.00
E051502	4/ 6 sq. mm. wire	R. Mtr.	3.00
E051503	10 sq. mm. wire	R. Mtr.	4.00
E051600	P & F 3.0 mm thick Poly propylene plastic polished concealed fan box, square of size (106x106) mm dia, depth 50 mm , 10 mm dia rod of SS with platinum coated with 55 mm length extended on each side . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	99.00

E-06 Distribution Board & it's Accessories

Code No	Description	Unit	Rate Rs.
E060100	Providing & Fixing of 240/415 V AC MCB with positive isolation of breaking capacity not less than 10 KA (B/ C tripping characteristic as per type of load and site requirement) 4KV impulse withstand voltage, as per PWD specification for electrical Works with ISI marked IS 8828(1996) / conforming to IEC 60898-1 2002, IEC 60947-2, low watt losses, trip free mechanism , energy limiting of class 3 as per IEC, minimum phase termination capacity of 35sq.mm. , conductorline load reversibility, label holding facility , IP 20 contact protection and fitted with existing distribution board/sheets, min. operation 20,000 upto 32 A rating and 10,000 upto 63 A, 5000 for 80 A rating including making connections, testing etc. as required. . OEM shall have submit NABL / CPRI / ERDA accredited lab test reports before execution & All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E060110	Single pole MCB		
E060111	0.5 A to 2 A rating	Each	216.00
E060112	3 A to 5 A rating	Each	207.00
E060113	6 A to 32 A rating	Each	146.00
E060114	40 A rating	Each	292.00
E060115	50/63 A rating	Each	319.00
E060116	80 A rating	Each	1,118.00
E060120	Double pole MCB		
E060121	0.5 A to 2 A rating	Each	525.00
E060122	3 A to 5 A rating	Each	517.00
E060123	6 A to 32 A rating	Each	417.00
E060124	40 A rating	Each	638.00
E060125	50-63 A rating	Each	686.00
E060126	80 A rating	Each	2,432.00
E060130	Triple pole MCB		
E060131	0.5 A to 5 A rating	Each	659.00
E060132	6 A to 32 A rating	Each	654.00
E060133	40 A rating	Each	942.00
E060134	50-63 A rating	Each	983.00
E060135	80 A rating	Each	3,334.00

Code No	Description	Unit	Rate Rs.
E060136	100 A rating	Each	3,684.00
E060140	Four pole MCB		
E060141	0.5 A to 5 A rating	Each	1,055.00
E060142	6 A to 32 A rating	Each	913.00
E060143	40 A rating	Each	1,246.00
E060144	50-63 A rating	Each	1,301.00
E060145	80 A rating	Each	4,433.00
E060146	100 A rating	Each	4,833.00
E060200	Providing & Fixing of 240/415 V AC MCB with positive isolation of breaking capacity not less than 10 KA (D curve tripping characteristic as per site requirement) 4KV impulse withstand voltage, as per PWD specification for electrical Works with ISI marked IS 8828(1996) / conforming to IEC 60898-1 2002, IEC 60947-2, low watt losses, trip free mechanism , energy limiting of class 3 as per IEC, minimum phase termination capacity of 35sq.mm. , conductorline load reversibility, label holding facility , IP 20 contact protection and fitted with existing distribution board/sheets, min. operation 20,000 upto 32 A rating and 10,000 upto 63 A, 5000 for 80 A rating including making connections, testing etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab test reports before execution & All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E060210	Triple pole MCB		
E060211	0.5 A to 5 A rating	Each	694.00
E060212	6 A to 32 A rating	Each	687.00
E060213	40 A rating	Each	990.00
E060214	50/63 A rating	Each	1,039.00
E060300	Providing & Fixing of 240/415 V isolator as per PWD specification for electrical Works with ISI marked IS:13947-III/conforming to IEC 60947-3, suitable for AC22A utilization category, 4KV impulse withstand voltage, true contact indication, Red colour dolly / lever shall have single mould covering over all poles for operation , two position din rail mounting, minimum phase termination capacity of 35sq.mm. , label holding facility , IP 20 contact protection and fitted with existing distribution board / sheet including making connections, testing etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab test reports before execution & All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E060310	Double pole isolator		

Code No	Description	Unit	Rate Rs.
E060311	30 A / 40 A rating	Each	258.00
E060312	63 A rating	Each	329.00
E060313	80 A/ 100 A rating	Each	426.00
E060320	Triple pole Isolator		
E060321	40 A rating	Each	486.00
E060322	63 A rating	Each	563.00
E060323	80 A/ 100 A rating	Each	677.00
E060330	Four pole Isolator		
E060331	40 A rating	Each	562.00
E060332	63 A rating	Each	607.00
E060333	80 A/ 100 A rating	Each	777.00
E060400	Providing & Fixing of 240/415 V factory fitted RCBO with overload, short-circuit and earth leakage protection as per PWD specification for electrical Works with ISI marked (IS12640-2)/ conforming to IEC 61009-1, breaking capacity 10 KA, true position indication and trip free mechanism, line load reversibility, provision for pad lock, min. operation 10,000 upto 63 A rating and 5000 for 80 A-100 A rating, minimum phase termination capacity of 35sq.mm. , IP 20 contact protection with existing distribution board / sheet including making connections, testing etc. as required.OEM shall have submit NABL / CPRI / ERDA accredited lab test reports before execution & All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E060410	Two pole 30 mA sensitivity		
E060411	6A-32 A rating	Each	2,019.00
E060412	40 A rating	Each	2,336.00
E060413	63 A rating	Each	2,708.00
E060420	Two pole 100/300mA sensitivity		
E060421	6A-32 A rating	Each	2,129.00
E060422	40 A rating	Each	2,488.00
E060423	63 A rating	Each	2,889.00
E060430	Four pole 30 mA sensitivity		
E060431	6A-32 A rating	Each	2,645.00
E060432	40 A rating	Each	2,783.00
E060433	63 A rating	Each	3,197.00
E060440	Four pole 100/300 mA sensitivity		
E060441	6A-32 A rating	Each	2,714.00

Code No	Description	Unit	Rate Rs.
E060442	40 A rating	Each	2,813.00
E060443	63 A rating	Each	3,211.00
E060500	Providing & Fixing of 240/415 V Residual current circuit breaker (RCCB) as per PWD specification for electrical Works with ISI marked (IS:12640-1) / conforming to IEC 61008 -1 , rated conditional s/c current of 10 KA, truly current operated and shall operate on CBCT mechanism, provision for pad lock, min. operation 10,000 upto 63 A rating and 5000 for 100 A rating, minimum phase termination capacity of 50 sq.mm. rigid wire , IP 20 contact protection with existing distribution board / sheet including making connections, testing etc. as required.OEM shall have submit NABL / CPRI / ERDA accredited lab test reports before execution & All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E060510	Two pole 30 mA sensitivity		
E060511	16/25 A rating	Each	1,688.00
E060512	32/40 A rating	Each	1,700.00
E060513	63A rating	Each	2,222.00
E060520	Two pole 100/300mA sensitivity		
E060521	16/25 A rating	Each	1,639.00
E060522	40 A rating	Each	1,682.00
E060523	63 A rating	Each	2,218.00
E060530	Four pole 30 mA sensitivity		
E060531	25 A rating	Each	2,093.00
E060532	40 A rating	Each	2,121.00
E060533	63 A rating	Each	2,231.00
E060534	100 A rating	Each	5,271.00
E060540	Four pole 100/300 mA sensitivity		
E060541	25 A rating	Each	2,037.00
E060542	40 A rating	Each	2,072.00
E060543	63 A rating	Each	2,203.00
E060544	100 A rating	Each	5,340.00
E060600	Providing & Fixing of IK09 recessed/surface mounting heavy duty horizontal type sheet steel not less than 1.2 mm thick Distribution board as per PWD specification for electrical Works ISI marked conforming to IS-13032 & IS-8623 / conforming to IEC 61439-3. Phosphatised/ powder painted complete with suitable rating insulated copper bus bar, shorting link , neutral link, earth link , connecting wire of suitable rating and din bar,masking sheet,		

Code No	Description	Unit	Rate Rs.
	including making internal DB terminations with copper lugs and with detachable gland plate, including making connections, testing etc. as required.OEM shall have submit NABL / CPRI / ERDA accredited lab test reports before execution & All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E060610	IP-43 Double door (single phase)		
E060611	4 Way (4 O/G +2 I/C)	Each	765.00
E060612	6 Way (6 O/G +2 I/C)	Each	834.00
E060613	8 Way (8 O/G +2 I/C)	Each	979.00
E060614	12 Way (12 O/G +2 I/C)	Each	1,138.00
E060615	16 Way (16 O/G +2 I/C)	Each	1,475.00
E060620	IP-43 Double door (Three phase)		
E060621	4 Way (12 O/G + 8 I/C)	Each	1,648.00
E060622	6 Way (18 O/G + 8 I/C)	Each	1,972.00
E060623	8 Way (24 O/G + 8 I/C)	Each	2,441.00
E060624	12 Way (36 O/G + 8 I/C)	Each	3,620.00
E060700	Providing & Fixing of IK 09 recessed/surface mounting heavy duty Flexi/Row TPN sheet steel not less then 1.2 mm thick Distribution board as per PWD specification for electrical Works ISI marked conforming to IS-13032 & IS-8623 /conforming to IEC 61439-3.Phosphatised/ powder painted complete with suitable rating insulated copper bus bar, shorting link , neutral link, earth link and din bar,masking sheet, including making internal DB terminations with copper lugs and with detachable gland plate, testing etc. as required complete in all respect.OEM shall have submit NABL / CPRI / ERDA accredited lab test reports before execution & All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E060710	IP-43 Double door		
E060711	2 Row 28 Module(14 module per row)	Each	2,385.00
E060712	3 Row 42 Module(14 module per row)	Each	2,841.00
E060713	4 Row 56 Module(14 module per row)	Each	3,275.00
E060714	4 Row 64 Module(16 module per row)	Each	3,633.00
E060800	Providing & Fixing of recessed/surface mounting type sheet steel / Plastic enclosure as per PWD specification for electrical Works conforming to IEC 61439-3 of not less then 1.2 mm thick for housing MCB/Isolator with Din rail including , all as per pre approved by Engineer in charge,making connections, with lugs, repairs etc. as required.OEM shall have submit NABL / CPRI / ERDA accredited lab test reports before execution & All as per pre approved by		

Code No	Description	Unit	Rate Rs.
	Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E060810	With sheet steel enclosure		
E060811	One way	Each	197.00
E060812	Two way	Each	287.00
E060813	Four way	Each	293.00
E060820	With plastic enclosure		
E060821	One way	Each	94.00
E060822	Two way	Each	118.00
E060823	Four way	Each	171.00
E060900	Providing & Fixing of metal clad industrial plug top & socket unit with pin and sleeve type copper contact on porcelain/ bakelite base insheet steel(CRCA) powdered coated enclosure as per PWD specification for electrical Works conforming to Is 8623 & IEC 61439-3 (without MCB) including , all as per pre approved by Engineer in charge,making connections,, testing etc.as required .OEM shall have submit NABL / CPRI / ERDA accredited lab test reports before execution & All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E060910	20 A Double Pole (single phase Three pin)	Each	820.00
E060911	20 A (Three phase Three pole)	Each	1,489.00
E060912	30A-32A(three phase Three pole)	Each	1,752.00
E060913	63 A (Three phase Five pin 3P +N +E))	Each	6,174.00
E061000	Providing & Fixing of Industrial plug and socket as per PWD specification for electrical Works conforming to IEC 60309-1/2 made out of self extinguishing engineering polymer / polyamide, nickel plated brass sleeve and pins, socket with shutter including making connection etc as reqd complete in all respect.OEM shall have submit NABL / CPRI / ERDA accredited lab test reports before execution & All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E061010	Panel mounted socket		
E061011	16 A 3 pin(2P+E)	Each	452.00
E061012	32 A 3 pin(2P+E)	Each	533.00
E061013	32 A 5 pin(3P+N+E)	Each	701.00
E061014	63 A 5 pin(3P+N+E)	Each	1,702.00
E061020	Surface/Wall mounted socket		
E061021	16 A 3 pin(2P+E)	Each	606.00

Code No	Description	Unit	Rate Rs.
E061022	32 A 3 pin(2P+E)	Each	737.00
E061023	32 A 5 pin(3P+N+E)	Each	946.00
E061024	63 A 5 pin(3P+N+E)	Each	2,158.00
E061030	Plug top		
E061031	16 A 3 pin(2P+E)	Each	359.00
E061032	32 A 3 pin(2P+E)	Each	579.00
E061033	32 A 5 pin(3P+N+E)	Each	620.00
E061034	63 A 5 pin(3P+N+E)	Each	1,569.00
E061100	Providing & Fixing of IK09 rating recessed/surface mounting heavy duty Vertical type sheet steel not less than 1.2 mm thick Distribution board as per PWD specification for electrical Works ISI marked conforming to IS-13032 & IS-8623 / conforming to IEC 61439-3 with provision of incomer suitable for MCB / RCCB and SP / TP MCB as outgoing , phosphatised ,powder painted complete with insulated suitable rating copper bus bar , neutral link, earth link and din bar, masking sheet, including making internal DB terminations with copper lugs and with detachable gland plate , testing etc. as required complete in all respect.OEM shall have submit NABL / CPRI / ERDA accredited lab test reports before execution & All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E061110	IP-43 Double door		
E061111	4 Way(8+12)	Each	4,242.00
E061112	6 Way(8+18)	Each	4,932.00
E061113	8 Way(8+24)	Each	5,200.00
E061114	12 Way(8+36)	Each	6,801.00
E061200	Providing & Fixing of IK 09 rating recessed/surface mounting heavy duty Vertical type sheet steel not less than 1.2 mm thick Distribution board as per PWD specification for electrical Works ISI marked conforming to IS-13032 & IS-8623 / conforming to IEC 61439-3 with provision of incomer suitable for MCCB and SP / TP MCB as outgoing , phosphatised ,powder painted complete with insulated suitable rating copper bus bar , neutral link, earth link and din bar, masking sheet, including making internal DB terminations with copper lugs and with detachable gland plate, testing etc. as required complete in all respect.OEM shall have submit NABL / CPRI / ERDA accredited lab test reports before execution & All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E061210	IP 43- Double door with Provision of Incomer MCCB 100 / 125/160 A Rating		

Code No	Description	Unit	Rate Rs.
E061211	4 Way	Each	4,656.00
E061212	6 Way	Each	5,532.00
E061213	8 Way	Each	5,842.00
E061214	12 Way	Each	8,029.00
E061220	IP- 43 Double door with Provision of Incomer MCCB 200/ 250 A Rating		
E061221	4 Way	Each	9,417.00
E061222	6 Way	Each	10,052.00
E061223	8 Way	Each	10,210.00
E061224	12 Way	Each	11,038.00
E061300	Providing & Fixing of recessed/surface mounting heavy duty sheet steel not less than 1.2 mm thick End Box as per PWD specification for electrical Works for distribution board duly phosphatised powder coated complete as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E061301	For TPN 4 way DB	Each	447.00
E061302	For TPN 6 way DB	Each	490.00
E061303	For TPN 8 way DB	Each	524.00
E061304	For TPN 12 way DB	Each	696.00
E061305	For all VTPN DB	Each	1,076.00
E061400	P & F of Industrial plug and socket conforming to IEC 60309-1/2 made out of self extinguishing engineering polymer / polyamide, nickel plated brass sleeve and pins, socket with shutter including making connection etc as required.		
E061410	Mobile socket		
E061410A	16 A 3 pin	Each	515.00
E061410B	32 A 4 pin	Each	683.00
E061410C	63 A 5 pin	Each	2,570.00

E-07 Electrical Accessories

Code No	Description	Unit	Rate Rs.
E070100	Providing & Fixing of ISI marked (IS :3854) 6 amp. flush type non modular switch as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material, minimum width of switch toggle (PUSH PART) should not less then 16 mm, brass terminal & captive screws including cutting hole in tile and making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	19.00
E070200	Providing & Fixing of ISI marked (IS :3854) 16 amp. flush type non modular switch as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material , minimum width of switch toggle (PUSH PART) should not less then 16 mm, brass terminal & captive screws including cutting hole in tile and making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	47.00
E070300	Providing & Fixing of of 3 pin 6 amp. flush type non modular socket as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material, brass terminal with Porcelain based back cover & captive screws including cutting hole in tile and making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	23.00
E070400	Providing & Fixing of 3/6 pin 16 amp flush type non modular socket as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material, brass terminal with Porcelain based back cover & captive screws including cutting hole in tile and making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	49.00
E070500	Providing & Fixing of ISI marked (IS :3854) non modular 6A bell push surface type as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material, minimum width of switch toggle (PUSH PART) should not less then 16 mm, brass terminal & captive screws including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	21.00

Code No	Description	Unit	Rate Rs.
E070600	Providing & Fixing of ISI marked (IS :3854) twin control non modular 6A switch surface type as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material, minimum width of switch toggle should not less then 18 mm, brass terminal & captive screws including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	29.00
E070700	Providing & Fixing of ISI marked (IS :3854) non modular 6A bell push flush type as per PWD specification for electrical Works,made out from industrial grade Polycarbonate or fire resistant ABS material, minimum width of switch toggle (PUSH PART) should not less then 16 mm, brass terminal & captive screws including cutting hole in tile and making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	21.00
E070800	Providing & Fixing of ISI marked (IS :3854) non modular 6A twin control switch flush type as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material, minimum width of switch toggle (PUSH PART) should not less then 16 mm, brass terminal & captive screws including cutting hole in tile and making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	21.00
E070900	Providing & Fixing of ISI marked non modular 6A hanging bell push/one way switch made out from industrial grade Polycarbonate or fire resistant ABS material, minimum width of switch toggle (PUSH PART) should not less then 16 mm, brass terminal & captive screws including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	22.00
E071000	Providing & Fixing of ISI marked (IS :3854) 6 amp. Combined flush type non modular socket and switch set as per PWD specification for electrical Works,made out from industrial grade Polycarbonate or fire resistant ABS material, minimum width of switch toggle(PUSH PART) should not less then 18 mm, brass terminal with Porcelain based back cover & captive screws including cutting hole in tile and making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	83.00

Code No	Description	Unit	Rate Rs.
E071100	Providing & Fixing of ISI marked (IS :3854) 16 amp. Combined flush type non modular socket and switch set with indicator and fuse set as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material, brass terminal with Porcelain based back cover & captive screws including cutting hole in tile and making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	122.00
E071200	Providing and fixing of non modular power plug point accessories as per PWD specification for electrical Works with 18 SWG G I box of size 175 x 100 x 60 mm with earthing terminal/connector on recessed/surface with suitable size phenolic laminated sheet (IS : 2036 - 1995) cover including cost of 16 amp. Switch (IS :3854) and 3/6 pin 16 amp. socket outlet [as per detailed in respective item in BSR], making connection , testing , etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	205.00
E071300	Providing & Fixing of ISI marked (IS:371) 6 amp surface type 3 pin ceiling roses as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material, brass terminal & captive screws including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	19.00
E071400	Providing & Fixing of ISI marked (IS:1258) 6 amp batten/angle lamp holder as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material, brass terminal & captive screws including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	20.00
E071500	Providing & Fixing of ISI marked (IS:1293) 6 amp unbreakable 3 pin plug top with lamp indicator as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material, brass terminal including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	30.00
E071600	Providing & Fixing of ISI marked (IS:1293) 16 amp unbreakable 3 pin plug top with lamp indicator as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material, brass terminal including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	46.00

Code No	Description	Unit	Rate Rs.
E071700	Providing & Fixing of flush type non modular 2 pin telephone socket with plug top as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material, brass terminals including making connection testing etc. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	37.00
E071800	Providing & Fixing of flush type non modular single line telephone jack as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material, including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	48.00
E071900	Providing & Fixing of flush type non modular double line telephone jack as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material, including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	57.00
E072000	Providing & Fixing of flush type non modular coaxial T.V. socket as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material, including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	25.00
E072100	Providing & Fixing of non modular socket size flush type 120 watt rotary minimum 5 step fan regulator as per PWD specification for electrical Works, ISI marked (IS:11037) made out from industrial grade Polycarbonate or fire resistant ABS material including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	139.00
E072200	Providing & Fixing of non modular socket size flush type 180 watt rotary minimum 5 step fan regulator as per PWD specification for electrical Works, ISI marked (IS:11037) made out from industrial grade Polycarbonate or fire resistant ABS material including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	165.00
E072300	Providing & Fixing of non modular Switch size flush type 100 watt rotary Minimum 5 step fan regulator as per PWD specification for electrical Works, ISI marked (IS:11037) made out from industrial grade Polycarbonate or fire resistant ABS material including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	118.00

Code No	Description	Unit	Rate Rs.
E072400	Providing & Fixing of 100 watt non modular switch type dimmer ISI marked (IS :11037) as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	121.00
E072500	Providing & Fixing of Socket size 200 watt non modular flush type dimmer ISI marked (IS :11037) as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	143.00
E072600	Providing & Fixing of ISI marked (IS:2268-1994) gong bell as per PWD specification for electrical Works, including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	69.00
E072700	Providing & Fixing of ISI marked surface type buzzer as per PWD specification for electrical Works, (IS:2268-1994) including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	50.00
E072800	Providing & Fixing of ISI marked (IS:2268-1994) single / multi tone electronic call bell as per PWD specification for electrical Works, including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	209.00
E072900	Providing & Fixing of ISI marked (IS:2268-1994) ding dong/musical chime bell as per PWD specification for electrical Works, including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	109.00
E073000	Providing & Fixing of office one module call bell system comprising of indicator as per PWD specification for electrical Works, push to reset switch housed in pvc/metallic sheet including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	101.00
E073100	Providing & Fixing of 3 Way Connector equivalent to 3 pin ceiling rose for False Ceiling as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	22.00

Code No	Description	Unit	Rate Rs.
E073200	Providing & Fixing of 3 Wire Shorting Connectors for Neutral or Phase as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	23.00
E073300	Providing & Fixing of 5 Wire Shorting Connectors for Neutral or Phase as per PWD specification for electrical Works, made out from industrial grade Polycarbonate or fire resistant ABS material. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	31.00
E073400	Providing & Fixing of modular type switch/ bell push duly ISI marked (IS :3854) as per PWD specification for electrical Works, made out of unbreakable and fire retardant virgin poly carbonate with brass terminals and captive screws & silver alloy contact tip with IP-20 rating , minimum width of 1 module switch toggle(PUSH PART) should not less than 20mm, including all as per pre approved by Engineer in charge, making connections, testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E073401	6 A one way switch	Each	52.00
E073402	6 A two way switch	Each	75.00
E073403	6 A bell push	Each	83.00
E073404	16 Amp. 1 Module switch With Led Indicator	Each	107.00
E073405	25 Amp. 1 Module switch With Led Indicator	Each	147.00
E073406	32 Amp. 2 Module switch With Led Indicator	Each	274.00
E073500	Providing & Fixing of modular type lockable feature socket duly ISI marked (IS :1293) as per PWD specification for electrical Works, made out of unbreakable and fire retardant virgin poly carbonate with brass terminals and captive screws & silver alloy contact tip with IP-20 rating , including all as per pre approved by Engineer in charge, making connections, testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E073501	6 A 3 pin shuttered socket	Each	88.00
E073502	16 A 6 pin shuttered socket	Each	133.00
E073503	13 A flat pin international socket	Each	136.00
E073504	25 Amp. 2 Module Socket	Each	167.00

Code No	Description	Unit	Rate Rs.
E073600	Providing & Fixing of modular type Step Fan regulator duly ISI marked (IS :11037) as per PWD specification for electrical Works, made out of unbreakable and fire retardant vergin poly carbonate with brass terminals and captive screws & silver alloy contact tip with IP-20 rating , minimum width of 1 module switch toggle(PUSH PART) should not less then 20mm, including all as per pre approved by Engineer in charge,making connections, testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E073601	5 step fan regulator 100 watt 2 Module	Each	319.00
E073602	5 step fan regulator 100 watt 1 Module	Each	233.00
E073603	Dimmer 300-500 watt 2 Module	Each	300.00
E073604	Dimmer 300-500 watt 1 Module	Each	211.00
E073700	Providing & Fixing of following modular accessories as per PWD specification for electrical Works, made out of unbreakable and fire retardant vergin poly carbonate with brass terminals and captive screws & silver alloy contact tip with IP-20 rating , minimum width of 1 module switch toggle(PUSH PART) should not less then 20mm, including all as per pre approved by Engineer in charge,making connections, testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E073701	2 pin Telephone socket	Each	105.00
E073702	RJ-11 telephone jack single two line	Each	72.00
E073703	USB Charger 1 A - 1 M with BIS mark	Each	385.00
E073704	RJ-45 computer jack with shutter	Each	208.00
E073705	T.V. coaxial socket	Each	75.00
E073706	Blanking plate	Each	15.00
E073707	25 Amp. 2 Module Motor Starter with on / off Push button	Each	277.00
E073708	LED Skirting /Foot Light 2/3 Module	Each	257.00
E073709	Electronic Chime/Buzzer 2M	Each	144.00
E073710	Modular MCB 6 A to 32 A SP (IS:8832 marked)	Each	153.00
E073711	Modular MCB 6 A to 32 A DP (IS:8832 marked)	Each	337.00
E073800	Providing & Fixing of following size mounting grid plates with cover plates as per PWD specification for electrical Works, made from fire retardent UV established high performance engineering plastic suitable for all universal metal boxes for front installation & removal direct fit type complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E073801	1/2 Module	Each	49.00

Code No	Description	Unit	Rate Rs.
E073802	3 Module	Each	65.00
E073803	4 Module	Each	67.00
E073804	5 Module	Each	79.00
E073805	6 Module	Each	85.00
E073806	8 Module	Each	121.00
E073807	10 Module	Each	147.00
E073807	10 Module	Each	147.00
E073808	12 Module	Each	157.00
E073809	16/18 Module	Each	243.00
E073900	Providing & Fixing of following size hot dip galvanized M.S. box of 18 SWG as per PWD specification for electrical Works, with earthing terminal in recess/ surface suitable for modular accessories as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E073901	1-2 Module	Each	55.00
E073902	3 Module	Each	76.00
E073903	4/5 Module	Each	87.00
E073904	6 / 8 module	Each	132.00
E073905	10 / 12 module	Each	197.00
E073906	16/18 module	Each	279.00
E074000	Providing & Fixing of following size polycarbonate modular boxes as per PWD specification for electrical Works, as per IS 14772-2000 in recess/ surface suitable for modular accessories as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E074001	1-2-3 Module	Each	56.00
E074002	4-5 Module	Each	95.00
E074003	6-8 Module	Each	131.00
E074004	10-12 Module	Each	185.00
E074005	16/18 Module	Each	213.00
E074100	Providing & Fixing of of ISO certified company made Multiple socket with surge and spikes protection cartridge not less then 5 KV as per PWD specification for electrical Works with minimum four nos. universal 6 A sockets, one 6 A switch and 3 pin company fitted plug top and 3 core multistrand copper lead minimum 1.5 mtr. including making connection etc as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	421.00

Code No	Description	Unit	Rate Rs.
E074200	Supplying and fixing of power plug point with Modular accessories as per PWD specification for electrical Works, on hot dipped galvanized modular box of 18 SWG with earthing terminal/connector on surface or in recessed with suitable size of modular face plate with grid plate and cover plate including cost of ISI marked modular 16 amp. Switch (IS :3854) and 3/5 pin 16 amp. socket outlet (IS:1293) [as per detailed in respective item in BSR] , making connection , testing , etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	408.00
E074300	Providing & Fixing of ISO certified company made vergin material PVC trunking system as per PWD specification for electrical Works, with double lock feature for cable management including finishing accessories like corners, tee, adjustable angles, junction etc. as required . The trunking system shall have adaptable system for modular type RJ 45 data socket/ wiring accessories/ power sockets and shall be covered with peal off plastic cover. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E074301	32mm X 20mm	Mtr.	127.00
E074302	80mm x 50mm	Mtr.	639.00
E074303	100/105mm x 50mm	Mtr.	761.00
E074304	150/160mm x 50mm	Mtr.	1,291.00
E074305	195/200mm x 50mm	Mtr.	1,658.00
E074500	Supplying and fixing of ISO Certified company made Krone module with base frame as per PWD specification for electrical Works, in the recess / surface made out of 16 SWG sheet steel box, front openable, having locking arrangements duly powder painted., including dressing, ferruling and punching of telephone cable with krone tool etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E074501	10 Pairs	Each	573.00
E074502	20 Pairs	Each	764.00
E074503	50 Pairs	Each	1,235.00
E074504	100 Pairs	Each	3,278.00
E074505	200 Pairs	Each	5,491.00
E074600	Supply, Fixing and testing of following capacity wall mounted stablisers having output voltage variation from 200V to 250V(+/-5%) with input voltage variation from 170V to 260V, time delay facility from 2 to 4 minute and high cutoff at 270V complete in all respect		
E074601	3 kVA	Each	2,917.00
E074602	4 kVA	Each	3,264.00
E074603	5 kVA	Each	3,819.00

E-08 LT Panels & Accessories

Code No	Description	Unit	Rate Rs.
E080100	SITC of wall/ free standing floor mounted dust and vermin proof compartmentalised cubical panel as per PWD specification for electrical Works, made out of CRCA sheet . Other parameters required as per point (a) ,(b), (c), (d) below:- (a)Thickness of sheet shall not be less than 1.6 mm up to 600 mm length / width of any compartment and be of 2.0 mm above 600 mm. Load bearing structure shall be of 2.0 mm thick sheet supported by base M.S. channel if required . Side walls and cable alley compartments having bolted type doors with / without detachable extension type structure (b) panel shall be duly treated for derusting in 7 tank process with dephosphating and with powder coating of minimum 70 microns on both side of panel in desired shade The panel having PU/ Neoprene rubber gasket of not less than 3mm thickness ,required hardware, separate detachable gland plate M.S. base channel (min75mm) , hinged door with locking arrangement for equipment/switchgear. (c) Interconnection between bus bar and switchgears /cable shall be rigidly supported and made out by flexible copper wires (up to 125 amp) and by solid bus bar (>125 amp) . All joints / interconnections of copper bus bar shall be dully tinned . Clearance between main bus bar and risers / metal parts shall be at least 10 mm additional to width of bus bar Bus bar is insulated by Heat Shrinkable sleeves . Earth and Neutral bus bar shall be half of the size of phase bus bar. (d) only outer area on all sides shall be measured & panel to be fabricated only from CPRI approved fabricator. All as per drawing pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	SQ.Mtr.	3,541.00
E080200	Supplying and fixing of Aluminium (IEC 60105 ISO 209-1,2) / Copper (IEC 60028) bus bar as per PWD specification for electrical Works, by means of SMC / DMC type insulator, high tensile nuts and bolts spring washers in existing panel including bending , cutting in required shape and size and colour coding with heat shrinkable PVC sleeves. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E080201	Electrolytic grade Aluminium bus bar 6010 grade	Kg.	458.00
E080202	Electrolytic grade (Cu-ETP) Tin Coated annealed copper bus bars IACS 100% grade	Kg.	820.00

Code No	Description	Unit	Rate Rs.
E080300	Providing & Fixing of (up to 500) V range Volt meter moving iron AC voltmeter of class 1.5 accuracy as per IS : 1248 on existing panel as per PWD specification for electrical Works, making connection by PVC insulated copper conductor with PVC sleeves / channel etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E080301	Analog type (96 mm x 96 mm) flush mounting	Each	462.00
E080400	Providing & Fixing of IP 51 (upto 500) V range Volt meter on existing panel as per PWD specification for electrical Works, making connection by PVC insulated copper conductor with PVC sleeves / channel etc. Meter shall give true RMS measurments, acc. CI 1.0 or better , with field programmable primary & sec. values PT(VT) primary upto 2000 KV. Field-programmable high and low threshold values, meter shall compliance of IS 13875 & IEC 61236. as required. OEM Must have BIS certificate and & shall have submit NABL / CPRI / ERDA lab test reports before execution & All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E080401	Digital type	Each	1,083.00
E080500	Providing & Fixing of IP 51 CT operated direct reading type flush mounting Ampere meter of Moving Iron type of class 1.5 accuracy on existing panel as per PWD specification for electrical Works, making connection by PVC insulated copper conductor with PVC sleeves / channel etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E080510	Analog type (96 mm x 96 mm) flush mounting		
E080511	Below 500 A	Each	475.00
E080512	Above 500A	Each	648.00
E080600	Providing & Fixing of CT operated direct reading type IP- 51 Ampere meter on existing panel as per PWD specification for electrical Works, making connection by PVC insulated copper conductor with PVC sleeves / channel etc. Ampere meter shall give true RMS measurement, Acc. CI 1.0 or better , Measuring current range 50 mA to 6 A, with Field-programmable primary and secondary values CT primary up to 15000 A, Field-programmable high and low threshold values as required. compliant to IS 13875, & IEC 61326. OEM Must have BIS certificate and & shall have submit NABL / CPRI / ERDA lab test reports before execution & All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E080610	Digital type Confirming to IEC 62053-21		
E080611	Below 500 A	Each	1,069.00

Code No	Description	Unit	Rate Rs.
E080612	Above 500 A	Each	1,483.00
E080700	Providing & Fixing of BIS approved Current Transformer as per PWD specification for electrical Works ,ISI marked as per IS 2705-1992/ conforming to IEC 60044-1, with secondary terminal of CT shall be brought out suitable to a terminal block which shall be easier accessible for testing and terminal connection , with all necessary support in existing panel including connection etc. as required Current transformer Resin Cast Wound Primary / Ring Type Tape Wound as per IS 16227 with, Accuracy Cl, CT ratio and burden as specified. ISF<=5, Cu cross section of secondary wire 1.5sqmm (minimum), including all necessary support in existing panel including connection etc. as required . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E080701	C T Class 1, Ratio upto 150/5, Burden 5 VA	Each	365.00
E080702	C T Class 1, Ratio 200/5 to 300/5, Burden 10 VA	Each	447.00
E080703	C T Class 1, Ratio 400/5 to 1200/5, Burden 15 VA	Each	485.00
E080704	C T Class 1, Ratio 1600/5 to 2000/5, Burden 15 VA	Each	717.00
E080800	Providing & Fixing of ISO certified company made selector switch of 10 A for voltmeter (4 position) using high grade engineering material to international standards with cam assembly insulation of glass filled polyamide with high tracking index. For reliable and stable electrical and mechanical endurance double butt contacts with silver bi-metal on copper should provided . contact assembly is of operating temp range -25 degree C to 55 degree C, frequency upto 10 KHz. switch life under std. op. conditions shall be mechanically minimum 50000 operations @300 cycles/ hour and electrically 10,000 operations at 100% rated duty for 100 cycles/ hour including making connection etc. as required . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	262.00
E080900	Providing & Fixing of ISO certified company made CT linked selector switch of 10 A for Ampere meter (4 position) using high grade engineering material to international standards with cam assembly insulation of glass filled polyamide with high tracking index. For reliable and stable electrical and mechanical endurance double butt contacts with silver bi-metal on copper should provided . contact assembly is of operating temp range -25 degree C to 55 degree C, frequency upto 10 KHz. switch life under std. op. conditions shall be mechanically minimum 50000 operations @300 cycles/ hour and electrically 10,000 operations at 100% rated duty for 100 cycles/ hour , including making connection etc. as required . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	311.00

Code No	Description	Unit	Rate Rs.
E081000	Providing & Fixing of ISO certified company made UL listed , IP 65 110/220 V, unibody LED Indicating lamp IEC 60947 , CSA 22.2 with integral circuit, IP 20 terminal block, Approx. body dia for panel not less then 20 mm, length min. 50mm, front LED cover dia min. 29 mm, contact material phosphor bronze for Led, PCB contacts shall be of brass (tin plated), impulse dielectric tested for 2.5 KV, Rated insulation resistance shall be 100 M ohm at 500VDC including connection etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E081001	Red/yellow/Green colour	Each	131.00
E081002	Blue / white Colour	Each	215.00
E081100	Providing & Fixing of IP 51 Multi function meter as per PWD specification for electrical Works, ISI marked (IS 16444)/ Confirming to IEC 61557 & IEC 62052 with LCD/ LED 3/4 line display capable of measuring electrical parameters like V, I, F, PF, KW, Kva, Kvar, Kwh, Kvah, Kvarh display with 1A/5A CT input for LV/ HV network, with /without RS 485 communication port etc. OEM Must have BIS certificate and & shall have submit NABL / CPRI / ERDA lab test reports before execution & complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E081101	Multifunction LCD meter with V,A,F,PF,KW,KVA, old energy memory, class 1 accuracy without RS485 port .	Each	3,582.00
E081102	Multifunction LCD meter with V, I, F, PF, KW, Kva, Kvar, Kwh, Kvah, Kvarh, Run hours, On hours, Phase angle, Interrupts, THD, Events, Neutral Current class 1 accuracy with RS485 port.	Each	7,429.00
E081200	Providing & Fixing of Electrical insulating rubber matts as per PWD specification for electrical Works, ISI marked confirming to IS: 15652 / 2006 with one side anti skid abberation marks and pasting the mat with synthetic rubber adhesive as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E081201	3.3 KV, 2 mm thick with proof voltage 10 KV / 3 min. and Break Down Voltage 30 KV	SQ.Mtr.	1,531.00
E081202	11 KV, 2.5 mm thick with proof voltage 22 KV / 3 min. and Break Down Voltage 45 KV	SQ.Mtr.	1,949.00
E081203	33 KV, 3 mm thick with proof voltage 36 KV / 3 min. and Break Down Voltage 65 KV	SQ.Mtr.	2,368.00
E081300	Providing & Fixing of self healing IP20 MPP type shunt capacitor (banks) as per PWD specification for electrical Works, ISI marked IS:13340-41 / conforming to IEC :831-1&2 OR IEC : 60831-1& 2 in existing panel or parallel with load terminals , the capacitor shall be fitted with discharge resistors, pressure sensitive disconnecter (PSD		

Code No	Description	Unit	Rate Rs.
	) and shall have dissipation factor less than 0.0025 at 50 Hz and total wattage loss less than 0.35 Watt per KVAR. Min over current capacity 1.8 times rated current & peak inrush current min. 250 times of rated current, including making connections, testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E081301	Heavy duty Three phase 480 V, 50 Hz cylindrical capacitor (Bank)	KVAR	345.00
E081302	Heavy duty Three phase 525 V, 50 Hz cylindrical capacitor (Bank)	KVAR	381.00
E081400	Providing & Fixing of IP54 on front microprocessor based three phase sensing power factor correction relay , IEC / EN 61000-6-(2&4) having 3 CT sensing, sensitivity up to 50 milli amp secondary current , self analysing auto c/k setting according to targeted power factor setting, the relay shall have digit display unit for display of real power factor, targeted power factor, lag/lead capacitor switching status, alarm output for under current, over current, insufficient compensation, communication interface with RS 485, indication of switching on units, auto/manual status, and shall have over load protection, no volt release , having multi parameter like KW, KVA, KVAR, VTHD, ITHD, metering facility as required. OEM shall have submit NABL / CPRI / ERDA accredited lab test reports. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E081401	6 to 8 stage	Each	12,539.00
E081402	12 to 14 stage	Each	16,017.00
E081500	Providing & Fixing of ISO certified company made Cam operated rotary (Auto/manual) switches on existing panel with 2 way and off position using high grade engineering material to international standards with cam assembly insulation of glass filled polyamide with high tracking index. For reliable and stable electrical and mechanical endurance double butt contacts with silver bi-metal on copper should provided . contact assembly is of operating temp range -25 degree C to 55 degree C, frequency upto 10 KHz. switch life under std. op. conditions shall be mechanically minimum 50000 operations @300 cycles/ hour and electrically 10,000 operations at 100% rated duty for 100 cycles/ hour including making connection etc. as required . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E081501	10 AMP	Each	261.00
E081502	32 AMP	Each	303.00
E081503	63 AMP	Each	441.00
E081600	Providing & Fixing of AC operated heavy duty 230 /440 Volt power contactor as per PWD specification for electrical Works, ISI marked IS/IEC 60947-4-1 : 2000 having provision of mechanical interlocking,		

Code No	Description	Unit	Rate Rs.
	auxiliary contacts, Din rail mounting type including making connections, testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E081610	3 pole Power contactors with following AC 3 Rating		
E0816101	Up to 12 Amp	Each	717.00
E0816102	13 to 25 Amp	Each	972.00
E0816103	32 Amp.	Each	2,179.00
E0816104	40 Amp	Each	3,339.00
E0816105	50 Amp	Each	4,553.00
E0816106	70 Amp	Each	6,140.00
E0816107	80 Amp	Each	7,796.00
E0816108	95 Amp	Each	7,070.00
E0816109	140 Amp	Each	12,559.00
E0816110	250 Amp	Each	21,905.00
E0816111	325 Amp	Each	28,053.00
E0816112	400 Amp	Each	35,488.00
E081620	4 pole Power contactors with following AC 1 Rating		
E0816201	25/32 Amp.	Each	951.00
E0816202	40 Amp	Each	1,448.00
E0816203	50 Amp	Each	1,800.00
E0816204	63 Amp	Each	3,464.00
E0816205	100 Amp	Each	6,536.00
E0816206	160 Amp	Each	12,026.00
E0816207	200 Amp	Each	14,730.00
E0816208	250 Amp	Each	16,802.00
E0816209	325 Amp	Each	29,536.00
E0816210	400 Amp	Each	37,989.00
E0816211	500 Amp	Each	46,330.00
E081700	Providing & Fixing of 440 Volt 3 pole capacitor (AC 6 B) duty contactor with 3 no. early make and post break auxiliary contacts in series with quick discharge damping resistors/ reactors to limit the inrush current as per PWD specification for electrical Works, IS/IEC 60947-4-1 : 2000, insulation voltage 1000V, impulse withstand voltage 8 KV,Din rail mounting type including making connections, testing etc. as required. suitable for following capacity capacitor bank. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		

Code No	Description	Unit	Rate Rs.
E081701	up to 6 kVar	Each	1,233.00
E081702	8.5 kVar	Each	1,440.00
E081703	10 kVar	Each	1,560.00
E081704	12.5 kVar	Each	1,694.00
E081705	15.0 kVar	Each	2,340.00
E081706	20.0 kVar	Each	2,667.00
E081707	25.0 kVar	Each	3,032.00
E081708	30.0 kVar	Each	4,583.00
E081709	40.0 kVar	Each	7,172.00
E081710	50.0 kVar	Each	8,187.00
E081800	Providing & Fixing of thermal over load relay with built in single phase protection and having at least 1NO & 1NC contacts, manual /auto reset facility including making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E081801	Up to 14 Amp	Each	1,061.00
E081802	14 to 23 Amp	Each	1,220.00
E081803	20 to 33 Amp	Each	1,740.00
E081804	24 to 40 Amp	Each	1,869.00
E081805	36 to 60 Amp	Each	2,628.00
E081806	45 to 75 Amp	Each	2,980.00
E081807	66 to 110 Amp	Each	3,418.00
E081900	Providing & Fixing of push button actuators and integral contact block of dia. 22.5 mm including making connection etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E081901	Non luminous type	Each	117.00
E081902	Luminous type Red , Yellow, Green, Amber	Each	166.00
E081903	Luminous type Blue , white	Each	287.00
E082000	Providing & Fixing of removable Voltage surge protection device (surge arrester) IEC 61643-11 type -2 for protection against transient over voltage (8/20 micro -seconds) and to run current waves to ground, making connection, testing etc. as required. (I _{max} =40 kA, U _p = 1.2kV, U _c =275 volts) All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E082001	one pole and neutral	Each	3,084.00

Code No	Description	Unit	Rate Rs.
E082002	Triple pole & neutral	Each	7,228.00
E082100	Providing & Fixing of mechanical / digital time switch having following day / week programme and minimum 100 hours reserve and AC1 rating of 16-20 amperes including making connection, programming conforming to IEC 60730-1 and 60730-2-7 etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E082101	One day & week reserve (mechanical type)	Each	2,619.00
E082102	One day & week reserve (digital type)	Each	4,692.00
E082200	Providing & Fixing of 110 - 240 V, AC, 1 ph. , 2 W Astronomical time switch with surge suppressor, memory card, Sunrise / Sunset selectable, software for programming including making connection, etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	3,178.00
E082300	Providing & Fixing of IP51 direct or CT operated, 1x240 / 3x240 volts , 50 Hz static watt-hour meter (kwh) as per PWD specification for electrical Works, ISI marked (IS :13010-2002) having resolution 0.1 / 0.01 kwh , accuracy class 1 as per IS:13779, LED indicators for tamper operation (Reverse &/or earth connection) , pulsating LED indicator for meterology , LCD Display, cover plate for body and terminal sealing , push button for all standard parameters, including making connection ,testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E082301	up to 30 ampere single phase meter	Each	1,026.00
E082302	10 A to 60 ampere Single phase meter	Each	1,302.00
E082303	3ph, 4W KWh Direct Base mounting 240 V 10-60 Amp	Each	4,018.00
E082400	P & F Cam operated rotary switches on existing panel with 2 way and off position		
E082410	one pole		
E082411	16 A	Each	382.00
E082412	32 A	Each	515.00
E082413	63 A	Each	766.00
E082420	Two pole		
E082421	16 A	Each	436.00
E082422	32 A	Each	599.00
E082423	63 A	Each	986.00
E082430	Three pole		
E082431	16 A	Each	540.00

Code No	Description	Unit	Rate Rs.
E082432	32 A	Each	784.00
E082433	63 A	Each	1,406.00
E082440	Four pole		
E082441	16 A	Each	545.00
E082442	32 A	Each	859.00
E082443	63 A	Each	1,578.00

E-09 Air circuit breakers & MCCB

Code No	Description	Unit	Rate Rs.
E090100	SITC of Draw out type 3/4 pole IP53, IK 08 door interlock Air Circuit Breaker (ACB) as per PWD specification for electrical Works, conforming to IS/IEC 60947 P - 2 :2003 in existing LT panel suitable for LT installation 440 V, 50 Hz and having adjustable over load short-circuit, earth fault and with separate LED indication for each type of fault , Password protected relase (trip mechanism) shall confirm to EMI/ EMC test , LCD/LED display , Thermal memory , pollution degree 4, trip free mechanism , suitable for ambient 50 degree and utilization catagary B. In built electrical & mechanical anti pumping fearute , 100% rated neutral . ACB shall have separate indication for service, test, isolation & maintenance position, Breaking capacity Icu = Ics = Icw (1 sec) , U imp - 12 KV, break time not more then 25 ms. Provision for electrical & mechanical interlock between ACBs, Min.electrical operation 10,000 upto 2000 A rating and 5,000 for 2500 A. including making connections etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution & All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E090110	Microprocessor based release Draw out type (Manual spring charged) 3 Pole		
E090111	800 A Rating , 50kA	Each	1,10,717.00
E090112	1000 A Rating , 50kA	Each	1,16,181.00
E090113	1250 A Rating ,50kA	Each	1,30,011.00
E090114	1600 A Rating ,65kA	Each	1,46,306.00
E090115	2000 A Rating ,65 kA	Each	1,74,090.00
E090116	2500 A Rating ,65 kA	Each	2,07,262.00
E090117	3200 A Rating ,65 kA	Each	2,53,703.00
E090120	Microprocessor based release Draw out type (Motorised charging type) 3Pole		
E090121	800 A Rating , 50kA	Each	1,36,137.00
E090122	1000 A Rating , 50kA	Each	1,41,603.00
E090123	1250 A Rating ,50kA	Each	1,55,431.00
E090124	1600 A Rating ,65kA	Each	1,71,728.00
E090125	2000 A Rating ,65 kA	Each	1,99,512.00
E090126	2500 A Rating , 65 kA	Each	2,32,683.00
E090127	3200 A Rating ,65 kA	Each	2,79,122.00

Code No	Description	Unit	Rate Rs.
E090130	Microprocessor based release Draw out type (Manual spring charged) 4Pole		
E090131	800 A Rating , 50kA	Each	1,38,398.00
E090132	1000 A Rating , 50kA	Each	1,46,116.00
E090133	1250 A Rating ,50kA	Each	1,62,693.00
E090134	1600 A Rating ,65kA	Each	1,78,625.00
E090135	2000 A Rating , 65 kA	Each	2,17,422.00
E090136	2500 A Rating ,65 kA	Each	2,51,835.00
E090137	3200 A Rating ,65 kA	Each	3,00,013.00
E090140	Microprocessor based release Draw out type (Motorised charging type) 4Pole		
E090141	800 A Rating , 50kA	Each	1,63,819.00
E090142	1000 A Rating , 50kA	Each	1,71,536.00
E090143	1250 A Rating ,50kA	Each	1,88,115.00
E090144	1600 A Rating ,65kA	Each	2,04,046.00
E090145	2000 A Rating ,65 kA	Each	2,42,843.00
E090146	2500 A Rating ,65 kA	Each	2,77,257.00
E090147	3200 A Rating ,65 kA	Each	3,25,437.00
E090200	Supply and fixing of following accessories for Air circuit breaker (ACB) compatible with MAin ACB OEM as per PWD specification for electrical Works, conforming to IS/IEC 60947 P - 2 :2003 including making connection etc complete in all respect. OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E090201	Shunt Trip Release	Each	2,991.00
E090202	Under Voltage Release	Each	2,911.00
E090203	Earth Fault Release	Each	2,042.00
E090204	Mechanical Interlocking kit	Each	9,276.00
E090300	SITC of IP 40 3 pole current limiting Moulded case circuit breaker (MCCB) made of flame retardent & heat resistant material having following current rating, short circuit breaking capacity at 440/415 V, 50 Hz; O/L & S/C settings as per PWD specification for electrical Works, conforming to IS/IEC 60947 P -2 :2003 with front face and centralised adjustable, trip free mechanisum, true contact position indicator, line load interchangeability, designed for both horizontal & vertical mounting without any adverse effect on electrical performance, suitable for operation upto 55 degree and without derating upto 40 degree, pollution degree 3, having positive		

Code No	Description	Unit	Rate Rs.
	isolation capability, push (test) to trip, trip time less then 10 ms under s/c condition, Breaking capacity Ics = 100% Icu. U imp =8 KV, rated insulation voltage 800 V, provision for UVR , shunt trip , earth fault trip, door interlock, pad lock & rotary handle , including making connections with lugs & spreaders, etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E090310	With Thermal Magnetic release		
E090311	up to 100 Amp , 25 kA, adjustable O/L & fixed S/C setting, Ics = 100 % Icu	Each	3,671.00
E090312	125 Amp , 25 kA, adjustable O/L & fixed S/C setting, Ics = 100 % Icu	Each	5,361.00
E090313	160 Amp , 25 kA, adjustable O/L & fixed S/C setting, Ics = 100 % Icu	Each	6,347.00
E090314	200 Amp , 35 kA, adjustable O/L & fixed S/C setting, Ics = 100 % Icu	Each	9,535.00
E090315	250 Amp , 35 kA, adjustable O/L & fixed S/C setting, Ics = 100 % Icu	Each	15,730.00
E090316	400 Amp ,50 kA, adjustable O/L & adjustable S/C setting, Ics = 100 % Icu	Each	18,018.00
E090317	630 Amp , 50 kA, adjustable O/L & adjustable S/C setting, Ics = 100 % Icu	Each	23,876.00
E090400	SITC of IP 40 3 pole current limiting Moulded case circuit breaker (MCCB) made of flame retardent & heat resistant material having following current rating, short circuit breaking capacity at 440/415 V, 50 Hz; O/L & S/C and inst. protection setting , True RMS sensing. as per PWD specification for electrical Works, conforming to IS/IEC 60947 P -2 :2003 with front face and centralised adjustable, common fault LED indication, Thermal memory, release trip shall confirm to EMC/ EMI compatability, trip free mechanism, true contact position indicator, line load interchangeability, designed for both horizontal & vertical mounting without any adverse effect on electrical performance, suitable for operation upto 55 degree and without derating upto 40 degree, pollution degree 3, having positive isolation capability, push (test) to trip, trip time less then 10 ms under s/c condition, Breaking capacity Ics = 100% Icu. U imp =8 KV, rated insulation voltage 800 V, provision for UVR , shunt trip , earth fault trip, door interlock, pad lock & rotary handle , including making connections with lugs & spreaders, etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution & All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E090410	With Microprocessor based release		
E090411	250 Amp , 35 kA, adjustable O/L & Adjustable S/C setting, Ics = 100 % Icu	Each	22,976.00

Code No	Description	Unit	Rate Rs.
E090412	400 Amp ,50 kA, adjustable O/L & adjustable S/C setting, lcs = 100 % Icu	Each	29,354.00
E090413	630 Amp , 50 kA, adjustable O/L & adjustable S/C setting, lcs = 100 % Icu	Each	33,398.00
E090500	SITC of IP 40 quick make and quick break 4 pole current limiting Moulded case circuit breaker (MCCB) made of flame retardent & heat resistant material having following current rating, short circuit breaking capacity at 440/415 V, 50 Hz; O/L & S/C settings as per PWD specification for electrical Works, conforming to IS/IEC 60947 P -2 :2003 with front face and centralised adjustable, trip free mechanism, true contact position indicator, line load interchangeability, designed for both horizontal & vertical mounting without any adverse effect on electrical performance, suitable for operation upto 55 degree and without derating upto 40 degree, pollution degree 3, having positive isolation capability, push (test) to trip, trip time less then 10 ms under s/c condition, Breaking capacity lcs = 100% Icu. U imp =8 KV, rated insulation voltage 800 V, provision for UVR , shunt trip , earth fault trip, door interlock, pad lock & rotary handle , including making connections with lugs & spreaders, etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E090510	With Thermal Magnetic release		
E090511	up to 100 Amp , 25 kA, adjustable O/L & fixed S/C setting, lcs = 100 % Icu	Each	5,931.00
E090512	125 Amp , 25 kA, adjustable O/L & fixed S/C setting, lcs = 100 % Icu	Each	7,229.00
E090513	160 Amp, 25 kA, adjustable O/L & fixed S/C setting, lcs = 100 % Icu	Each	8,911.00
E090514	200 Amp , 35kA, adjustable O/L & fixed S/C setting, lcs = 100 % Icu	Each	14,050.00
E090515	250 Amp , 35 kA, adjustable O/L & fixed S/C setting, lcs = 100 % Icu	Each	17,999.00
E090516	400 Amp ,50 kA, adjustable O/L & adjustable S/C setting, lcs = 100 % Icu	Each	28,463.00
E090517	630 Amp , 50 kA, adjustable O/L & adjustable S/C setting, lcs = 100 % Icu	Each	30,948.00
E090600	SITC of IP 40 4 pole current limiting Moulded case circuit breaker (MCCB) made of flame retardent & heat resistant material having following current rating, short circuit breaking capacity at 440/415 V, 50 Hz; O/L & S/C and inst. protection setting , True RMS sensing. as per PWD specification for electrical Works, conforming to IS/IEC 60947 P -2 :2003 with front face and centralised adjustable, common fault LED indication, Thermal memory, release trip shall confirm to EMC/ EMI compatability, trip free mechanism, true contact position indicator, line load interchangeability, designed for both horizontal & vertical mounting without any adverse effect on		

Code No	Description	Unit	Rate Rs.
	electrical performance, suitable for operation upto 55 degree and without derating upto 40 degree, pollution degree 3, having positive isolation capability, push (test) to trip, trip time less than 10 ms under s/c condition, Breaking capacity Ics = 100% Icu. U imp =8 KV, rated insulation voltage 800 V, provision for UVR , shunt trip , earth fault trip, door interlock, pad lock & rotary handle , including making connections with lugs & spreaders, etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution & All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E090610	With Microprocessor based release		
E090611	250 Amp , 35 kA, adjustable O/L & Adjustable S/C setting, Ics = 100 % Icu	Each	30,102.00
E090612	400 Amp ,50 kA, adjustable O/L & adjustable S/C setting, Ics = 100 % Icu	Each	34,248.00
E090613	630 Amp , 50 kA, adjustable O/L & adjustable S/C setting, Ics = 100 % Icu	Each	36,839.00
E090700	Supply and fixing of following accessories for Moulded case circuit breaker (MCCB) compatible to main MCCB OEM as per PWD specification for electrical Works, conforming to IS/IEC 60947 P - 2 :2003 including making connection etc complete in all respect. OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E090701	Shunt Trip Release	Each	1,788.00
E090702	Under Voltage Release	Each	2,193.00
E090703	Earth Fault Release	Each	1,749.00
E090704	Extended Rotary Handle	Each	2,123.00
E090705	Direct Rotary Handle	Each	1,332.00
E090706	Mechanical Interlocking kit	Each	5,101.00
E090707	Motor mechanism for 250A MCCB (240V, 50Hz)	Each	17,239.00
E090708	Motor mechanism for 400A MCCB (240V, 50Hz)	Each	20,177.00
E090709	Motor mechanism for 630A MCCB (240V, 50Hz)	Each	21,167.00
E090710	Auxiliary contact	Each	1,159.00
E090711	Trip Alarm contact	Each	1,119.00
E090712	Auxiliary + Trip alarm contact	Each	1,542.00
E090713	Phase Barriers up to 630A, 3/4Pole MCCB	set	158.00

Code No	Description	Unit	Rate Rs.
E090800	SITC of surface mounting type sheet steel enclosure conforming to IEC 61439-3 of 1.6 mm thick with IK08 and IP 30 protection suitable for 3/4 POLE MCCB having in built neutral link , mounting holes for easy wall mounting including making connections ,testing & etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E090801	Suitable to accommodate up to 70 sqmm 3.5 core Al arm. Cable	Each	995.00
E090802	Suitable to accommodate above 70 sqmm 3.5 core Al arm. Cable to 185 Sqm , 3.5 core Al Arm. Cable	Each	2,106.00

E-10 Switch Fuse Unit, Change over switch & bus Bar Chamber

Code No	Description	Unit	Rate Rs.
E100100	Providing & Fixing of ISO certified company made TP&N 415 V side handle operated double break fuse switch unit in sheet steel enclosure as per PWD specification for electrical Works conforming to IS/IEC 60947-3 : 1999 (W/O HBC fuses) including making connections with suitable lugs, testing etc. as required. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E100101	63 A rating	Each	5,623.00
E100102	100 A rating	Each	7,695.00
E100103	200 A rating	Each	13,113.00
E100104	300/320 A rating	Each	14,771.00
E100105	400 A rating	Each	20,924.00
E100200	Providing & Fixing of ISO certified company made TP&N 415 V AC-23A front handle operated switch disconnecter fuse unit, cubical type, with metallic enclosure, as per PWD specification for electrical Works conforming to IS/IEC 60947-3 : 1999 with HBC fuses including making connections with lugs, testing etc as required. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E100201	32 A rating	Each	2,637.00
E100202	63 A rating	Each	3,167.00
E100203	100/125 A rating	Each	5,096.00
E100204	200 A rating	Each	8,013.00
E100205	250 A rating	Each	9,312.00
E100206	300/320 A rating	Each	12,375.00
E100207	400 A rating	Each	13,470.00
E100300	Providing & Fixing of ISO certified company made TP&N 415 V AC-23A front handle operated switch disconnecter fuse unit, cubical type, without metallic enclosure (For Panel Mounting), as per PWD specification for electrical Works conforming to IS/IEC 60947-3 : 1999 in existing panel With HBC fuses including making connections with lugs, testing etc as required. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		

Code No	Description	Unit	Rate Rs.
E100301	32 A rating	Each	1,481.00
E100302	63 A rating	Each	2,011.00
E100303	100/125 A rating	Each	4,022.00
E100304	200 A rating	Each	5,958.00
E100305	250 A rating	Each	7,393.00
E100306	300/320 A rating	Each	10,141.00
E100307	400 A rating	Each	11,287.00
E100400	Providing & Fixing of ISO certified company made bakelite fuse fitting for HBC fuse links (front/bus bar connections) Conforms To IS 13703/IEC 269 w/o HBC fuses as per PWD specification for electrical Works on existing board including making connections with lugs, testing etc. as required. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E100401	20 A rating	Each	102.00
E100402	32 A rating	Each	110.00
E100403	63 A rating	Each	227.00
E100404	100 A rating	Each	701.00
E100500	Providing & Fixing of ISO certified company made 240/415 V porcelain kitkat fuse (/HBC type) as per PWD specification for electrical Works conforming to IS:2086,1983 on existing board/ sheet including making connections with lugs, testing etc. as required . Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E100501	63 A , 415 V	Each	326.00
E100502	100 A ,415 V	Each	611.00
E100503	200 A , 415 V	Each	1,212.00
E100504	320 A , 415 V	Each	1,792.00
E100600	Providing & Fixing of ISO certified company made bolted type/ Din type HBC (High breaking capacity) fuse links of 80 KA breaking capacity,as per PWD specification for electrical Works conforming to IS:13703 in the existing fuse base, fuse switch unit etc. of the following type and rating. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E100610	Offset tag type		
E100611	2 A to 20 A	Each	38.00

Code No	Description	Unit	Rate Rs.
E100612	25 A to 32 A	Each	53.00
E100613	35 A to 63 A	Each	64.00
E100614	80 A to 125 A	Each	137.00
E100620	Central tag type		
E100621	80 A to 125 A	Each	141.00
E100622	160 A to 200 A	Each	203.00
E100623	250 A to 315 A	Each	292.00
E100624	400 A to 500 A	Each	838.00
E100630	Din (knife type) type		
E100631	6 A to 32 A	Each	153.00
E100632	40 A to 160 A	Each	203.00
E100633	200 A to 400 A	Each	545.00
E100700	Providing & Fixing of ISO certified company made on load change over switch, front handle operated, four pole 415 V as per PWD specification for electrical Works conforming to IS/IEC 60947-3 : 1999 including connections , testing etc. as required .in the following rating. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E100710	Open execution type		
E100711	63 A	Each	3,606.00
E100712	125 A	Each	6,757.00
E100713	160 A	Each	7,339.00
E100714	200 A	Each	8,861.00
E100715	250 A	Each	12,689.00
E100716	320 A	Each	13,374.00
E100717	400 A	Each	19,268.00
E100718	630 A	Each	22,781.00
E100720	With sheet steel enclosure made out from CRCA sheet door 1.2mm & body 1.6mm, powder quoted, door locking system allow opening of door in off position only with 2 external earthing point		
E100721	63 A	Each	4,721.00
E100722	125 A	Each	8,813.00
E100723	160 A	Each	9,404.00
E100724	200 A	Each	10,786.00
E100725	250 A	Each	15,336.00

Code No	Description	Unit	Rate Rs.
E100726	320 A	Each	16,021.00
E100727	400 A	Each	23,134.00
E100728	630 A	Each	26,580.00
E100900	Providing & Fixing of ISO certified company made bus bar chamber housed in sheet metal box as per PWD specification for electrical Works Confirming to IEC-60439/IS-8623 & IEC-60529/IS-2147 made out from 1.6 mm thick powder coated CRCA sheet,degree of protection IP-31, front openable bus bar made out of aluminium or wrought aluminium alloy suitable for 100 amp. Capacity , bus bar fixed on porcelain/DMC insulators at approved spacing including making connections etc. as required. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E100901	300 mm long , 2 strip	Each	673.00
E100902	300 mm long , 4 strip	Each	869.00
E100903	450 mm long , 2 strip	Each	808.00
E100904	450 mm long , 4 strip	Each	1,528.00
E100905	600 mm long ,2 strip	Each	1,100.00
E100906	600 mm long , 4 strip	Each	1,576.00
E100907	900 mm long , 2 strip	Each	1,474.00
E100908	900 mm long , 4 strip	Each	2,180.00
E101000	Providing & Fixing of ISO certified company made bus bar chamber housed in sheet metal box as per PWD specification for electrical Works Confirming to IEC-60439/ IS-8623 & IEC-60529/ IS-2147 made out from 1.6 mm thick powder coated CRCA sheet,degree of protection IP-31 front openable bus bar made out of aluminium or wrought aluminium alloy suitable for 200 amp. Capacity , bus bar fixed on porcelain/DMC insulators at approved spacing including making connections etc. as required. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E101001	300 mm long , 4 strip	Each	1,297.00
E101002	450 mm long , 4 strip	Each	2,045.00
E101003	600 mm long , 4 strip	Each	2,282.00
E101004	900 mm long , 4 strip	Each	3,111.00
E101100	Providing & Fixing of ISO certified company made bus bar chamber housed in sheet metal box as per PWD specification for electrical WorksConfirming to IEC-60439/IS-8623 & IEC-60529/IS-2147 made out from 1.6 mm thick powder coated CRCA sheet,degree of protection IP-31, front openable bus bar made out of Copper		

Code No	Description	Unit	Rate Rs.
	suitable for 100 amp. Capacity , bus bar fixed on porcelain/DMC insulators at approved spacing including making connections etc. as required. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E101101	300 mm long , 2 strip	Each	1,127.00
E101102	300 mm long , 4 strip	Each	2,180.00
E101103	450 mm long , 2 strip	Each	1,338.00
E101104	450 mm long , 4 strip	Each	2,527.00
E101105	600 mm long ,2 strip	Each	2,452.00
E101106	600 mm long , 4 strip	Each	3,301.00
E101107	900 mm long , 2 strip	Each	3,288.00
E101108	900 mm long , 4 strip	Each	4,551.00
E101200	Providing & Fixing of ISO certified company made bus bar chamber housed in sheet metal box as per PWD specification for electrical Works Confirming to IEC-60439/IS-8623 & IEC-60529/IS-2147 made out from 1.6 mm thick powder coated CRCA sheet,degree of protection IP-31, front openable bus bar made out of Copper suitable for 200 amp. Capacity , bus bar fixed on porcelain/DMC insulators at approved spacing including making connections etc. as required. Appropriate type test certificate / OEM test report shall be submitted . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E101201	300 mm long , 4 strip	Each	2,636.00
E101202	450 mm long , 4 strip	Each	2,683.00
E101203	600 mm long , 4 strip	Each	3,954.00
E101204	900 mm long , 4 strip	Each	5,761.00

E-11 LT Cables

Code No	Description	Unit	Rate Rs.
E110100	Providing & Laying P.V.C. / XLPE insulated & P.V.C. sheathed Un-armoured / Armoured aluminium cable of 1.1 KV grade as per PWD specification for electrical Works in existing RCC / Hume / Stoneware / PVC pipe/ open duct/cable trench with filling of excavated earth in trench , on existing cable trays or on surface etc. including making necessary connection, testing etc. as required of size and as per points (a), (b), (c), mentioned below:- (a) Material :- H4- Grade aluminium conductor of purity >99.6 % & as per IS:1554 P-I / IS :7098 P – I (b) conductor shall have electrolytic aluminium confirming to IS 8130, IS 3975-1999 for armouring of cables in armoured cable items , IS 5831 for sheath, IS 10810 (Part 0 to 64) for testing procedures. (c) OEM Must have ISO 9001 & 14001 certifications for quality assurance & its own in house NABL lab setup for all testing facilities for cables . Appropriate type test certificate / OEM test report shall be submitted . All above as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR.		
E110110	Un-armoured		
E110111	4.0 Sq. mm		
E110111A	2 core	Mtr	42.00
E110111B	3 core	Mtr	45.00
E110111C	4 core	Mtr	49.00
E110112	6.0 Sq. mm		
E110112A	2 core	Mtr	46.00
E110112B	3 core	Mtr	51.00
E110112C	4 core	Mtr	61.00
E110113	10.0 Sq. mm		
E110113A	2 core	Mtr	53.00
E110113B	3 core	Mtr	66.00
E110113C	4 core	Mtr	76.00
E110114	16.0 Sq. mm		
E110114A	1 core	Mtr	34.00
E110114B	2 core	Mtr	65.00
E110114C	3 core	Mtr	82.00

Code No	Description	Unit	Rate Rs.
E110114D	4 core	Mtr	106.00
E110115	25.0 Sq. mm		
E110115A	1 core	Mtr	45.00
E110115B	2 core	Mtr	87.00
E110115C	3 core	Mtr	122.00
E110115D	3.5 core	Mtr	139.00
E110115E	4 core	Mtr	147.00
E110116	35.0 Sq. mm		
E110116A	3.5 core	Mtr	164.00
E110116B	4 core	Mtr	181.00
E110117	50.0 Sq. mm		
E110117A	3.5 core	Mtr	219.00
E110117B	4 core	Mtr	240.00
E110118	70.0 Sq. mm		
E110118A	3.5 core	Mtr	302.00
E110118B	4 core	Mtr	333.00
E110119	95.0 Sq. mm		
E110119A	3.5 core	Mtr	370.00
E110119B	4 core	Mtr	418.00
E110120	120.0 Sq. mm		
E110120A	1 core	Mtr	147.00
E110120B	3.5 core	Mtr	465.00
E110121	150.0 Sq. mm		
E110121A	1 core	Mtr	176.00
E110121B	3.5 core	Mtr	562.00
E110122	185.0 Sq. mm		
E110122A	1 core	Mtr	219.00
E110122B	3.5 core	Mtr	709.00
E110123	240.0 Sq. mm		
E110123A	1 core	Mtr	269.00
E110123B	3.5 core	Mtr	901.00
E110124	300.0 Sq. mm		
E110124A	1 core	Mtr	333.00
E110124B	3.5 core	Mtr	1,106.00

Code No	Description	Unit	Rate Rs.
E110125	400.0 Sq. mm		
E110125A	1 core	Mtr	436.00
E110125B	3.5 core	Mtr	1,395.00
E110126	500.0 Sq. mm		
E110126A	1 core	Mtr	520.00
E110126B	3.5 core	Mtr	1,814.00
E110127	630.0 Sq. mm		
E110127A	1 core	Mtr	618.00
E110127B	3.5 core	Mtr	2,460.00
E110130	Armoured Cable		
E110131	4.0 Sq. mm		
E110131A	2 core	Mtr	57.00
E110131B	3 core	Mtr	63.00
E110131C	4 core	Mtr	76.00
E110132	6.0 Sq. mm		
E110132A	2 core	Mtr	71.00
E110132B	3 core	Mtr	77.00
E110132C	4 core	Mtr	86.00
E110133	10.0 Sq. mm		
E110133A	2 core	Mtr	83.00
E110133B	3 core	Mtr	102.00
E110133C	4 core	Mtr	112.00
E110134	16.0 Sq. mm		
E110134A	1 core	Mtr	57.00
E110134B	2 core	Mtr	94.00
E110134C	3 core	Mtr	107.00
E110134D	4 core	Mtr	127.00
E110135	25.0 Sq. mm		
E110135A	1 core	Mtr	71.00
E110135B	2 core	Mtr	111.00
E110135C	3 core	Mtr	141.00
E110135D	3.5 core	Mtr	156.00
E110135E	4 core	Mtr	169.00
E110136	35.0 Sq. mm		

Code No	Description	Unit	Rate Rs.
E110136A	3 core	Mtr.	159.00
E110136B	3.5 core	Mtr	184.00
E110136C	4 core	Mtr	209.00
E110137	50.0 Sq. mm		
E110137A	3 core	Mtr.	219.00
E110137B	3.5 core	Mtr	242.00
E110137C	4 core	Mtr	265.00
E110138	70.0 Sq. mm		
E110138A	3 core	Mtr.	299.00
E110138B	3.5 core	Mtr	329.00
E110138C	4 core	Mtr	359.00
E110139	95.0 Sq. mm		
E110139A	3 core	Mtr.	356.00
E110139B	3.5 core	Mtr	397.00
E110139C	4 core	Mtr	438.00
E110140	120.0 Sq. mm		
E110140A	1 core	Mtr	166.00
E110140B	3 core	Mtr.	396.00
E110140C	3.5 core	Mtr	496.00
E110141	150.0 Sq. mm		
E110141A	1 core	Mtr	201.00
E110141B	3 core	Mtr.	462.00
E110141C	3.5 core	Mtr	586.00
E110142	185.0 Sq. mm		
E110142A	1 core	Mtr	242.00
E110142B	3 core	Mtr.	582.00
E110142C	3.5 core	Mtr	727.00
E110143	240.0 Sq. mm		
E110143A	1 core	Mtr	299.00
E110143B	3 core	Mtr.	738.00
E110143C	3.5 core	Mtr	914.00
E110144	300.0 Sq. mm		
E110144A	1 core	Mtr	359.00
E110144B	3 core	Mtr.	912.00

Code No	Description	Unit	Rate Rs.
E110144C	3.5 core	Mtr	1,119.00
E110145	400.0 Sq. mm		
E110145A	1 core	Mtr	450.00
E110145B	3 core	Mtr.	1,169.00
E110145C	3.5 core	Mtr	1,424.00
E110146	500.0 Sq. mm		
E110146A	1 core	Mtr	618.00
E110146B	3 core	Mtr.	1,592.00
E110146C	3.5 core	Mtr	1,945.00
E110147	630.0 Sq. mm		
E110147A	1 core	Mtr	726.00
E110147B	3 core	Mtr.	2,286.00
E110147C	3.5 core	Mtr	2,631.00
E110200	Providing & Laying P.V.C. / XLPE insulated & P.V.C. sheathed Un-armoured / Armoured copper cable of 1.1 KV grade as per PWD specification for electrical Works in existing RCC / Hume / Stoneware / PVC pipe/ open duct/cable trench with filling of excavated earth in trench , on existing cable trays or on surface etc. including making necessary connection, testing etc. as required of size and as per points (a), (b), (c), mentioned below:- (a) Copper conductor of electrolytic grade copper, purity >99.97 % ISI marked as per IS:1554 P-I / IS :7098 P - I (b) conductor shall made of copper rods confirming to IS 613-1964, IS 3975-1999 for armouring of cables in armoured cable items , IS 5831 for sheath, IS 10810 (Part 0 to 64) for testing procedures (c) OEM Must have ISO 9001 & 14001 certifications & its own in house NABL lab setup for all testing facilities for cables . Appropriate type test certificate / OEM test report shall be submitted . All above as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E110210	Un-armoured		
E110211	1.5 Sq. mm		
E110211A	2 core	Mtr	47.00
E110211B	3 core	Mtr	59.00
E110211C	4 core	Mtr	71.00
E110211D	5 core	Mtr	83.00
E110210	6 core	Mtr	103.00
E110211E	7 core	Mtr	115.00
E110212	2.5 Sq. mm		

Code No	Description	Unit	Rate Rs.
E110212A	2 core	Mtr	65.00
E110212B	3 core	Mtr	82.00
E110212C	4 core	Mtr	109.00
E110212D	5 core	Mtr	129.00
E110212E	6 core	Mtr	151.00
E110212F	7 core	Mtr	172.00
E110213	4.0 Sq. mm		
E110213A	2 core	Mtr	87.00
E110213B	3 core	Mtr	127.00
E110213C	4 core	Mtr	159.00
E110214	6.0 Sq. mm		
E110214A	2 core	Mtr	127.00
E110214B	3 core	Mtr	175.00
E110214C	4 core	Mtr	230.00
E110215	10.0 Sq. mm		
E110215A	2 core	Mtr	208.00
E110215B	3 core	Mtr	292.00
E110215C	4 core	Mtr	383.00
E110216	16.0 Sq. mm		
E110216A	1 core	Mtr	149.00
E110216B	2 core	Mtr	296.00
E110216C	3 core	Mtr	427.00
E110216D	4 core	Mtr	563.00
E110217	25.0 Sq. mm		
E110217A	1 core	Mtr	230.00
E110217B	2 core	Mtr	447.00
E110217C	3 core	Mtr	674.00
E110217D	4 core	Mtr	887.00
E110220	Armoured		
E110221	1.5 Sq. mm		
E110221A	2 core	Mtr	65.00
E110221B	3 core	Mtr	78.00
E110221C	4 core	Mtr	93.00
E110221D	5 core	Mtr	113.00

Code No	Description	Unit	Rate Rs.
E110221E	6 core	Mtr	128.00
E110221F	7 core	Mtr	140.00
E110222	2.5 Sq. mm		
E110222A	2 core	Mtr	83.00
E110222B	3 core	Mtr	109.00
E110222C	4 core	Mtr	133.00
E110222D	5 core	Mtr	157.00
E110222E	6 core	Mtr	181.00
E110222F	7 core	Mtr	209.00
E110223	4.0 Sq. mm		
E110223A	2 core	Mtr	112.00
E110223B	3 core	Mtr	142.00
E110223C	4 core	Mtr	177.00
E110224	6.0 Sq. mm		
E110224A	2 core	Mtr	146.00
E110224B	3 core	Mtr	196.00
E110224C	4 core	Mtr	249.00
E110225	10.0 Sq. mm		
E110225A	2 core	Mtr	231.00
E110225B	3 core	Mtr	313.00
E110225C	4 core	Mtr	400.00
E110226	16.0 Sq. mm		
E110226A	1 core	Mtr	160.00
E110226B	2 core	Mtr	329.00
E110226C	3 core	Mtr	437.00
E110226D	4 core	Mtr	577.00
E110227	25.0 Sq. mm		
E110227A	1 core	Mtr	264.00
E110227B	2 core	Mtr	502.00
E110227C	3 core	Mtr	715.00
E110227D	4 core	Mtr	939.00
E110228	35 Sq. mm		
E110228A	1 core	Mtr	359.00
E110228B	2 core	Mtr	684.00

Code No	Description	Unit	Rate Rs.
E110228C	3 core	Mtr	983.00
E110228D	4 core	Mtr	1,296.00
E110229	50 Sq. mm		
E110229A	1 core	Mtr	489.00
E110229B	2 core	Mtr	925.00
E110229C	3 core	Mtr	1,342.00
E110229D	4 core	Mtr	1,772.00
E110230	70 Sq. mm		
E110230A	1 core	Mtr	684.00
E110230B	2 core	Mtr	1,307.00
E110230C	3 core	Mtr	1,904.00
E110230D	4 core	Mtr	2,538.00
E110300	Providing & Laying of 25 cm thick layer of river sand to cover of existing cable in 30cmx75cm size cable trench with levelling and making symmetric 25 mm thick layer in complete running length of trench as required.	Mtr	56.00
E110400	Providing & covering of existing cable lying in existing trench by IInd class bricks/ Stone slab of minimum 32mm thick and 250 mm wide in complete running length of trench complete as required.	Mtr	45.00
E110500	Labour charges for Excavation of 30cmx75cm size trench in loose soil including refilling of excavated earth, compaction of earth, making good the same complete as required .	Mtr	61.00
E110600	Labour charges for Excavation of 30cmx75cm size trench in tar road including refilling of excavated earth, compaction of earth, making good the same with CC or Tar complete as required .	Mtr	103.00
E110700	Labour charges for Excavation of 30cmx75cm size trench in CC road including refilling of excavated earth, compaction of earth, making good the same complete as required .	Mtr	124.00
E110800	Laying and fixing of PVC /XLPE power Cable of 1.1 KV grade of following size on wall/ cable tray with saddles/MS flat clamp etc as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E110801	upto 35 sqmm	Mtr	12.00
E110802	above 35 Sqmm and upto 95 sqmm	Mtr	21.00
E110803	above 95 Sqmm and upto 185 sqmm	Mtr	35.00
E110804	above 185 Sqmm and upto 300 sqmm	Mtr	47.00
E110805	above 300 Sqmm	Mtr	63.00

Code No	Description	Unit	Rate Rs.
E110900	Laying Charges for cable through Manual Boggi by making pit at regular interval and repairing the pit after laying of cable with PCC/ Bitumin as required.	Mtr	108.00
E111000	Laying Charges for cable through Vermeer machine by making pit at regular interval and repairing the pit after laying of cable with PCC/ Bitumin as required.	Mtr	270.00
E111100	Providing and laying XLPE/PVC insulated & PVC sheathed armoured control cables of 1.1 KV grade with copper conductor as per IS 1255 including excavationj of 30 CmX75 Cm size trench 25 Cm thick under layer of sand and lind class bricks covering		
E111101	2C x 2.5 sq.mm	Mtr	140.00
E111102	3C x 2.5 sq.mm	Mtr	199.00
E111103	4C x 2.5 sq.mm	Mtr	228.00
E111104	5C x 2.5 sq.mm	Mtr	258.00
E111105	6C x 2.5 sq.mm	Mtr	326.00
E111106	8C x 2.5 sq.mm	Mtr	371.00
E111107	10C x 2.5 sq.mm	Mtr	430.00
E111108	12C x 2.5 sq.mm	Mtr	560.00
E111109	14 C x 2.5 sq.mm	Mtr	617.00
E111110	19 C x 2.5 sq.mm	Mtr	756.00
E111111	2C x 1.5 sq.mm	Mtr	135.00
E111112	3C x 1.5 sq.mm	Mtr	152.00
E111113	4C x 1.5 sq.mm	Mtr	172.00
E111114	5C x 1.5 sq.mm	Mtr	203.00
E111115	6C x 1.5 sq.mm	Mtr	210.00
E111116	8C x 1.5 sq.mm	Mtr	250.00
E111117	10C x 1.5 sq.mm	Mtr	309.00
E111118	12C x 1.5 sq.mm	Mtr	344.00
E111119	14C x 1.5 sq.mm	Mtr	381.00
E111120	19C x 1.5 sq.mm	Mtr	480.00
E111200	Providing and laying XLPE/PVC insulated & PVC sheathed Un-armoured control cables of 1.1 KV grade with copper conductor as per IS 1255 including excavationj of 30 CmX75 Cm size trench 25 Cm thick under layer of sand and lind class bricks covering		
E111201	2C x 2.5 sq.mm	Mtr	122.00
E111202	3C x 2.5 sq.mm	Mtr	156.00
E111203	4C x 2.5 sq.mm	Mtr	183.00
E111204	5C x 2.5 sq.mm	Mtr	206.00

Code No	Description	Unit	Rate Rs.
E111205	6C x 2.5 sq.mm	Mtr	283.00
E111206	8C x 2.5 sq.mm	Mtr	340.00
E111207	10C x 2.5 sq.mm	Mtr	389.00
E111208	12C x 2.5 sq.mm	Mtr	440.00
E111209	14 C x 2.5 sq.mm	Mtr	492.00
E111210	19 C x 2.5 sq.mm	Mtr	573.00
E111211	2C x 1.5 sq.mm	Mtr	113.00
E111212	3C x 1.5 sq.mm	Mtr	115.00
E111213	4C x 1.5 sq.mm	Mtr	143.00
E111214	5C x 1.5 sq.mm	Mtr	158.00
E111215	6C x 1.5 sq.mm	Mtr	175.00
E111216	8C x 1.5 sq.mm	Mtr	204.00
E111217	10C x 1.5 sq.mm	Mtr	253.00
E111218	12C x 1.5 sq.mm	Mtr	284.00
E111219	14C x 1.5 sq.mm	Mtr	317.00
E111220	19C x 1.5 sq.mm	Mtr	397.00
E111300	P/Laying ISI marked P.V.C. insulated submersible cable confirming to IS:694 with flexible copper conductor including making connection etc. as required		
E111301	1.5 Sq.mm 3 core flat	Mtr.	56.00
E111302	2.5 Sq.mm 3 core flat	Mtr.	88.00
E111303	4.0 Sq.mm 3 core flat	Mtr.	137.00
E111304	6.0 Sq.mm 3 core flat	Mtr.	190.00
E111305	10.0 Sq.mm 3 core flat	Mtr.	284.00
E111306	16.0 Sq.mm 3 core flat	Mtr.	423.00
E111307	25.0 Sq.mm 3 core flat	Mtr.	631.00
E111308	35.0 Sq.mm 3 core flat	Mtr.	852.00
E111400	Providing and laying Stranded/ Flexible Annealed Bare copper conductor ,XLPE/PVC insulated suitably laid up together overall polyster taped Al (inner sheated GI Steel wire Mylar/Drain wire) along with ATC drain wire , round/steel armoured overall PVC sheathed (ST-1) overall screened Core armoured instrumentation Cables generally confirming to PAS 5308- Part-2-2009.		
E111410	0.5 sq.mm		
E111410A	2 core	Mtr.	98.00
E111410B	3 core	Mtr.	107.00
E111410C	4 core	Mtr.	113.00

Code No	Description	Unit	Rate Rs.
E111410D	5 core	Mtr.	121.00
E111410E	6 core	Mtr.	115.00
E111410F	7 core	Mtr.	122.00
E111410G	8 core	Mtr.	144.00
E111410H	9 core	Mtr.	151.00
E111410I	10 core	Mtr.	157.00
E111410J	12 core	Mtr.	168.00
E111410K	14 core	Mtr.	182.00
E111410L	16 core	Mtr.	197.00
E111410M	18 core	Mtr.	216.00
E111410N	19 core	Mtr.	221.00
E111410O	20 core	Mtr.	226.00
E111410P	22 core	Mtr.	236.00
E111410Q	24 core	Mtr.	246.00
E111410R	25 core	Mtr.	267.00
E111410S	27 core	Mtr.	278.00
E111410T	40 core	Mtr.	357.00
E111420	0.75 sq.mm		
E111420A	2 core	Mtr.	104.00
E111420B	3 core	Mtr.	115.00
E111420C	4 core	Mtr.	115.00
E111420D	5 core	Mtr.	122.00
E111420E	6 core	Mtr.	144.00
E111420F	7 core	Mtr.	150.00
E111420G	8 core	Mtr.	162.00
E111420H	9 core	Mtr.	173.00
E111420I	10 core	Mtr.	182.00
E111420J	12 core	Mtr.	197.00
E111420K	14 core	Mtr.	216.00
E111420L	16 core	Mtr.	234.00
E111420M	18 core	Mtr.	252.00
E111420N	19 core	Mtr.	253.00
E111420O	20 core	Mtr.	280.00
E111420P	22 core	Mtr.	294.00

Code No	Description	Unit	Rate Rs.
E111420Q	24 core	Mtr.	305.00
E111420R	25 core	Mtr.	320.00
E111420S	27 core	Mtr.	335.00
E111420T	40 core	Mtr.	436.00
E111430	1 sq.mm		
E111430A	2 core	Mtr.	111.00
E111430B	3 core	Mtr.	115.00
E111430C	4 core	Mtr.	139.00
E111430D	5 core	Mtr.	150.00
E111430E	6 core	Mtr.	162.00
E111430F	7 core	Mtr.	168.00
E111430G	8 core	Mtr.	182.00
E111430H	10 core	Mtr.	216.00
E111430I	12 core	Mtr.	234.00
E111430J	14 core	Mtr.	257.00
E111430K	16 core	Mtr.	281.00
E111430L	18 core	Mtr.	317.00
E111430M	24 core	Mtr.	377.00
E111440	1.5 sq.mm		
E111440A	2 core	Mtr.	121.00
E111440B	3 core	Mtr.	138.00
E111440C	4 core	Mtr.	150.00
E111440D	5 core	Mtr.	168.00
E111440E	6 core	Mtr.	186.00
E111440F	7 core	Mtr.	201.00
E111440G	8 core	Mtr.	222.00
E111440H	9 core	Mtr.	236.00
E111440I	10 core	Mtr.	245.00
E111440J	12 core	Mtr.	273.00
E111440K	14 core	Mtr.	306.00
E111440L	16 core	Mtr.	335.00
E111440M	18 core	Mtr.	364.00
E111440N	19 core	Mtr.	376.00
E111440O	20 core	Mtr.	416.00

Code No	Description	Unit	Rate Rs.
E111440P	22 core	Mtr.	425.00
E111440Q	24 core	Mtr.	448.00
E111440R	25 core	Mtr.	469.00
E111440S	27 core	Mtr.	496.00
E111440T	40 core	Mtr.	683.00
E111450	2.5 sq.mm		
E111450A	2 core	Mtr.	140.00
E111450B	3 core	Mtr.	160.00
E111450C	4 core	Mtr.	183.00
E111450D	5 core	Mtr.	212.00
E111450E	6 core	Mtr.	230.00
E111450F	7 core	Mtr.	244.00
E111450G	8 core	Mtr.	274.00
E111450H	9 core	Mtr.	282.00
E111450I	10 core	Mtr.	325.00
E111450J	12 core	Mtr.	363.00
E111450K	14 core	Mtr.	417.00
E111450L	16 core	Mtr.	469.00
E111450M	18 core	Mtr.	515.00
E111450N	19 core	Mtr.	531.00
E111450O	20 core	Mtr.	575.00
E111450P	22 core	Mtr.	606.00
E111450Q	24 core	Mtr.	640.00
E111450R	25 core	Mtr.	672.00
E111450S	27 core	Mtr.	718.00
E111450T	40 core	Mtr.	1,000.00
E111500	Providing and laying Stranded/ Flexible Annealed Bare copper conductor ,XLPE/PVC insulated suitably laid up together overall polyester taped Al (Mylar tape wrapped) along with ATC Drain wire overall PVC sheathed (ST-1) overall screened Pair armoured instrumentation Cables generally conforming to PAS 5308- Part-2-2009.		
E111510	0.5 sq.mm		
E111510A	1 pair	Mtr.	98.00
E111510B	2 pair	Mtr.	111.00
E111510C	3 pair	Mtr.	114.00

Code No	Description	Unit	Rate Rs.
E111510D	4 pair	Mtr.	140.00
E111510E	5 pair	Mtr.	157.00
E111510F	6 pair	Mtr.	162.00
E111510G	7 pair	Mtr.	172.00
E111510H	8 pair	Mtr.	204.00
E111510I	10 pair	Mtr.	227.00
E111510J	12 pair	Mtr.	250.00
E111510K	14 pair	Mtr.	275.00
E111510L	15 pair	Mtr.	290.00
E111510M	16 pair	Mtr.	305.00
E111510N	18 pair	Mtr.	319.00
E111510O	19 pair	Mtr.	334.00
E111510P	20 pair	Mtr.	350.00
E111510Q	22 pair	Mtr.	375.00
E111510R	24 pair	Mtr.	401.00
E111510S	30 pair	Mtr.	531.00
E111520	0.75 sq.mm		
E111520A	1 pair	Mtr.	104.00
E111520B	2 pair	Mtr.	118.00
E111520C	3 pair	Mtr.	139.00
E111520D	4 pair	Mtr.	155.00
E111520E	5 pair	Mtr.	182.00
E111520F	6 pair	Mtr.	204.00
E111520G	7 pair	Mtr.	222.00
E111520H	8 pair	Mtr.	239.00
E111520I	10 pair	Mtr.	281.00
E111520J	12 pair	Mtr.	311.00
E111520K	14 pair	Mtr.	346.00
E111520L	15 pair	Mtr.	363.00
E111520M	16 pair	Mtr.	381.00
E111520N	18 pair	Mtr.	408.00
E111520O	19 pair	Mtr.	434.00
E111520P	20 pair	Mtr.	452.00
E111520Q	22 pair	Mtr.	489.00

Code No	Description	Unit	Rate Rs.
E111520R	24 pair	Mtr.	524.00
E111520S	30 pair	Mtr.	698.00
E111530	1 sq.mm		
E111530A	1 pair	Mtr.	111.00
E111530B	2 pair	Mtr.	144.00
E111530C	3 pair	Mtr.	162.00
E111530D	4 pair	Mtr.	192.00
E111530E	5 pair	Mtr.	216.00
E111530F	6 pair	Mtr.	239.00
E111530G	7 pair	Mtr.	257.00
E111530H	8 pair	Mtr.	293.00
E111530I	10 pair	Mtr.	341.00
E111530J	12 pair	Mtr.	381.00
E111530K	14 pair	Mtr.	429.00
E111530L	16 pair	Mtr.	471.00
E111530M	19 pair	Mtr.	547.00
E111530N	24 pair	Mtr.	661.00
E111540	1.5 sq.mm		
E111540A	1 pair	Mtr.	121.00
E111540B	2 pair	Mtr.	149.00
E111540C	3 pair	Mtr.	192.00
E111540D	4 pair	Mtr.	209.00
E111540E	5 pair	Mtr.	263.00
E111540F	6 pair	Mtr.	293.00
E111540G	7 pair	Mtr.	304.00
E111540H	8 pair	Mtr.	315.00
E111540I	10 pair	Mtr.	424.00
E111540J	12 pair	Mtr.	489.00
E111540K	14 pair	Mtr.	547.00
E111540L	15 pair	Mtr.	580.00
E111540M	16 pair	Mtr.	613.00
E111540N	18 pair	Mtr.	658.00
E111540O	19 pair	Mtr.	702.00
E111540P	20 pair	Mtr.	735.00

Code No	Description	Unit	Rate Rs.
E111540Q	22 pair	Mtr.	801.00
E111540R	24 pair	Mtr.	868.00
E111540S	30 pair	Mtr.	1133.00
E111550	2.5 sq.mm		
E111550A	1 pair	Mtr.	144.00
E111550B	2 pair	Mtr.	186.00
E111550C	3 pair	Mtr.	231.00
E111550D	4 pair	Mtr.	274.00
E111550E	5 pair	Mtr.	318.00
E111550F	6 pair	Mtr.	361.00
E111550G	7 pair	Mtr.	398.00
E111550H	8 pair	Mtr.	441.00
E111550I	10 pair	Mtr.	535.00
E111550J	12 pair	Mtr.	609.00
E111550K	14 pair	Mtr.	700.00
E111550L	15 pair	Mtr.	747.00
E111550M	16 pair	Mtr.	779.00
E111550N	18 pair	Mtr.	868.00
E111550O	19 pair	Mtr.	913.00
E111550P	20 pair	Mtr.	959.00
E111550Q	22 pair	Mtr.	1,036.00
E111550R	24 pair	Mtr.	1,120.00
E111550S	30 pair	Mtr.	1,240.00
E111600	Providing and laying Stranded/ Flexible Annealed Bare copper conductor ,XLPE/PVC insulated suitably laid up together overall polyester taped Al (Mylar tape wrapped) along with ATC Drain wire overall PVC sheathed (ST-1) overall screened Triad armoured instrumentation Cables generally confirming to PAS 5308- Part-2-2009.		
E111610	0.5 sq.mm		
E111610A	1 pair	Mtr.	107.00
E111610B	2 pair	Mtr.	148.00
E111610C	3 pair	Mtr.	168.00
E111610D	4 pair	Mtr.	191.00
E111610E	5 pair	Mtr.	213.00
E111610F	6 pair	Mtr.	237.00

Code No	Description	Unit	Rate Rs.
E111610G	7 pair	Mtr.	254.00
E111610H	8 pair	Mtr.	281.00
E111610I	10 pair	Mtr.	322.00
E111610J	12 pair	Mtr.	358.00
E111610K	14 pair	Mtr.	398.00
E111610L	16 pair	Mtr.	436.00
E111610M	19 pair	Mtr.	493.00
E111620	0.75 sq.mm		
E111620A	1 pair	Mtr.	115.00
E111620B	2 pair	Mtr.	157.00
E111620C	3 pair	Mtr.	183.00
E111620D	4 pair	Mtr.	211.00
E111620E	5 pair	Mtr.	237.00
E111620F	6 pair	Mtr.	267.00
E111620G	7 pair	Mtr.	291.00
E111620H	8 pair	Mtr.	315.00
E111620I	10 pair	Mtr.	375.00
E111620J	12 pair	Mtr.	422.00
E111620K	14 pair	Mtr.	473.00
E111620L	16 pair	Mtr.	525.00
E111620M	19 pair	Mtr.	596.00
E111630	1 sq.mm		
E111630A	1 pair	Mtr.	115.00
E111630B	2 pair	Mtr.	177.00
E111630C	3 pair	Mtr.	211.00
E111630D	4 pair	Mtr.	247.00
E111630E	5 pair	Mtr.	284.00
E111630F	6 pair	Mtr.	322.00
E111630G	7 pair	Mtr.	352.00
E111630H	8 pair	Mtr.	389.00
E111630I	10 pair	Mtr.	459.00
E111630J	12 pair	Mtr.	527.00
E111630K	14 pair	Mtr.	595.00
E111630L	16 pair	Mtr.	662.00

Code No	Description	Unit	Rate Rs.
E111630M	19 pair	Mtr.	758.00
E111640	1.5 sq.mm		
E111640A	1 pair	Mtr.	139.00
E111640B	2 pair	Mtr.	199.00
E111640C	3 pair	Mtr.	244.00
E111640D	4 pair	Mtr.	291.00
E111640E	5 pair	Mtr.	338.00
E111640F	6 pair	Mtr.	380.00
E111640G	7 pair	Mtr.	422.00
E111640H	8 pair	Mtr.	474.00
E111640I	10 pair	Mtr.	569.00
E111640J	12 pair	Mtr.	653.00
E111640K	14 pair	Mtr.	742.00
E111640L	16 pair	Mtr.	832.00
E111640M	19 pair	Mtr.	961.00
E111650	2.5 sq.mm		
E111650A	1 pair	Mtr.	168.00
E111650B	2 pair	Mtr.	257.00
E111650C	3 pair	Mtr.	328.00
E111650D	4 pair	Mtr.	396.00
E111650E	5 pair	Mtr.	468.00
E111650F	6 pair	Mtr.	545.00
E111650G	7 pair	Mtr.	612.00
E111650H	8 pair	Mtr.	688.00
E111650I	10 pair	Mtr.	835.00
E111650J	12 pair	Mtr.	973.00
E111650K	14 pair	Mtr.	1,115.00
E111650L	16 pair	Mtr.	1,144.00
E111650M	19 pair	Mtr.	1,462.00

E-12 LT Cable Termination & Accessories

Code No	Description	Unit	Rate Rs.
E120100	Supplying and making one end termination with heavy duty brass compression gland (as per IS 12943- 1990) SIBG type, heavy duty aluminium lugs (as per IS 8309 -1993 & IS 8337-1976) duly crimped with crimping tool, PVC tape as per PWD specification for electrical Works etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium conductor cable of 1100 volt grade as required of size. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E120101	2 x 4.0 sq.mm	Each	50.00
E120102	2 x 6.0 sq.mm	Each	59.00
E120103	2 x 10.0 sq.mm	Each	60.00
E120104	2 x 16.0 sq.mm	Each	73.00
E120105	2 x 25.0 sq.mm	Each	81.00
E120106	2 x 35.0 sq.mm	Each	93.00
E120107	2 x 50.0 sq.mm	Each	112.00
E120108	3 x 4.0 sq.mm	Each	57.00
E120109	3 x 6.0 sq.mm	Each	62.00
E120110	3 x 10.0 sq.mm	Each	66.00
E120111	3 x 16.0 sq.mm	Each	81.00
E120112	3 x 25.0 sq.mm	Each	91.00
E120113	3 x 35.0 sq.mm	Each	103.00
E120114	3 x 50.0 sq.mm	Each	121.00
E120115	3 x 70.0 sq.mm	Each	177.00
E120116	3 x 95.0 sq.mm	Each	207.00
E120117	3 x 120.0 sq.mm	Each	256.00
E120118	3 x 150.0 sq.mm	Each	348.00
E120119	3 x 185.0 sq.mm	Each	405.00
E120120	3 x 240.0 sq.mm	Each	492.00
E120121	3 x 300.0 sq.mm	Each	654.00
E120122	3.5 x 25.0 sq.mm	Each	97.00
E120123	3.5 x 35.0 sq.mm	Each	110.00
E120124	3.5 x 50.0 sq.mm	Each	131.00
E120125	3.5 x 70.0 sq.mm	Each	191.00

Code No	Description	Unit	Rate Rs.
E120126	3.5 x 95.0 sq.mm	Each	222.00
E120127	3.5 x 120.0 sq.mm	Each	274.00
E120128	3.5 x 150.0 sq.mm	Each	375.00
E120129	3.5 x 185.0 sq.mm	Each	436.00
E120130	3.5 x 240.0 sq.mm	Each	555.00
E120131	3.5 x 300.0 sq.mm	Each	735.00
E120132	3.5 x 400.0 sq.mm	Each	995.00
E120133	3.5 x 500.0 sq.mm	Each	1,362.00
E120134	3.5 x 630.0 sq.mm	Each	1,882.00
E120135	4 x 4.0 sq.mm	Each	62.00
E120136	4 x 6.0 sq.mm	Each	67.00
E120137	4 x 10.0 sq.mm	Each	73.00
E120138	4 x 16.0 sq.mm	Each	91.00
E120139	4 x 25.0 sq.mm	Each	99.00
E120140	4 x 35.0 sq.mm	Each	113.00
E120141	4 x 50.0 sq.mm	Each	135.00
E120142	1 x 400.0 sq.mm	Each	339.00
E120143	1 x 500.0 sq.mm	Each	419.00
E120144	1 x 630.0 sq.mm	Each	622.00
E120200	Supplying and making one end termination with heavy duty single compression brass gland (as per IS 12943- 1990) SIBG type, heavy duty Copper/ Bimetallic lugs (IS 8337- 1976) duly crimped with crimping tool, PVC tape as per PWD specification for electrical Works etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium/copper conductor cable of 1100 volt grade as required of size. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E120201	2 x 4.0 sq.mm	Each	58.00
E120202	2 x 6.0 sq.mm	Each	61.00
E120303	2 x 10.0 sq.mm	Each	69.00
E120404	2 x 16.0 sq.mm	Each	86.00
E120505	2 x 25.0 sq.mm	Each	107.00
E120206	2 x 35.0 sq.mm	Each	119.00
E120207	2 x 50.0 sq.mm	Each	146.00
E120208	3 x 4.0 sq.mm	Each	66.00
E120209	3 x 6.0 sq.mm	Each	70.00

Code No	Description	Unit	Rate Rs.
E120210	3 x 10.0 sq.mm	Each	80.00
E120211	3 x 16.0 sq.mm	Each	102.00
E120212	3 x 25.0 sq.mm	Each	129.00
E120213	3 x 35.0 sq.mm	Each	144.00
E120214	3 x 50.0 sq.mm	Each	172.00
E120215	3 x 70.0 sq.mm	Each	273.00
E120216	3 x 95.0 sq.mm	Each	349.00
E120217	3 x 120.0 sq.mm	Each	448.00
E120218	3 x 150.0 sq.mm	Each	626.00
E120219	3 x 185.0 sq.mm	Each	835.00
E120220	3 x 240.0 sq.mm	Each	1,095.00
E120221	3 x 300.0 sq.mm	Each	1,472.00
E120222	3.5 x 25.0 sq.mm	Each	142.00
E120223	3.5 x 35.0 sq.mm	Each	157.00
E120224	3.5 x 50.0 sq.mm	Each	189.00
E120125	3.5 x 70.0 sq.mm	Each	302.00
E120226	3.5 x 95.0 sq.mm	Each	388.00
E120227	3.5 x 120.0 sq.mm	Each	498.00
E120128	3.5 x 150.0 sq.mm	Each	701.00
E120229	3.5 x 185.0 sq.mm	Each	938.00
E120230	3.5 x 240.0 sq.mm	Each	1,235.00
E120231	3.5 x 300.0 sq.mm	Each	1,664.00
E120232	3.5 x 400.0 sq.mm	Each	2,362.00
E120233	3.5 x 500.0 sq.mm	Each	3,125.00
E120234	3.5 x 630.0 sq.mm	Each	4,422.00
E120235	4 x 4.0 sq.mm	Each	75.00
E120236	4 x 6.0 sq.mm	Each	79.00
E120237	4 x 10.0 sq.mm	Each	91.00
E120238	4 x 16.0 sq.mm	Each	116.00
E120239	4 x 25.0 sq.mm	Each	151.00
E120240	4 x 35.0 sq.mm	Each	168.00
E120241	4 x 50.0 sq.mm	Each	202.00
E120242	1 x 400.0 sq.mm	Each	730.00
E120243	1 x 500.0 sq.mm	Each	923.00
E120244	1 x 630.0 sq.mm	Each	1,347.00

Code No	Description	Unit	Rate Rs.
E120300	Supplying and making end termination with heavy aluminium lugs Pin / ring type (as per IS 8309 -1993 & IS 8337-1976) duly crimped with crimping tool, PVC tape as per PWD specification for electrical Works etc of following size. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E120301	1.5 Sq.mm	Each	2.00
E120302	2.5 Sq.mm	Each	3.00
E120303	4.0 Sq.mm	Each	3.00
E120304	6.0 Sq.mm	Each	4.00
E120305	10.0 Sq.mm	Each	4.00
E120306	16.0 Sq.mm	Each	7.00
E120307	25.0 Sq.mm	Each	8.00
E120308	35.0 Sq.mm	Each	10.00
E120309	50.0 Sq.mm	Each	13.00
E120310	70.0 Sq.mm	Each	20.00
E120311	95.0 Sq.mm	Each	24.00
E120312	120.0 Sq.mm	Each	30.00
E120313	150.0 Sq.mm	Each	38.00
E120314	185.0 Sq.mm	Each	41.00
E120315	240.0 Sq.mm	Each	65.00
E120316	300.0 Sq.mm	Each	88.00
E120317	400.0 Sq.mm	Each	128.00
E120318	500.0 Sq.mm	Each	174.00
E120319	630.0 Sq.mm	Each	222.00
E120400	Supplying and making end termination with heavy Copper/ Bimetallic lugs Pin / ring type (IS 8337- 1976) duly crimped with crimping tool, PVC tape as per PWD specification for electrical Works etc of following size. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E120401	1.5 Sq.mm	Each	3.00
E120402	2.5 Sq.mm	Each	5.00
E120403	4.0 Sq.mm	Each	6.00
E120404	6.0 Sq.mm	Each	7.00
E120405	10.0 Sq.mm	Each	9.00
E120406	16.0 Sq.mm	Each	13.00
E120407	25.0 Sq.mm	Each	21.00

Code No	Description	Unit	Rate Rs.
E120408	35.0 Sq.mm	Each	24.00
E120409	50.0 Sq.mm	Each	30.00
E120410	70.0 Sq.mm	Each	51.00
E120411	95.0 Sq.mm	Each	71.00
E120412	120.0 Sq.mm	Each	93.00
E120413	150.0 Sq.mm	Each	131.00
E120414	185.0 Sq.mm	Each	189.00
E120415	240.0 Sq.mm	Each	264.00
E120416	300.0 Sq.mm	Each	359.00
E120417	400.0 Sq.mm	Each	514.00
E120418	500.0 Sq.mm	Each	673.00
E120419	630.0 Sq.mm	Each	940.00
E120500	Supply, Fabricating & installing following sizes of perforated Hot dipped Galvanized iron cable tray (Galvanized thickness not less than 50 microns) with perforation not more than 17.5% in convenient section including horizontal and vertical bends, reducers tees,cross members and other accessories as required and duly suspended from the ceiling with GI suspenders including GI bolts & nuts , fastners, supports etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E120501	100mm x 50mm x 1.6mm	Mtr	342.00
E120502	150mm x 50mm x 1.6mm	Mtr	419.00
E120503	225mm x 50mm x 1.6mm	Mtr	504.00
E120504	300mm x 50mm x 1.6mm	Mtr	579.00
E120505	375mm x 50mm x 2.0mm	Mtr	805.00
E120506	450mm x 50mm x 2.0mm	Mtr	1,042.00
E120507	600mm x 50mm x 2.0mm	Mtr	1,268.00
E120508	300mm x 62.5mm x 2.0mm	Mtr	805.00
E120509	375mm x 62.5mm x 2.0mm	Mtr	957.00
E120510	450mm x 62.5mm x 2.0mm	Mtr	1,118.00
E120511	600mm x 62.5mm x 2.0mm	Mtr	1,344.00
E120512	600mm x 75mm x 2.0mm	Mtr	1,419.00
E120600	Supply, Fabricating & installing following sizes of powder coated perforated M.S. cable trays with perforation not more than 17.5% in convenient section including horizontal and vertical bends, reducers tees,cross members and other accessories as required and duly suspended from the ceiling with MS suspenders including bolts & nuts , fastners, supports, painting suspenders etc. as required. All as		

Code No	Description	Unit	Rate Rs.
	per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E120601	100mm x 50mm x 1.6mm	Mtr	303.00
E120602	150mm x 50mm x 1.6mm	Mtr	369.00
E120603	225mm x 50mm x 1.6mm	Mtr	445.00
E120604	300mm x 50mm x 1.6mm	Mtr	510.00
E120605	375mm x 50mm x 2.0mm	Mtr	708.00
E120606	450mm x 50mm x 2.0mm	Mtr	914.00
E120607	600mm x 50mm x 2.0mm	Mtr	1,111.00
E120608	300mm x 62.5mm x 2.0mm	Mtr	708.00
E120609	375mm x 62.5mm x 2.0mm	Mtr	838.00
E120610	450mm x 62.5mm x 2.0mm	Mtr	980.00
E120611	600mm x 62.5mm x 2.0mm	Mtr	1,177.00
E120612	600mm x 75mm x 2.0mm	Mtr	1,242.00
E120700	Supply, Fabricating & installing following sizes of powder coated ladder type M.S. cable trays with rungs at span of 250 mm including horizontal and vertical bends, reducers tees,cross members and other accessories as required and duly suspended from the ceiling/wall with MS suspenders including bolts & nuts ,fastners, supports, painting suspenders etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E120701	100mm x 50mm x 1.6mm	Mtr	238.00
E120702	150mm x 50mm x 1.6mm	Mtr	287.00
E120703	225mm x 50mm x 1.6mm	Mtr	347.00
E120704	300mm x 50mm x 1.6mm	Mtr	396.00
E120705	375mm x 50mm x 2.0mm	Mtr	543.00
E120706	450mm x 50mm x 2.0mm	Mtr	701.00
E120707	600mm x 50mm x 2.0mm	Mtr	849.00
E120708	300mm x 62.5mm x 2.0mm	Mtr	543.00
E120709	375mm x 62.5mm x 2.0mm	Mtr	642.00
E120710	450mm x 62.5mm x 2.0mm	Mtr	750.00
E120711	600mm x 62.5mm x 2.0mm	Mtr	898.00
E120712	600mm x 75mm x 2.0mm	Mtr	947.00

Code No	Description	Unit	Rate Rs.
E120800	Supply & Making of Heat shrinkable type outdoor straight through joint as per PWD specification for electrical Works for following size of PVC/ XLPE insulated aluminium conductor cable of 1.1 KV grade including cost of compound, sleeves etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E120801	1 x 25 sq.mm-50 sq.mm	Set	1,130.00
E120802	1 x 70 sq.mm-150 sq.mm	Set	1,804.00
E120803	1 x 185 sq.mm-300 sq.mm	Set	2,310.00
E120804	1 x 400 sq.mm	Set	2,512.00
E120805	1 x 500 sq.mm	Set	2,826.00
E120806	1 x 630 sq.mm	Set	2,902.00
E120807	2 x 1.5 sq.mm-6 sq.mm	Set	368.00
E120808	2 x 10.0-16.0 sq.mm	Set	876.00
E120809	2 x 25.0 sq.mm-50 sq.mm	Set	1,412.00
E120810	2 x 70.0 sq.mm-150 sq.mm	Set	2,460.00
E120811	2 x 185.0 sq.mm-300 sq.mm	Set	4,620.00
E120812	2 x 400 sq.mm	Set	4,948.00
E120813	2 x500 sq.mm	Set	5,315.00
E120814	3/3.5/4 x 1.5 sq.mm-6 sq.mm	Set	593.00
E120815	3/3.5/4 x 10.0-16.0 sq.mm	Set	999.00
E120816	3/3.5/4 x 25.0 sq.mm-50 sq.mm	Set	1,784.00
E120817	3/3.5/4 x 70.0 sq.mm-150 sq.mm	Set	2,724.00
E120818	3/3.5/4 x 185.0 sq.mm-300 sq.mm	Set	4,969.00
E120819	3/3.5/4 x 400 sq.mm	Set	5,252.00
E120820	3/3.5/4 x500 sq.mm	Set	6,191.00
E120900	supply & fixing of cable route marker as per PWD specification for electrical Works with 10cm x 10cm x 5mm thick and 10cm dia. G.I.plate with inscription thereon, bolted/welded to 35mm x 35mm x 5mm angle iron,60cm long and fixing the same in ground in C C (1:3:6) as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	238.00
E121000	Providing & laying of Double wall corrugated pipe confirming to IS : 14930 P - 1 & 2 with HDPE Coupler at 1 mtr. Depth below the ground for laying cable including making the trench and back filling , compaction of earth as required(Excavation of Earth to be paid Extra as required.) of following Outer Dia. / Inner dia as per IS:4984:1995. All as per pre approved by Engineer in charge. For		

Code No	Description	Unit	Rate Rs.
	additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E121001	55/50 mm	Mtr	68.00
E121002	90/76 mm	Mtr	139.00
E121003	110 / 95 mm	Mtr	176.00
E121004	120 / 103.5 mm	Mtr	225.00
E121005	160 / 136 mm	Mtr	267.00
E121006	180 / 152 mm	Mtr	455.00
E121007	200 / 175 mm	Mtr	691.00
E121008	300 / 260 mm	Mtr	1,240.00
E121100	Providing and laying Non Pressure NP-3 class (Medium duty) R.C.C. pipes including collars/spigot jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) etc. as required. (Excavation of Earth to be paid Extra as required.) All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E121101	200 mm Dia.	Mtr	424.00
E121102	250 mm dia.	Mtr	499.00
E121103	300 mm dia	Mtr	696.00
E121104	450 mm dia.	Mtr	1,270.00
E121200	Supply, Fabricating & installing following sizes of ladder type cable trays with rungs at span of 250 mm including horizontal and vertical bends, reducers tees,cross members and other accessories as required and duly suspended from the ceiling/wall with suspenders and including painting as required.		
E121210	Hot Dipped Galvanized		
E121210A	100mm x 50mm x 1.6mm	Mtr.	323.00
E121210B	150mm x 50mm x 1.6mm	Mtr.	323.00
E121210C	225mm x 50mm x 1.6mm	Mtr.	350.00
E121210D	300mm x 50mm x 1.6mm	Mtr.	376.00
E121210E	375mm x 50mm x 2.0mm	Mtr.	492.00
E121210F	450mm x 50mm x 2.0mm	Mtr.	528.00
E121210G	600mm x 50mm x 2.0mm	Mtr.	593.00
E121210H	300mm x 62.5mm x 2.0mm	Mtr.	502.00
E121210I	375mm x 62.5mm x 2.0mm	Mtr.	536.00
E121210J	450mm x 62.5mm x 2.0mm	Mtr.	571.00
E121210K	600mm x 62.5mm x 2.0mm	Mtr.	639.00

Code No	Description	Unit	Rate Rs.
E121210L	750mm x 62.5mm x 2.0mm	Mtr.	706.00
E121210M	900mm x 62.5mm x 2.0mm	Mtr.	774.00
E121210N	600mm x 75mm x 2.0mm	Mtr.	680.00
E121210O	750mm x 75mm x 2.0mm	Mtr.	748.00
E121210P	900mm x 75mm x 2.0mm	Mtr.	817.00
E121300	Supplying and making one end termination with heavy duty double compression brass gland SIBG type, heavy duty copper lugs duly crimped with crimping tool, PVC tape etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium conductor cable of 1000 volt grade as required of size.		
E121301	2 x 2.5 sq.mm	SET	11.00
E121302	2 x 4.0 sq.mm	SET	164.00
E121303	2 x 6.0 sq.mm	SET	167.00
E121304	2 x 10.0 sq.mm	SET	168.00
E121305	2 x 16.0 sq.mm	SET	175.00
E121306	2 x 25.0 sq.mm	SET	250.00
E121307	2 x 35.0 sq.mm	SET	264.00
E121308	2 x 50.0 sq.mm	SET	300.00
E121309	2 x 70.0 sq.mm	SET	469.00
E121310	3 x 2.5 sq.mm	SET	167.00
E121310	3 x 4.0 sq.mm	SET	169.00
E121312	3 x 6.0 sq.mm	SET	175.00
E121313	3 x 10.0 sq.mm	SET	188.00
E121314	3 x 16.0 sq.mm	SET	197.00
E121315	3 x 25.0 sq.mm	SET	282.00
E121316	3 x 35.0 sq.mm	SET	304.00
E121317	3 x 50.0 sq.mm	SET	403.00
E121318	3 x 70.0 sq.mm	SET	524.00
E121319	3 x 95.0 sq.mm	SET	738.00
E121320	3 x 120.0 sq.mm	SET	885.00
E121321	3 x 150.0 sq.mm	SET	1,040.00
E121322	3 x 185.0 sq.mm	SET	1,181.00
E121323	3 x 240.0 sq.mm	SET	1,158.00
E121324	3 x 300.0 sq.mm	SET	1,813.00
E121325	3.5 x 25.0 sq.mm	SET	310.00
E121326	3.5 x 35.0 sq.mm	SET	401.00
E121327	3.5 x 50.0 sq.mm	SET	521.00

Code No	Description	Unit	Rate Rs.
E121328	3.5 x 70.0 sq.mm	SET	789.00
E121329	3.5 x 95.0 sq.mm	SET	973.00
E121330	3.5 x 120.0 sq.mm	SET	1,129.00
E121331	3.5 x 150.0 sq.mm	SET	1,158.00
E121332	3.5 x 185.0 sq.mm	SET	1,358.00
E121333	3.5 x 240.0 sq.mm	SET	1,836.00
E121334	3.5 x 300.0 sq.mm	SET	2,163.00
E121335	3.5 x 400.0 sq.mm	SET	2,976.00
E121336	3.5 x 500.0 sq.mm	SET	3,429.00
E121337	3.5 x 630.0 sq.mm	SET	4,699.00
E121338	4 x 2.5 sq.mm	SET	173.00
E121339	4 x 4.0 sq.mm	SET	176.00
E121340	4 x 6.0 sq.mm	SET	195.00
E121341	4 x 10.0 sq.mm	SET	197.00
E121342	4 x 16.0 sq.mm	SET	285.00
E121343	4 x 25.0 sq.mm	SET	310.00
E121344	4 x 35.0 sq.mm	SET	401.00
E121345	4 x 50.0 sq.mm	SET	521.00
E121400	Supplying and making one end termination with heavy duty double compression brass gland SIBG type, aluminium lugs duly crimped with crimping tool, PVC tape etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium conductor cable of 1000 volt grade as required of size.		
E121401	2 x 2.5 sq.mm	SET	3.00
E121402	2 x 4.0 sq.mm	SET	153.00
E121403	2 x 6.0 sq.mm	SET	155.00
E121404	2 x 10.0 sq.mm	SET	156.00
E121405	2 x 16.0 sq.mm	SET	157.00
E121406	2 x 25.0 sq.mm	SET	229.00
E121407	2 x 35.0 sq.mm	SET	231.00
E121408	2 x 50.0 sq.mm	SET	253.00
E121409	2 x 70 Sq. mm	SET	261.00
E121410	3 x 2.5 sq.mm	SET	156.00
E121410	3 x 4.0 sq.mm	SET	156.00
E121412	3 x 6.0 sq.mm	SET	156.00
E121413	3 x 10.0 sq.mm	SET	169.00
E121414	3 x 16.0 sq.mm	SET	172.00
E121415	3 x 25.0 sq.mm	SET	249.00

Code No	Description	Unit	Rate Rs.
E121416	3 x 35.0 sq.mm	SET	253.00
E121417	3 x 50.0 sq.mm	SET	333.00
E121418	3 x 70.0 sq.mm	SET	401.00
E121419	3 x 95.0 sq.mm	SET	574.00
E121420	3 x 120.0 sq.mm	SET	675.00
E121421	3 x 150.0 sq.mm	SET	847.00
E121422	3 x 185.0 sq.mm	SET	914.00
E121423	3 x 240.0 sq.mm	SET	1,160.00
E121424	3 x 300.0 sq.mm	SET	1,700.00
E121425	3.5 x 25.0 sq.mm	SET	253.00
E121426	3.5 x 35.0 sq.mm	SET	329.00
E121427	3.5 x 50.0 sq.mm	SET	396.00
E121428	3.5 x 70.0 sq.mm	SET	583.00
E121429	3.5 x 95.0 sq.mm	SET	671.00
E121430	3.5 x 120.0 sq.mm	SET	850.00
E121431	3.5 x 150.0 sq.mm	SET	1,013.00
E121432	3.5 x 185.0 sq.mm	SET	1,004.00
E121433	3.5 x 240.0 sq.mm	SET	1,689.00
E121434	3.5 x 300.0 sq.mm	SET	2,012.00
E121435	3.5 x 400.0 sq.mm	SET	2,684.00
E121436	3.5 x 500.0 sq.mm	SET	3,326.00
E121437	3.5 x 630.0 sq.mm	SET	4,781.00
E121438	4 x 2.5 sq.mm	SET	157.00
E121439	4 x 4.0 sq.mm	SET	157.00
E121440	4 x 6.0 sq.mm	SET	169.00
E121441	4 x 10.0 sq.mm	SET	173.00
E121442	4 x 16.0 sq.mm	SET	249.00
E121443	4 x 25.0 sq.mm	SET	253.00
E121444	4 x 35.0 sq.mm	SET	329.00
E121445	4 x 50.0 sq.mm	SET	396.00
E121446	1 x 300 sq.mm	SET	1,793.00
E121447	1 x 400 sq.mm	SET	2,368.00
E121448	1 x 500 sq.mm	SET	2,868.00
E121449	1 x 630 sq.mm	SET	4,184.00

E-13 H T CABLES & TERMINATION KITS

Code No	Description	Unit	Rate Rs.
E130100	Providing & Laying XLPE insulated as per IS:7098/II/85 H.T.cable as per PWD specification for electrical Works for working voltage 11 K.V.(E) in existing RCC / Hume / Stoneware / PVC pipe/ open duct/cable trench with filling of excavated earth in trench , on existing cable trays or on surface etc. including making necessary connection, testing etc. as required of size as per points (a), (b), (c) mentioned below:- (a) Material :- H4- Grade aluminium conductor of purity >99.6 % & as per IS:1554 P-I / IS :7098 P - I (b) conductor shall have electrolytic aluminium confirming to IS 8130, IS 3975-1999 for armouring of cables , IS 5831 for sheath, IS 10810 (Part 0 to 64) for testing procedures (c) OEM Must have ISO 9001 & 14001 certifications for quality assurance & its own in house NABL lab setup for all testing facilities for cables . All above as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E130101	3 core 120.0 Sq.mm	Mtr	759.00
E130102	3 core 150.0 Sq.mm	Mtr	845.00
E130103	3 core 185.0 Sq.mm	Mtr	980.00
E130104	3 core 240.0 Sq.mm	Mtr	1,177.00
E130105	3 core 300.0 Sq.mm	Mtr	1,364.00
E130200	Providing & Laying XLPE insulated as per IS:7098/II/85 H.T.cable as per PWD specification for electrical Works for working voltage 33 K.V.(E) in existing RCC / Hume / Stoneware / PVC pipe/ open duct/cable trench with filling of excavated earth in trench , on existing cable trays or on surface etc. including making necessary connection, testing etc.as required of size as per points (a), (b), (c) mentioned below:- (a) Material :- H4- Grade aluminium conductor of purity >99.6 % & as per IS:1554 P-I / IS :7098 P - I (b) conductor shall have electrolytic aluminium confirming to IS 8130, IS 3975-1999 for armouring of cables , IS 5831 for sheath, IS 10810 (Part 0 to 64) for testing procedures (c) OEM Must have ISO 9001 & 14001 certifications for quality assurance & its own in house NABL lab setup for all testing facilities for cables . All above as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		

Code No	Description	Unit	Rate Rs.
E130201	3 core 185.0 Sq.mm	Mtr	1,567.00
E130202	3 core 240.0 Sq.mm	Mtr	1,788.00
E130203	3 core 300.0 Sq.mm	Mtr	2,014.00
E130300	Providing & Laying of 25 cm thick layer of river sand to cover of existing cable in 30 cm x 100/ 120 cm size cable trench with levelling and making symmetric 25 mm thick layer in complete running length of trench as required.	Mtr	56.00
E130400	Providing & covering of existing cable lying in existing trench by IInd class bricks/ Stone slab of minimum 32mm thick and 250 mm wide in complete running length of trench complete as required.	Mtr	45.00
E130500	Labour charges for Excavation of 30cmx100cm size loose soil trench including refilling of excavated earth,compaction of earth, making good the same complete as required .	Mtr	81.00
E130600	Labour charges for Excavation of 30cmx120cm size loose soil trench including refilling of excavated earth,compaction of earth, making good the same complete as required .	Mtr	98.00
E130700	Labour charges for cable through Manual Boggi by making pit at regular interval and repairing the pit after laying of cable with PCC/ Bitumin as required.	Mtr	108.00
E130800	Labour charges for cable through Vermeer machine by making pit at regular interval and repairing the pit after laying of cable with PCC/ Bitumin as required.	Mtr	270.00
E130900	Labour charges for Excavation of 30cmx100cm size trench in tar road including refilling of excavated earth,compaction of earth, making good the same complete as required .	Mtr	115.00
E131000	Labour charges for Excavation of 30cmx100cm size trench in CC road including refilling of excavated earth,compaction of earth, making good the same complete as required .	Mtr	132.00
E131100	Labour charges for Excavation of 30cmx120cm size trench in tar road including refilling of excavated earth,compaction of earth, making good the same complete as required .	Mtr	128.00
E131200	Labour charges for Excavation of 30cmx120cm size trench in CC road including refilling of excavated earth,compaction of earth, making good the same complete as required .	Mtr	143.00
E131300	Providing & making heat shrinkable type indoor/outdoor/straight through terminations/ joint kit as per PWD specification for electrical Works suitable for 11 KV / 33 KV cable with required components, preperation of cable ends. Type test report should be as per IS13573:2011 which covered all sequence for table 2 for termination kit and table 3 for streight through joint inclusive thermal & dynamic short circuit test, humidity test, soil fog test. Cross linking shall be done out side factory with E- beam/ peroxide technology. Extrusion process shall be in house OEM within same vicinity. OEM test lab should be as per ISO 9001:2015 & 14001 : 2015 & reports submitted		

Code No	Description	Unit	Rate Rs.
	to engineer in charge including testing etc. as required of following sizes. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E131310	11 KV End Termination Kit Indoor type		
E131311	3 core up to 35 Sqmm	Each	3,502.00
E131312	3 core 50/70/95 Sq.mm	Each	3,832.00
E131313	3 core 120/150/185 Sq.mm	Each	4,162.00
E131314	3 core 240/300 Sq.mm	Each	4,424.00
E131315	3 core 400 Sq.mm	Each	4,893.00
E131320	11 KV End Termination Kit Outdoor type		
E131321	3 core up to 35 Sq.mm	Each	4,054.00
E131322	3 core 50/95/70 Sq.mm	Each	4,453.00
E131323	3 core 120/150/185 Sq.mm	Each	5,060.00
E131324	3 core 240/300 Sq.mm	Each	5,528.00
E131325	3 core 400 Sq.mm	Each	5,893.00
E131330	11 KV Straight Through Joint Kit		
E131331	3 core up to 35 Sq.mm	Each	7,186.00
E131332	3 core 50/70/95 Sq.mm	Each	7,820.00
E131333	3 core 120/150/185 Sq.mm	Each	11,630.00
E131334	3 core 240/300 Sq.mm	Each	12,678.00
E131335	3 core 400 Sq.mm	Each	13,208.00
E131340	33 KV End Termination Kit Indoor type		
E131341	3 core 95/120/150 Sq.mm	Each	5,415.00
E131342	3 core 185/240 Sq.mm	Each	6,980.00
E131343	3 core 300/400 Sq.mm	Each	7,407.00
E131350	33 KV End Termination Kit Outdoor type		
E131351	3 core 95/120/150 Sq.mm	Each	6,105.00
E131352	3 core 185/240 Sq.mm	Each	8,672.00
E131353	3 core 300/400 Sq.mm	Each	9,237.00
E131360	33 KV Straight Through Joint Kit		
E131361	3 core 95/120/150 Sq.mm	Each	17,756.00
E131362	3 core 185/240 Sq.mm	Each	22,298.00
E131363	3 core 240/300/400 Sq.mm	Each	23,110.00

E-14 EARTHING & LIGHTNING ARRESTER

Code No	Description	Unit	Rate Rs.
E140100	Pipe Earthing as per PWD specification for electrical Works as per IS:3043- 1987 with 3.0 Mtr. Long, 40 mm dia. ' B ' class G.I. Pipe IS: 1239 (Part-1) 2004, Equivalent to BS : 1387 with perforated holes of 12 mm dia ,including all accessories like nut, bolts, reducer, nipple, wire meshed funnel, and Heavy duty weather proof poly-propylene earth pit chamber with lockable Jam free lid suitable for safe working load 5000 Kg or more of size Top Dia. 225 to 260 mm, Bottom Dia 300 to 350 mm. and Height 250 to 300 mm. and embodying the pipe complete with alternate layers salt and coke/ charcoal, testing of earth resistance for value of 5 ohms or less as required & must record by engineer in charge during site visit and ensure to enter in measurment book. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Set	2,254.00
E140200	Plate Earthing as per PWD specification for electrical Works as per IS:3043 with Hot dipped G.I. Earth plate of size 600mm x 600mm x 6.0mm by embodying 3 to 4 mtr. below the ground level with 20 mm dia. G.I. 'B' class watering Pipe ,including all accessories like nut, bolts, reducer, nipple, wire meshed funnel, and Heavy duty weather proof poly-propylene earth pit chamber with lockable Jam free lid suitable for safe working load 5000 Kg or more of size Top Dia. 225 to 260 mm, Bottom Dia 300 to 350 mm. and Height 250 to 300 mm. and embodying the pipe complete with alternate layers salt and coke/ charcoal, testing of earth resistance for value of 5 ohms or less as required & must record by engineer in charge during site visit and ensure to enter in measurment book. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Set	3,832.00
E140300	Plate Earthing as per PWD specification for electrical Works as per IS:3043 with copper Earth plate of size 600mm x 600mm x 3.0mm by embodying 3 to 4 mtr. below the ground level with 20 mm dia. G.I. 'B' class watering Pipe ,including all accessories like nut, bolts, reducer, nipple, wire meshed funnel, and Heavy duty weather proof poly-propylene earth pit chamber with lockable Jam free lid suitable for safe working load 5000 Kg or more of size Top Dia. 225 to 260 mm, Bottom Dia 300 to 350 mm. and Height 250 to 300 mm. and embodying the pipe complete with alternate layers salt and coke/ charcoal, testing of earth resistance for value of 5 ohms or less as required & must record by engineer in charge during site visit and ensure to enter in measurment book. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Set	8,943.00

Code No	Description	Unit	Rate Rs.
E140400	Plate Earthing as per PWD specification for electrical Works as per IS:3043 with copper Earth plate of size 300mm x 300mm x 3.0mm by embodying 3 to 4 mtr. below the ground level with 20 mm dia. G.I. 'B' class watering Pipe ,including all accessories like nut, bolts, reducer, nipple, wire meshed funnel, and Heavy duty weather proof poly-propylene earth pit chamber with lockable Jam free lid suitable for safe working load 5000 Kg or more of size Top Dia. 225 to 260 mm, Bottom Dia 300 to 350 mm. and Height 250 to 300 mm. and embodying the pipe complete with alternate layers salt and coke/ charcoal, testing of earth resistance for value of 5 ohms or less as required & must record by engineer in charge during site visit and ensure to enter in measurment book. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Set	3,683.00
E140500	SITC of chemical Gel earthing system of Dual Pipe Technology made of with "B" Class G I Pipe as per IS 1239 (part-1):2004 of Medium duty of following sizes as per points mentioned (a), (b), [c], (d), (e) below :- (a) filled with anti corrosive conductive compounds with the permanent sealings at both the ends, CPRI/ ERDA tested with RMS capacity of minimum 35- 40 KA for withstanding 1 second . (b) To ensure the moisture content and electrical conductivity, 25 kg for 2000 mm & 50 Kgs for 3000mm of resistance lowering earth enhancement material shall be used as a backfill compound. The compound shall be tested form NABL acredeated lab for low resistivity (less than 0.12 Ohm - meter) & high conductivity in nature with carbon as a major content as per referance of IS 3043-1987,IEEE 80-2013 (clause 14.5d) , IEEE 837 & IER 1956 with latest amendemnts (c) Heavy duty weather proof poly-propylene earth pit chamber with lockable Jam free lid suitable for safe working load 5000 Kg or more of size Top Dia. 225 to 260 mm, Bottom Dia 300 to 350 mm. and Height 250 to 300 mm. (d) Testing of earth resistance for value of 5 ohms or less as required & must record by engineer in charge during site visit and ensure to enter in measurment book. (e) Self certificate for confirming above standards from OEM is mandatory. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E140510	With Pipe in Pipe Technology (Outer pipe dia. / Inner pipe dia.) Minimum 100 mm dia borewell		
E140511	GI pipe 2000 mm long, 50 / 25mm, Terminal 40mm x 6 mm GI Strip	Set	4,179.00
E140512	GI pipe 2000 mm long, 80 / 50 mm, Terminal 50mm x 6 mm GI Strip	Set	5,150.00

Code No	Description	Unit	Rate Rs.
E140513	GI pipe 3000 mm long, 50 / 25mm, Terminal 40mm x 6 mm GI Strip	Set	6,804.00
E140514	GI pipe 3000 mm long, 80 / 50 mm, Terminal 50 mm x 6 mm GI Strip	Set	7,062.00
E140515	Add Extra for Gel / Pipe earthing in Rocky Strata for making pit by Boring machine	P. mtr.	244.00
E140600	Supply & Laying following size earth strip in horizontal or vertical run in ground/surface/recess including riveting, soldering, saddles, Jointing shall be done by overlapping and with 2 set of Brass (for Cu strip) / GI (for GI Strip) nut bolt & spring washer spaced at 50cm making connection etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E140601	20mm x 3mm copper strip	Mtr.	400.00
E140602	25mm x 3mm copper strip	Mtr.	531.00
E140603	25mm x 5mm copper strip	Mtr.	793.00
E140604	30mm x 5 mm copper strip	Mtr.	990.00
E140605	40mm x 6mm copper strip	Mtr.	1,578.00
E140606	50mm x 6mm copper strip	Mtr.	2,100.00
E140607	20mm x 3mm G.I. (Hot Dipped) Strip	Mtr.	43.00
E140608	25mm x 3mm G.I. (Hot Dipped) Strip	Mtr.	51.00
E140609	25mm x 6mm G.I. (Hot Dipped) Strip	Mtr.	96.00
E140610	32mm x6mm G.I. (Hot Dipped) Strip	Mtr.	116.00
E140611	50mm x 6mm G.I. (Hot Dipped) Strip	Mtr.	189.00
E140612	20mm x 3mm Alum. Strip	Mtr.	60.00
E140613	25mm x 3mm Alum. Strip	Mtr.	72.00
E140614	25mm x 4 mm Alum. Strip	Mtr.	95.00
E140615	25mm x 5 mm Alum. Strip	Mtr.	115.00
E140616	30mm x 6mm Alum. Strip	Mtr.	161.00
E140617	50mm x 5mm Alum. Strip	Mtr.	219.00
E140618	50mm x 8mm Alum. Strip	Mtr.	343.00
E140619	100mm x 8mm Alum. Strip	Mtr.	669.00
E140620	100mm x 10mm Alum. Strip	Mtr.	832.00
E140621	200mm x 20mm Alum. Strip	Mtr.	3,281.00
E140700	Supply & Laying following size earth wire in horizontal or vertical run in ground/surface/recess including riveting, soldering, saddles, making connection with GI/Cu thimble etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		

Code No	Description	Unit	Rate Rs.
E140701	6 SWG copper Wire	Mtr.	117.00
E140702	8 SWG copper Wire	Mtr.	83.00
E140703	10 SWG copper. Wire	Mtr.	56.00
E140704	12 SWG copper wire	Mtr.	35.00
E140705	14 SWG copper wire	Mtr.	21.00
E140706	6 SWG G.I. (Hot Dipped) Wire	Mtr.	14.00
E140707	8 SWG G.I. (Hot Dipped) Wire	Mtr.	11.00
E140708	10 SWG G.I. (Hot Dipped) Wire	Mtr.	8.00
E140709	2.24 mm dia. Bare alum. Conductor	Mtr.	3.00
E140800	Supply & Laying following size ' B ' class , Medium class G.I. Pipe confirming to IS : 1239 P - 1 (2004) with accessories like bend, socket etc. for laying earth conductor/ strip / cable in ground/ surface/ recess as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E140801	15 mm dia.	Mtr.	116.00
E140802	20 mm dia.	Mtr.	150.00
E140803	25 mm dia.	Mtr.	194.00
E140804	32mm dia	Mtr.	246.00
E140805	40 mm dia.	Mtr.	266.00
E140806	50 mm dia.	Mtr.	368.00
E140807	65 mm dia.	Mtr.	471.00
E140808	80 mm dia.	Mtr.	724.00
E140809	100 mm dia.	Mtr.	861.00
E140810	125 mm dia.	Mtr.	1,092.00
E140900	Mesh earthing as per IS:3043 with GI earth strip of size 25 mm x 6 mm to form a mesh of size 3000 mm x 1000 mm in horizontal formation to create equal sections of 500 mm x 500 mm by means of 10 mm brass bolts, & nuts with spring washer, embodying 1 mtr. below the ground level, refilling the pit by alternative layers of charcoal & salt up to 500 mm with 20 mm dia. GI 'B' class watering pipe, wire mesh funnel and brick masonry finished chamber covered with hinged MS cover of 6 mm thickness and locking arrangement of size 300 mm x 300 mm complete in all respect including connections and testing as required. Testing of earth resistance for value of 5 ohms or less as required & must record by engineer in charge during site visit and ensure to enter in measurement book. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	4,745.00

Code No	Description	Unit	Rate Rs.
E141000	P & F of Heavy duty weather proof poly-propylene earth pit chamber with lockable Jam free lid suitable for safe working load 5000 Kg or more of size Top Dia. 225 to 260 mm, Bottom Dia 300 to 350 mm. and Height 250 to 300 mm. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	867.00
E141100	Supply and installation of UL listed, CPRI tested copper bounded steel electrode of minimum 17.2 mm dia. (as per IEC 62561-2) With a minimum coating thickness of 250 microns and length of 3 meters, filled with anti corrosive conductive compounds with the permanent sealings at both the ends as per point mentioned (a), (b), (c), (d), (e) below :- (a) filled with anti corrosive conductive compounds with the permanent sealings at both the ends, CPRI/ ERDA tested with RMS capacity of minimum 35- 40 KA for withstanding 1 second . (b) To ensure the moisture content and electrical conductivity, 25 kg for 2000 mm & 50 Kgs for 3000mm of resistance lowering earth enhancement material shall be used as a backfill compound. The compound shall be tested form NABL acredated lab for low resistivity (less than 0.12 Ohm - meter) & high conductivity in nature with carbon as a major content as per reference of IS 3043-1987,IEEE 80-2013 (clause 14.5d) , IEEE 837 & IER 1956 with latest amendemnts (c) Heavy duty weather proof poly-propylene earth pit chamber with lockable Jam free lid suitable for safe working load 5000 Kg or more of size Top Dia. 225 to 260 mm, Bottom Dia 300 to 350 mm. and Height 250 to 300 mm. (d) Testing of earth resistance for value of 5 ohms or less as required & must record by engineer in charge during site visit and ensure to enter in measurment book. (e) Self certificate for confirming above standards from OEM is mandatory. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	5,544.00
E141200	Providing & Fixing of ISO Certified company made lightning conductor finial as per PWD specification for electrical Works as per IS 2309-1989 made out of 25 mm dia.,300 mm long copper solid rod having single prong at top with 85 mm dia., 3 mm thick copper base plate including holes etc. complete as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	2,287.00

Code No	Description	Unit	Rate Rs.
E141300	Providing & Fixing of ISO Certified company made lightning conductor finial as per PWD specification for electrical Works as per IS 2309-1989 made out of 25 mm dia., 300 mm long G.I. solid Rod having single prong at top with 85 mm dia., 3 mm thick G.I. base plate including holes etc. complete as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,283.00
E141400	Rivetting, sweating and soldering of copper/ GI Tape with another copper/ G.I. Tape , base of the finial or any other metallic objects as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E141401	Copper Tape	Each	71.00
E141402	G I Tape	Each	47.00
E141500	Providing & Fixing of copper tape 20mm x 3 mm on parapet or surface of wall fixed with porcelain or bakelite insulator (SP-35) in vertical/horizontal run as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E141501	20mm x 3mm copper strip	Mtr	436.00
E141600	Providing & Fixing of G.I. tape (Hot Dipped galvanized) 20mm x 3 mm on parapet or surface of wall fixed with porcelain or bakelite insulator (SP-35) in vertical/horizontal run as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E141601	20mm x 3mm G.I. (Hot Dipped) Strip	Mtr	62.00
E141700	Providing & Fixing of testing joint, made out of 20mm x 3mm copper Strip, 125 mm long, with 4 no. tinned brass bolts, nuts, checknuts, spring washer etc. complete as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	283.00
E141800	Providing & Fixing of testing joint, made out of 20mm x 3mm G.I. Strip, 125 mm long, with 4 no. G.I. bolts, nuts, checknuts, spring washer etc. complete as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	139.00
E141900	Mesh earthing as per IS:3043 with copper earth strip of size 20 mm x 3 mm to form a mesh of size 3000 mm x 1000 mm in horizontal formation to create equal sections of 500 mm x 500 mm by means of 10 mm brass bolts, & nuts with spring washer, embodying 1 mtr. Below the ground level, refilling the pit by alternative layers of charcoal & salt up to 500 mm with 20 mm dia, 20mm GI 'B' class watering pipe and 12 mm G I 'B' class pipe for the earth wire including all accessories like nuts, bolts, wire mesh funnel and brick masonry finished chamber covered with hinged CI cover and locking arrangement of size 300 mm x 300 mm complete in all respect.	Each	13,540.00

E-15 FANS

Code No	Description	Unit	Rate Rs.
E150100	Making of hole in wall (brick/stone) of required size for housing exhaust fan and making good the same, with cement plaster as required of following size:		
E150101	Up to 457 mm size	Each	290.00
E150102	more than 457 mm & up to 610 mm	Each	340.00
E150200	Fixing of fresh air fan/exhaust fan up to size of 300 mm on ply/ poly board of 6.0 mm in existing window frame including cost of ply, cutting of hole in ply. Nut bolts etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	138.00
E150300	Installation , testing and Commissioning of ceiling fan (any size) including wiring the down rod up to 30 cm with 3 x 1.5 sq.mm pvc insulated flexible copper conductor making connection testing etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E150301	With regulator	Each	53.00
E150302	Without regulator	Each	46.00
E150400	Providing & Fixing of ISO Certified company made BEE Approved copper wound 1200 mm sweep BLDC technology power saving ceiling fan with longer life span and low maintenance 5 star rated which can withstand on voltage fluctuations from 140 volts to 240 volts ,power factor not less than 0.9 , service value (CMM/W) minimum 6.85 , air delivery minimum 215 CMM, speed 350 RPM (tolerance as per IS:374 2019) THD less than 10% and complete with down rod up to 30 cm with secondary support safety cable , cotter pin with 3 x 1.5 sq.mm pvc insulated flexible copper conductor making connection testing etc. as required. Appropriate OEM test certificate shall be submitted by contractor. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E150401	Without Remote	Each	2,502.00
E150402	With Remote	Each	2,666.00
E150500	Providing & Fixing of ISO Certified company made BEE Star rated copper wound double ball bearing capacitor start, aluminium body & Metallic blade ceiling fan as per PWD specification for electrical Works, Conform to all the performance requirements laid down in IS:374-2019 including all amendments, as applicable ; & Carry BIS licensing (i.e. ISI marking) or Quality Certification such as ISO - 9001 or above. with down rod up to 30 cm with secondary support		

Code No	Description	Unit	Rate Rs.
	safety cable (steel wire) , cotter pin with 3 x 1.5 sq.mm pvc insulated flexible copper conductor making connection testing etc. as required. Appropriate OEM test certificate shall be submitted by contractor. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E150501	1200 mm Sweep BEE 2 Star rated (service value ≥ 4.5 to < 5)	Each	1,482.00
E150502	1200 mm Sweep BEE 3 Star rated (service value ≥ 5.0 to < 5.5)	Each	1,617.00
E150503	1400 mm Sweep BEE 2 Star rated (service value ≥ 4.5 to < 5)	Each	1,604.00
E150504	1400 mm Sweep BEE 3 Star rated (service value ≥ 5.0 to < 5.5)	Each	1,732.00
E150600	Providing & Fixing of shackle (iron hook) made from 2mm nominal thick CRCA sheet and bolts (2nos) of 6mm with spring washer nut, checknut & split pin as required.	Each	57.00
E150700	Providing & Fixing of of M.S. J- hook of standard design made out of 16 mm dia. M.S. round bar and fixed with cement concrete mortar with required support as required.	Each	111.00
E150800	Providing & Fixing of of Double ball bearing, copper wounded capacitor start single phase metallic blade fresh air fan, in existing opening including cost of hardware , flexible 3 core copper conductor ,making connections, testing etc. as required. OEM shall be an ISO certified company. Appropriate OEM test certificate shall be submitted by contractor. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E150801	225 mm sweep	Each	1,073.00
E150802	300 mm sweep	Each	1,210.00
E150900	Providing & Fixing of Heavy duty capacitor start, copper wound Double ball bearing 900/1400 RPM single phase Exhaust fan as per PWD specification for electrical Works, conforming to IS:2312 ISI marked in existing opening including making connections testing etc. as required. OEM shall be an ISO certified company. Appropriate OEM test certificate shall be submitted by contractor. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E150901	300 mm sweep(900/1400 RPM)	Each	2,316.00
E150902	380 mm sweep(900/1400 RPM)	Each	3,088.00
E150903	450 mm sweep(900/1400 RPM)	Each	4,277.00
E150904	600 mm sweep(700 / 900 RPM)	Each	7,788.00
E151000	Providing & Fixing of of ventilating fans Capacitor start, copper wounded, single phase with PVC impeller, ABS body, automatic openable louver shutter in existing opening including making connection, testing etc. as required. OEM shall be an ISO certified company. Appropriate OEM test certificate shall be submitted by		

Code No	Description	Unit	Rate Rs.
	contractor. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E151001	150 mm sweep	Each	970.00
E151002	200 mm sweep	Each	1,066.00
E151003	250 mm sweep	Each	1,244.00
E151100	Providing & Fixing of heavy duty, copper wound , Double ball bearing and with metal sturdy mesh guard; Aluminium alloy one piece blade wall mounting oscillating type air circulator as per PWD specification for electrical Works, conforming to IS:2997, including fixing with anchor bolts, regulator making connection testing etc. as required. OEM shall be an ISO certified company. Appropriate OEM test certificate shall be submitted by contractor. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E151101	450 mm sweep With wall Mounting and three speed regulator	Each	5,329.00
E151102	450 mm sweep With Pedestal and three speed regulator	Each	5,809.00
E151103	600 mm sweep With wall Mounting and three speed regulator	Each	6,899.00
E151104	600 mm sweep With Pedestal and three speed regulator	Each	7,079.00
E151105	750 mm sweep With wall Mounting and three speed regulator	Each	8,266.00
E151106	750 mm sweep With Pedestal and three speed regulator	Each	8,473.00
E151200	Providing & Fixing of capacitor start, copper wound, metal body, metal blade three speed wall mounting fan of following sweep with the help of anchor bolts including making connection testing etc. as required. OEM shall be an ISO certified company. Appropriate OEM test certificate shall be submitted by contractor. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E151201	400 mm sweep(Oscillating type)	Each	2,118.00
E151202	300 mm sweep(oscillating type)	Each	1,707.00
E151300	Providing & Fixing of capacitor start, copper wounded, three speed, oscillating type pedestal fan with adjustable height, Confirming to IS:1169 -1967 of following size with cord and plug top as required. OEM shall be an ISO certified company. Appropriate OEM test certificate shall be submitted by contractor. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E151301	400 mm sweep	Each	2,493.00
E151302	450 mm sweep	Each	2,691.00
E151303	500 mm sweep	Each	3,142.00

Code No	Description	Unit	Rate Rs.
E151400	Providing & Fixing of extra down rod of 15 mm dia . ERW (Electrical resistance welded) of 1.6mm nominal thick medium duty steel pipe including cutting, threading, drilling, fixing quarter pin etc as reqd. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Mtr.	136.00
E151500	Numbering of ceiling fans/ fixtures with approved enamel paint etc as reqd	Each	21.00
E151600	P & F of Gravity Louver shutter of superior quality made out of frame of 18 swg M.S. sheet & Louvers made from 24 swg MS Sheet with enamel paint including cost of nuts, bolts, etc as reqd. Appropriate OEM test certificate shall be submitted by contractor. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E151601	Up to 380 mm size	Each	210.00
E151602	above 380 mm size	Each	250.00
E151700	P & F of Gravity Louver shutter of superior quality made out of PVC including cost of nuts, bolts, etc as reqd. Appropriate OEM test certificate shall be submitted by contractor. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E151701	Up to 380 mm size	Each	217.00

E-16 STORAGE WATER HEATERS

Code No	Description	Unit	Rate Rs.
E160100	Providing & Fixing of ISO Certified company made ISI marked (IS:2082) of 5 star rated vertical storage water heater with outer casing made of M.S.sheet finished with anti-corrosive powder coating,inner tank made of pure electrolytic copper/stainless steel / SPHP, Tubular copper sheathed and Nickel plated heating element/ twin ceramic cartridge heating element, stem type thermostat and thermal cut out, Dual indicating lamps for power supply and thermostat, PUF insulation, Pressure release valve,fusible plug etc. as required held in position with 4 no. rag bolts,duly wired with 3 core 2.5/4.0 Sqmm PVC insulated & sheathed copper conductor and 16 A/25A three pin plug top with Portable Residual Current Device (PRCD) facility form OEM ,including making inlet,outlet heavy gauge C.P./ Flexible alloy connection,testing etc. complete in all respect. Appropriate OEM test certificate shall be submitted by contractor. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E160101	6 Ltr.	Each	6,562.00
E160102	10 Ltr.	Each	7,645.00
E160103	15 Ltr.	Each	7,983.00
E160104	25 Ltr.	Each	9,133.00
E160105	35 Ltr.	Each	10,486.00
E160106	50 Ltr.	Each	12,448.00
E160200	Providing & Fixing of ISO Certified company made ISI marked (IS:2082) 4 star rated Horizontal storage water heater with outer casing made of M.S.sheet finished with anti-corrosive powder coating,inner tank made of pure electrolytic copper/stainless steel , Tubular copper sheathed and Nickel plated heating element/ twin ceramic cartridge heating element, stem type thermostat and thermal cut out,Dual indicating lamps for power supply and thermostat,PUF insulation, Pressure release valve,fusible plug etc. as required held in position with 4 no. rag bolts,duly wired with 3 core 2.5/4.0 Sqmm PVC insulated & sheathed copper conductor and 16 A/25A three pin plug top Portable Residual Current Device (PRCD) facility form OEM ,including making inlet,outlet heavy gauge C.P. connection,testing etc. complete in all respect. Appropriate OEM test certificate shall be submitted by contractor. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E160201	6 Ltr.	Each	6,427.00
E160202	10 Ltr.	Each	7,915.00

Code No	Description	Unit	Rate Rs.
E160203	15 Ltr.	Each	8,227.00
E160204	25 Ltr.	Each	9,715.00
E160205	35 Ltr.	Each	10,595.00
E160206	50 Ltr.	Each	12,827.00
E160300	Providing & Fixing of stem type ISI marked (IS 3017 / 85) snap action adjustable thermostat storage water heater including making connection testing etc. complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	331.00
E160400	Providing & Fixing of stem type, ISI marked, push to reset type auto thermal cut off and rated at 20 A 250 V including testing etc. complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	278.00
E160500	Providing & Fixing of stem type, ISI merked snap action bipolar adjustable thermostat with built in auto thermal cut out of storage water heater including making connection testing etc. complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	683.00
E160600	Providing & Fixing of ISI marked (IS:4159) marked copper sheathed,nickle plated, mineral filled heating element including making connection testing etc complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E160601	3.0 KW	Each	1,015.00
E160602	2.0 KW	Each	974.00
E160700	Providing & Fixing of base plate assembly with neoprene rubber gasket, inlet socket with inbuilt NRV/ PRV and drain out system and outlet socket pipe,fusible plug assembly,mounting hardwares complete etc. complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E160701	upto 10 Ltr. Capacity SWH	Each	1,055.00
E160702	15 Ltr. To 25 Ltr. Capacity SWH	Each	1,515.00
E160703	35 Ltr. To 50 Ltr. Capacity SWH	Each	1,704.00
E160800	Providing & Fixing of inlet socket with built in safety valve as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	203.00

Code No	Description	Unit	Rate Rs.
E160900	Providing & Fixing of Multi safety valve of 8.5 bar capacity with built in drain, NRV, Vacuum release, Pressure release etc. as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	278.00
E161000	Providing & Fixing of fusible plug pipe assembly for storage water heater as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	123.00
E161100	Providing & Fixing of fusible tablet in fusible plug assembly as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	25.00
E161200	Providing & Fixing of bottom cover with half cover set for storage water heater as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	392.00
E161300	Providing & Fixing of neon indicating lamp of superior quality for storage water heater complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	40.00
E161400	Providing & Fixing of heavy duty ISI marked C.P. vacuum release valve for Storage water heater as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	189.00
E161500	Providing & Fixing of ISI marked C.P. adjustable type non return valve for storage water heater complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	159.00
E161600	Providing & Fixing of ISI marked pressure reducing valve for storage water heater as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,488.00
E161700	Providing & Fixing of 13 mm angle valve for storage water heater as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E161701	Brass with C.P. finished ISI marked	Each	230.00
E161800	Providing & Fixing of heavy duty C.P. connection for storage water heater for inlet and outlet of suitable length including the cost of nuts, washers etc complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/		

Code No	Description	Unit	Rate Rs.
	work , refer Annexure "A" attached with this BSR .		
E161801	300 mm	Set	297.00
E161802	600 mm	Set	568.00
E161900	Providing & Fixing of heavy duty flexible alloy pipe for storage water heater for inlet and outlet of suitable length including the cost of nuts, washers etc complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E161901	300 mm	Set	365.00
E161902	600 mm	Set	704.00
E162000	Charges for brass welding of inner copper tank for storage water heater including opening,refixing,testing etc. complete in all respect.	P.Job	372.00
E162100	Charges for descaling of storage water heater including required chemical, opening,refixing,testing as complete.	P.Job	271.00
E162200	Charges for Fixing of storage water heater including rag bolts of suitable size,supply & making heavy gauge inlet, outlet C.P. connection, testing, carrying from store to site,etc. as required.	P.Job	744.00
E162300	Providing & Fixing of outlet socket made out of brass for SWH complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	68.00
E162400	Providing & Fixing of Brass vent Nut with washer for SWH complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	68.00
E162500	Providing & Fixing of Base plate neoprene gasket for SWH complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	47.00
E162600	Providing & Fixing of Brass drain nut for SWH as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	47.00
E162700	Providing & Fixing of twin ceramic cartridge, shock and hard water proof heating element including making connection testing etc complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E162701	3.0 KW	Each	688.00
E162702	2.0 KW	Each	578.00

Code No	Description	Unit	Rate Rs.
E162800	Providing & Fixing of ISO Certified company made 1.5 sq.mm 3 core PVC copper conductor cable (IS :694) as required complete in all respect. Appropriate OEM test certificate shall be submitted by contractor.All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Mtr.	52.00
E162900	SITC of ISO Certified company made MNRE approved & confirming to IS:12933 P-1,2,3 & 5 Flat Plate Collector type solar hot water system with collector, insulated stainless steel (SS grade:304) storage tank with electrical back up with Portable Residual Current Device (PRCD) facility form OEM , CRCA Powder coated /MS stand for Collector & Tank etc. as required. of following capacity complete in all respect. Appropriate OEM test certificate shall be submitted by contractor. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E162901	100 litre/ day	Set	21,636.00
E162902	200 litre/ day	Set	42,594.00
E162903	250 litre/ day	set	53,243.00
E162904	300 litre/ day	Set	63,893.00
E162905	500 litre/ day	Set	1,06,487.00
E163000	SITC of ISO Certified company made MNRE approved & confirming to IS:12933 P-1,2,3 & 5 Evacuated tube Collector type solar hot water system with collector, PUF insulated stainless steel (SS grade:304)storage tank with electrical back up with Portable Residual Current Device (PRCD) facility form OEM , CRCA Powder coated /MS stand for Collector & Tank etc. as required. of following capacity complete in all respect. Appropriate OEM test certificate shall be submitted by contractor.All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E163001	System capacity 100 Litre/day ,minimum number of tubes to be provided with the system are 14 Nos of Dia. 47 mm, Length 1500 mm or 10 Nos of Dia 58 mm and Length 1800 mm	Set	17,777.00
E163002	System capacity 200 Litre/day ,minimum number of tubes to be provided with the system are 24 Nos of Dia. 47 mm, Length 1500 mm or 19 Nos of Dia 58 mm and Length 1800 mm	Set	35,556.00
E163003	System capacity 250 Litre/day ,minimum number of tubes to be provided with the system are 34 Nos of Dia. 47 mm, Length 1500 mm or 23 Nos of Dia 58 mm and Length 1800 mm	Set	44,445.00
E163004	System capacity 300 Litre/day ,minimum number of tubes to be provided with the system are 40 Nos of Dia. 47 mm, Length 1500 mm or 27 Nos of Dia 58 mm and Length 1800 mm	Set	53,333.00

Code No	Description	Unit	Rate Rs.
E163005	System capacity 500 Litre/day ,minimum number of tubes to be provided with the system are 64 Nos of Dia. 47 mm, Length 1500 mm or 44 Nos of Dia 58 mm and Length 1800 mm	Set	88,889.00
E163100	Providing and replacement of ISO Certified company made vaccum tube for solar water heater as per MNRE approved & confirming to IS:12933 P-1,2,3&5 with inner and outer dia of 47/58 mm respectively, solar transmission ratio more then 0.89, lifetime greater then 15 year, thickness of tube 1.60+/-0.15 of length 1800 mm including making necessary arrangement for replacement with required T&P etc as required complete in all respect.Appropriate OEM test certificate shall be submitted by contractor. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,021.00

E-17 INDOOR LIGHTING

Code No	Description	Unit	Rate Rs.
E170100	Providing & Fixing of Fluorscent tube rod in existing fixtures as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E170110	Flourscent powder coated		
E170111	18/20 Watts	Each	47.00
E170112	36/40 Watts	Each	51.00
E170120	T5 lamps		
E170121	14 Watts	Each	59.00
E170122	28 Watts	Each	65.00
E170200	Providing & Fixing of IP20 SMD Mid Power LED batten type integrated light fixture made from polycarbonate /extruded aluminium powder coated housing with in built driver , Power Consumption of 18W/20W ,system lumen efficacy ≥ 120 lm/Watt output, internal surge protection of 2.5 KV with Short & Open circuit protection ,THD < 10% ,p.f.≥ 0.95, CRI >80 , life time of minimum 50000 Burning Hours with , 70% of intial Lumen maintaned till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin) , maximum power consumption should not more than the specified rating and Fixture shall be of BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79/LM80) certificate / Report from OEM shall be submitted. All as per pre approved by engineer in charge . foe additional technical parameters of product/ work, refer Annexure "A" attacheded with this BSR.		
E170201	4' LED Tube shape fixture 18/20 W (Polycarbonate Base)	Each	235.00
E170202	4' LED Tube shape fixture 18/20 W (Extruded Al Base)	Each	312.00
E170203	2' LED Tube shape fixture 9/10 W (Polycarbonate Base)	Each	208.00
E170300	Providing & Fixing of energy efficient direct fit (Retrofit) Polycarbonate /Extruded Al Base Housing & diffuser SMD Mid Power LED tube (with integral driver), on existing fixture. Power Consumption of 18W / 20W system lumen efficacy ≥ 110 lm/Watt output, internal surge protection of 2.5 KV ,THD < 15% ,p.f.≥ 0.95,CRI >80 , life time of minimum 35000 Burning Hours with , 70% of intial Lumen maintaned till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin) , maximum power consumption should not more than the specified rating and Fixture shall be of BIS standard and trade mark certificate (T.C.).		

Code No	Description	Unit	Rate Rs.
	Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing.		
	OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79/LM80) certificate / Report from OEM shall be submitted. All as per pre approved by engineer in charge . foe additional technical parameters of product/ work, refer Annexure "A" attacheded with this BSR.		
E170301	4' ,18/ 20 Watt LED Tube Without Batten (Polycarbonate base)	Each	163.00
E170302	4' ,18/ 20 Watt LED Tube Without Batten (Extruded Al Base)	Each	259.00
E170400	Providing & Fixing of Ballast for existing FTL / CFL fixture as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E170401	copper ballast 18/36 Watts suitable for FTL	Each	219.00
E170402	Vacuum pressure impregnated open construction(VPIT) copper ballast 18/36 Watts for FTL	Each	228.00
E170403	High frequency electronic ballast 18/36 watts for FTL	Each	255.00
E170404	Vacuum pressure impregnated copper ballast for 9/11/13/18 watt CFL	Each	201.00
E170405	High frequency electronic ballast 9/11/13/18 watts for CFL.	Each	228.00
E170406	Vacuum pressure impregnated copper ballast for 26 watt CFL	Each	229.00
E170407	High frequency electronic ballast 14 watts for T5 Lamps	Each	258.00
E170408	High frequency electronic ballast 28 watts for T5 Lamps	Each	258.00
E170500	Providing & Fixing of starter for existing fluorscent lamp fixture as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E170501	FSU	Each	12.00
E170502	FS-2 rated 110 V for 2x20 W FTL luminaire with single ballast	Each	19.00
E170600	Providing & Fixing of energy efficient / energy saving direct fit (Retrofit) composite self ballasted compact fluorscent lamp (CFL) with PF >0.85 in existing holder / fixture as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E170601	5 Watt	Each	61.00
E170602	8/9 Watt	Each	68.00
E170603	11/13 Watt	Each	75.00
E170604	14/15 Watt	Each	81.00
E170605	18/20 Watt	Each	88.00

Code No	Description	Unit	Rate Rs.
E170700	Providing & Fixing of two pin energy efficient compact fluorescent lamp in existing holder/fixture as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E170701	7/9 watt	Each	59.00
E170702	11 watt	Each	65.00
E170703	13/18 watt	Each	72.00
E170704	26 watt	Each	128.00
E170705	36 Watt 4 pin	Each	163.00
E170800	Providing & Fixing of IP40 LED Recessed / Surface Mounted, Round / Square Non-Dimmable Back lit SMD Mid Power LED Downlight with die-cast aluminum housing & Heat Sink for heat dissipation with UV Stabilized non yellowish Diffuser with internal/ external BIS compliance 2.5 KV surge protected Isolated driver, with Short & Open circuit protection, having efficiency > 85% and in compliance to IEC standards. System Lumen efficacy of ≥ 120 lm / watt, THD < 10 % ,p.f.≥ 0.95, CRI >80, life time of minimum 50000 Burning Hours with , 70% of initial Lumen maintained till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin) , maximum power consumption should not more than the specified rating and Fixture shall be of BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79/LM80) certificate / Report from OEM shall be submitted. All as per pre approved by engineer in charge . for additional technical parameters of product/ work, refer Annexure "A" attached with this BSR.		
E170810	Recessed Mounting		
E170811	LED Downlight 2/3 Watt	Each	435.00
E170812	LED Downlight 6/7W	Each	480.00
E170813	LED Downlight 9/10W	Each	577.00
E170814	LED Downlight 14/15W	Each	707.00
E170815	LED Downlight 18/20W	Each	746.00
E170820	Surface Mounting		
E170821	LED Downlight 6/7 W	Each	500.00
E170822	LED Downlight 12/14 W	Each	590.00
E170823	LED Downlight 18/20W	Each	785.00
E170900	Providing & Fixing of IP40 LED Surface/ Recessed / suspended		

Code No	Description	Unit	Rate Rs.
	mounting Mid power SMD type LED Light fixture made from CRCA sheet steel housing, high purity / transmissivity UV stabilized Non - yellowish diffuser for uniform light distribution. High efficiency with 2.5 KV internal/external surge protection BIS certified isolated driver having efficiency > 85% , with Short & Open circuit protection and in compliance to IEC standards (Integral with light fixture). System lumen efficacy of ≥ 120 lm/Watt ,THD < 10 % , p.f.≥ 0.95,CRI >80 , life time of minimum 50000 Burning Hours with , 70% of initial Lumen maintained till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin) , maximum power consumption should not more than the specified rating and Fixture shall be of BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79/LM80) certificate / Report from OEM shall be submitted. All as per pre approved by engineer in charge . foe additional technical parameters of product/ work, refer Annexure "A" attacheded with this BSR.		
E170910	Recessed Mounting		
E170911	36W LED light fixture 2'x2' with acrylic / prismatic front cover.	Each	2,413.00
E170912	48W LED light fixture 2'x2' with acrylic / prismatic front cover.	Each	2,802.00
E170920	Suspended Mounting/Surface Moutning		
E170921	36W LED light fixture 2'x2' with acrylic / prismatic front cover.	Each	2,608.00
E170922	48W LED light fixture 2'x2' with acrylic / prismatic front cover.	Each	3,436.00
E171000	Providing & Fixing of IP 20 box made out from 1.2mm thick CRCA sheet steel with depth of minimum 30 mm and finished with powder coating and suitable for mounting LED tube including side covers, holders , internal wiring to illuminate the single sided connection LED tube. (Without tube). All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E171001	Suitable for 4' LED Tube shape fixture 1 X 18/20 W	Each	217.00
E171002	Suitable for 4' LED Tube shape fixture 2 X 18/20 W	Each	245.00
E171100	Providing & Fixing of IP65 IK10 rated Integrated SMD Mid power LED bulk head type light fixture made from Pressure Die Cast AL housing suitable for mounting LED tube system (integral driver), system lumen efficacy ≥ 100 lm/Watt output , THD < 15% ,p.f.≥ 0.95,CRI >80 , life time of minimum 30000 Burning Hours with , 70% of initial Lumen maintained till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin) , maximum power consumption should not more than the specified rating and Fixture shall be of BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. surge protection 5 KV. OEM must have its own in house NABL lab setup for all testing		

Code No	Description	Unit	Rate Rs.
	facilities for LED fixtures. (LM79/LM80) certificate / Report from OEM shall be submitted. All as per pre approved by engineer in charge . foe additional technical parameters of product/ work, refer Annexure "A" attacheded with this BSR.		
E171101	LED BULK head luminaire 6/7W	Each	1,039.00
E171102	LED BULK head luminaire 9/10W	Each	1,051.00
E171103	LED BULK head luminaire 15 W	Each	1,220.00
E171200	Providing & Fixing of energy efficient /energy saving IP 20 LED direct retrofit Bulb in existing holder or fixture as required with system lumen efficacy ≥ 100 lm/Watt output ,pf 0.95 , CRI >70, minimum life time of minimum 25000 Burning Hours with , 70% of intial Lumen maintaned till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin) , maximum power consumption should not more than the specified rating and Fixture shall be of BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79/LM80) certificate / Report from OEM shall be submitted. All as per pre approved by engineer in charge . foe additional technical parameters of product/ work, refer Annexure "A" attacheded with this BSR.		
E171201	2/3 Watt	Each	68.00
E171202	6/7 Watt	Each	80.00
E171203	9 Watt	Each	92.00
E171204	15 Watt	Each	120.00
E171205	18/20 Watt	Each	172.00

E-18 OUTDOOR LIGHTING

Code No	Description	Unit	Rate Rs.
E180100	Providing & Fixing of Normal / High Output High pressure sodium vapour/ Metal halide / Halogen lamp as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E180110	HPSV Elliptical lamp Normal Output		
E180111	70 Watt	Each	275.00
E180120	HPSV Tubular lamp Normal Output		
E180121	70 Watt	Each	275.00
E180122	150 Watt	Each	379.00
E180123	250 Watt	Each	407.00
E180124	400 Watt	Each	465.00
E180130	Metal halide lamp double ended		
E180131	70 Watt	Each	467.00
E180132	150 Watt	Each	492.00
E180140	Metal halide lamp single ended tubular		
E180141	70 Watt	Each	679.00
E180142	150 Watt	Each	693.00
E180143	250 Watt	Each	746.00
E180144	400 Watt	Each	759.00
E180150	Halogen tube lamp		
E180151	500 Watt	Each	68.00
E180152	1000 Watt	Each	91.00
E180200	Providing & Fixing of Capacitors for power factor improvement in existing HPSV/ HPMV/ Metal halide lamp fixture as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E180201	8 mfd	Each	94.00
E180202	10 mfd	Each	117.00
E180203	15 mfd	Each	144.00
E180204	20 mfd	Each	191.00

Code No	Description	Unit	Rate Rs.
E180300	Providing & Fixing of Electronic ignitor suitable for HPSV/ Metal halide lamp of any rating complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	167.00
E180400	Providing & Fixing of vacuum pressure impregnated copper ballast suitable for HPMV / HPSV / Metal halide lamp luminaire as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E180410	For HPMV lamp		
E180411	80 Watt	Each	937.00
E180412	125 Watt	Each	958.00
E180413	250 Watt	Each	1,403.00
E180414	400 Watt	Each	2,031.00
E180420	For HPSV/Metal halide lamp		
E180421	70 Watt	Each	914.00
E180422	150 Watt	Each	1,338.00
E180423	250 Watt	Each	1,947.00
E180424	400 Watt	Each	2,810.00
E180500	Supply and erection of M.S. Galvanized Octagonal pole (as per BSEN 40-3-3:2003 /BSEN 10025/IS 2062 IS:875 Part-1 – 2015/ for MS plate for base flange)of following length and dimension as per table P-01 with base plate on the cement concrete foundation of M-20 grade (1:1.5:3) as per IS 456/IS 2911. with the help of anchor bolts of grade 6.8 (IS: 1367 P III). The pole shall have a weatherproof flush door and locking arrangements. complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E180510	Octagonal MS Poles made of S-355JO grade steel sheet , folded lengthwise to obtained Octagonal shape, having single longitudinal seam weld and hot dipped galvanised internally & externally in accordance with IS 2629. (See Table P -01 for specs.)		
E180511	3 Mtr.	Each	6,210.00
E180512	4 Mtr.	Each	7,792.00
E180513	5 Mtr.	Each	9,707.00
E180514	6 Mtr.	Each	11,289.00
E180515	7 Mtr.	Each	13,208.00
E180516	8 Mtr.	Each	15,297.00
E180517	9 Mtr.	Each	19,846.00

Code No	Description	Unit	Rate Rs.
E180518	10 Mtr.	Each	22,763.00
E180519	11 Mtr.	Each	30,174.00
E180520	12 Mtr.	Each	34,799.00
E180600	Supply, Erection and Fixing of hot dipped galvanised M.S. Overhang (48.3 X 3.25 mm) with cap (400 x 88.9 / 114.3 x 3.25 mm) over the existing poles. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E180601	Single arm overhang	Mtr.	910.00
E180602	Double arm overhang	Mtr.	1,603.00
E180700	Supply and erection of M S swaged tubular pole conforming to IS: 2713-1980 (part I to II) with galvanised base plate in position including excavation of the pit and filling the same with C.C. of M-20 grade (1:1.5:3) from base plate to 50 cm above ground level, with the help of steel frame not less than 40 cm dia up to 114.3mm outer dia and 50 cm beyond 114.3mm outer dia around the pole. Duly finished with cement plaster, earthing terminals, cable entry, GI cable sleeve complete as required. After erection pole shall be painted with two coat of red oxide primer and two quote of enamel paint of silver colour as per the direction of Engineer incharge. The pole shall be fabricated by using ISI mark tube for structural purpose of following height & designation. (See Table P - 02 for specs.) complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E180701	7.5 Mtr. (410 SP - 5)	Each	6,992.00
E180702	8.5 Mtr. (410 SP - 17)	Each	7,622.00
E180703	9.0 Mtr. (410 SP - 28)	Each	9,811.00
E180704	10 Mtr. (410 SP - 42)	Each	12,096.00
E180705	11 Mtr. (410 SP - 51)	Each	14,033.00
E180706	12 Mtr. (410 SP - 59)	Each	16,804.00
E180800	Add for supply and fixing of M S Overhang of following size over the existing poles. Overhang shall be painted with two coat of red oxide primer and two quote of enamel paint of silver colour as per the direction of Engineer incharge All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E180801	76.1 mm OD x 3.25 mm thickness	Mtr.	509.00
E180802	88.9 mm OD x 3.25 mm thickness	Mtr.	692.00
E180803	114.3 mm OD x 3.65 mm thickness	Mtr.	910.00

Code No	Description	Unit	Rate Rs.
E180900	Supply installation testing & Commissioning of ISO certified company made high mast lighting system (as per PLG 07 of ILP UK technical report no 7 of ILE UK /IS:875 Part-1 – 2015//BSEN10025/and IS:2062)consisting of totally hot dip galvanised by single dipped method high mast, lantern carriage suitable for up to 12 nos luminaries with welded arm (excluding luminaires), mast head frame assembly with full cover, including 1 No. LED 15 Watts aviation obstruction lights, double drum type self sustaining winch, integral power tool accesible from door with padlocking arrangement (winch motor with control circuit) hot dipped galvanised heavy duty pipe lightening finial, S.S. ropes (AISI 316, 7 / 19 costruction), EPR insulated PCP sheathed trailing cable, including outdoor type control panel for auto on / off, reverse / forward motor operation and CC foundation of M - 25 grade complete as required as per IS 456/IS 2911. The mast is constructed from mild steel plates (as per IS 5986 Gr. 510) cut and folded to form a polygonal section, telescopic jointed and welding as per BS 5135. (See table P - 03 for specs.) OEM Must have Type test certificate for wind tunnel test for High mast fixtures. complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E180901	12.5 Mtr HM (in 2 section)	Each	1,51,473.00
E180902	16.0 Mtr HM (in 2 section)	Each	2,34,765.00
E180903	20.0 Mtr Hm (in 2 section)	Each	2,75,874.00
E180904	25.0 Mtr HM (in 3 section)	Each	3,05,046.00
E180905	30.0 Mtr HM (in 3 section)	Each	3,61,063.00
E181000	Providing & Fixing of IP-65 Protected LED aviation obstruction light luminaire comprising of die cast aluminium alloy housingwith Polycarbonate enclosure having more than 200 No's Low Power LED's having minimum power consumption 15 watts complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E181001	aviation obstruction LED light luminaire Min. 15 Watts	Each	4,961.00
E181100	Providing & Fixing of ISO certified company made IK10 IP65 protected Top/Bottom mounted LED Post top Light system. Fixture made of powder coated die cast alluminium housing with UV stabalized PC diffuser. The System level Luminous efficacy ≥ 90 Lumen/W. SMD LEDs is to be used, System CRI>70, CCT: 3000/4000/6500 K. The integral electronic driver must be potted & has a unique BIS R number must be potted & has a unique BIS R number constant current and Internal/external surge protection device of min. 4KV(L-N) and efficiency > 85%, PF>0.9, THD<20% and input Voltage range of 90-270V AC at 50Hz. System life of 30000 Burning hours with 70% of Initial Lumens maintained Light		

Code No	Description	Unit	Rate Rs.
	output in Cool white or Warm White Colour as per engineers choice. driver current <1000mA shown in LM79 report. Fixture must be in compliance with BIS Standards and T.C . Certificate complete in all respect.OEM Must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79/LM80) Certificate/ report with liable warranty of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E181101	25W LED Post Top Fixture	Each	5,841.00
E181102	30 W LED Post Top Fixture	Each	6,151.00
E181103	40W LED Post Top Fixture	Each	7,006.00
E181104	45 W LED Post Top Fixture	Each	7,316.00
E181200	Providing & Fixing of IK07 IP-66 protected high power LED flood light system with Pressure diecast aluminium housing LM6/ ADC12 material , toughened glass diffuser with suitable lenses on LED to achieve various beam angles, 240 volt, 50Hz, of high power LED lamps . Integrated driver must be potted & has a unique BIS R number shall be high efficiency having efficiency more than 85 % and in compliance to BIS certified and T.C. certificate. The System level Luminaire efficacy ≥ 120 lm/ wt with High Power LEDs is to be used . LED driver Input Voltage AC 120 to 270 V AC with High voltage Cutoff ≥ 300 V AC and Auto resetting Safety . Input Frequency $50\text{Hz} \pm 3\%$, Power Factor > 0.95 ,driver Efficiency $> 85\%$, THD(I) $< 10\%$, driver current <1000mA shown in LM79 report. driver should be Phase to phase protection of 440 V for 4 Hrs. Electrical Connector Must be provided, Surge Protection Min $\geq 4\text{KV}$ internal and 10KV external, System life of 30000 Burning hours with 70% of Initial Lumens maintained, color Rendering Index > 70 and CCT 5700K $\pm 355\text{K}$. Driver current <1000mA shown in LM79 report. Manufactures Word Mark/Name Engraved/Embossing/Screen printing on die cast housing to allow traceability/authenticity. Fixture shall be IS 10322 Complied.		
	OEM Must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79/LM80) Certificate/ report with liable warranty of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E181201	High Power LED Flood Light 30W	Each	2,532.00
E181202	High Power LED Flood Light 50W	Each	4,395.00
E181203	High Power LED Flood Light 70W	Each	6,016.00
E181204	High Power LED Flood Light 80W	Each	6,482.00
E181205	High Power LED Flood Light 100W	Each	8,035.00
E181206	High Power LED Flood Light 120W	Each	11,209.00

Code No	Description	Unit	Rate Rs.
E181207	High Power LED Flood Light 150W	Each	11,984.00
E181208	High Power LED Flood Light 180W	Each	20,526.00
E181209	High Power LED Flood Light 200W	Each	22,146.00
E181210	High Power LED Flood Light 240W	Each	28,357.00
E181211	High Power LED Flood Light 300W	Each	29,978.00
E181212	High Power LED Flood Light 350W	Each	36,189.00
E181300	Providing & Fixing of IK07 IP 66 protected LED Street Light Luminaire on existing bracket/pole. Fixture made of powder coated single piece pressure die cast aluminum LM6/ ADC12 material with heat dissipation fins on housing with UV stabilized PC/Toughened Glass cover (UV stablization report submitted for UV cover) and secondary lens on each LED & should be SMD type . The System level Luminaire efficacy ≥ 120 lm/ wt with High Power LEDs is to be used and potted driver must be potted & has a unique BIS R number with Input Voltage AC 120 to 270 V AC with High voltage Cutoff ≥ 300 V AC and Auto resetting Safety ,Input Frequency $50\text{Hz} \pm 3\%$ Power Factor > 0.95 driver Efficiency $> 85\%$,THD(I) $< 10\%$ Humidity 10% to 90% RH Working Temp -5C to 45C . driver current $< 1000\text{mA}$ shown in LM79 report. The luminaire shall be BIS certified and T.C. certified. Life Expectancy Equal or more than 50000 burning hrs with Minimum 70% lumen maintained ,color Rendering Index > 70 and CCT 5700K +355K. Surge protection shall be min ≥ 4 KV internal and min 10 KV external. driver should be Phase to phase protection of 440 V for 4 Hrs. Manufactures Word Mark/Name Engraved/Embossing on die cast housing to allow traceability/authenticity. Fixture shall be AS PER IS 10322 Comlianced. OEM Must have its own in house NABL lab setup for all testing facilities for LED fixtures. (LM79/LM80) Certificate/ report with liable warranty of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E181301	LED Street Light fixture 20 Watt	Each	1,843.00
E181302	LED Street Light fixture 30 Watt	Each	2,465.00
E181303	LED Street Light fixture 45 Watt	Each	4,405.00
E181304	LED Street Light fixture 60 Watt	Each	4,794.00
E181305	LED Street Light fixture 70 Watt	Each	5,250.00
E181306	LED Street Light fixture 90 Watt	Each	7,579.00
E181307	LED Street Light fixture 100 Watt	Each	8,744.00
E181308	LED Street Light fixture 120 Watt	Each	9,588.00
E181309	LED Street Light fixture 140 Watt	Each	10,752.00

Code No	Description	Unit	Rate Rs.
E181310	LED Street Light fixture 150 Watt	Each	11,141.00
E181311	LED Street Light fixture 180 Watt	Each	11,984.00
E181312	LED Street Light fixture 210 Watt	Each	19,749.00
E181400	Providing and fixing of fuse box size 250(H) x 200(W) x 150(D) mm fabricated of 1.6mm MS sheet with hinged cover, dust and vermin proof, rubber gasket, locking arrangement, duly holded with 2 nos pole clamps of 20 mm x 3 mm flat with nut and bolts, complete with anticorrosive treatment, finished with two coat of approved enamel paint. The box shall be provided with 2 / 4 nos copper bus bar 125 x 20 x 3 mm with brass screws suitable supports, earth terminal, inter connection, knock outs for 20 / 25 mm cable gland, 1 no. 16 Amp kitkat fuse complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,630.00
E181500	Providing and fixing of IP 65 protected Polycarbonate / Polysterene fuse box moulded with inside knock outs of following size with hinged cover, transparent window, PU gasket, locking arrangement, duly holded with 2 nos. pole clamps of 20 mm x 3 mm flat with nut and bolts, The box shall be provided with Din rail, 4 / 8 way 10.0 / 16.0 sq.mm heavy duty connector, earth terminal, complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E181501	125 mm X 200 mm X 122 mm	Each	1,290.00
E181502	160 mm X 225 mm X 100 mm	Each	1,562.00
E181503	200 mm X 200 mm X 122 mm	Each	2,072.00
E181504	225 mm X 225 mm X 100 mm	Each	2,582.00
E181600	Providing & Fixing of thermoplastic Polycarbonate cable junction boxes with IP66 rating of protection & knock out for cable entry/out of following sizes including clamps for holding the box, including cost of DIN rail for MCB mounting, 10 Sqmm 4 pole connectors for cables terminals, threaded cable glands made of polyamide material etc. complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E181601	175mm X 150mm X100mm	Each	509.00
E181602	300mm X 200mm X125mm	Each	679.00
E181700	Providing & Fixing of Street light bracket made out from following size of ' B ' class , Medium class G.I. Pipe confirming to IS : 1239 P - 1 (2004) with heavy duty pole clamp, Saddles suitable fastners etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E181701	20 mm Dia.	Mtr.	183.00

Code No	Description	Unit	Rate Rs.
E181702	25 mm Dia.	Mtr.	226.00
E181703	32 mm Dia.	Mtr.	279.00
E181704	40 mm Dia.	Mtr.	298.00
E181800	Providing & Fixing of IP - 65 protected impact resistant polycarbonate / Polysterene enclosures with knock out for cable entry/out including fixing with nut, bolt, fatner etc as required complete in all respect of following sizes. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E181801	180 x 180 x 91 mm	Each	883.00
E181802	250 x 200 x 115 mm	Each	1,019.00
E181803	300 x 450 x 132 mm	Each	1,766.00
E181804	320 x 440 x 179 mm	Each	2,418.00
E181805	320 x 640 x 179 mm	Each	3,668.00
E181900	S& F of all in one solar LED street light fixture with Integrated high efficient Monocrystalline panel with Lithium (LiFePO4) Ferro Phosphate battery with BIS approved make .luminaire should be secondary optic lenses for better distribution with delivered efficacy of > 100 Lumen per watt.Bidder shall have in house R&D Laboratory which is recognised by ministry of Science & Technology department, Govt. Of India/ NABL. Bidder shall have inhouse pole & luminaire manufacturing facility. Luminaire can be supplied with Hybrid switch along with indicator to understand the source of power(either from solar or AC supply).shall have certificate tested from MNRE approved Lab. Guarantee for total system is two years .Note: All the above should be integrated and should be 1 system. make: Bajaj/ Philips / Crompton.		
E181901	Compact Solar LED Street Light - 20W(MONO) 18V/ 12.8V9Ah/12W	Each	25,793.00
E181902	Compact Solar LED Street Light - 30W(MONO) 18V/ 12.8V9Ah/12W	Each	28,670.00
E181903	Compact Solar LED Street Light - 35W(MONO) 18V/ 12.8V9Ah/12W	Each	35,172.00
E181904	Compact Solar LED Street Light - 40W(MONO) 18V/ 12.8V 21Ah/20W	Each	38,227.00
E181905	Compact Solar LED Street Light - 60W(MONO) 18V/ 12.8V 27Ah/40W	Each	45,872.00
E181906	Compact Solar LED Street Light - 90W(MONO) 18V/ 12.8V 42Ah/60W	Each	68,808.00
E182000	Provide and fixing of LED POST TOP fixture made form Die cast aluminum graphite grey powder coated finished housing. Polycarbonate opal diffuser. Low power Warm White (WW) LEDs connected in series and parallel combination with better Heat dissipation arrangement. Highly efficient constant current electronic driver having operating voltage range from 140- 280 Volt AC;		

Code No	Description	Unit	Rate Rs.
	provided with high voltage, open and short circuit protection. Suitable for 60mm OD pipe entry with fixing bolts. Degree of protection IP65 LED Make – Nichia/Philips/Osram/Cree or Equivalent LED color temperature range form 3000-5700°K ±300°K. Voltage surge protection 5KV. the luminaire should bear 5 KV surge protection, PF ≥0.9(HPF) and total harmonic distortion of THD(I) <10% voltage range of 140-280V. Manufacturer to provide certificate of LM 80 LM 79 form source manufacturer and should have in house adequate testing facilities (approved by Govt. of India ministry of science and technology/NABL) . Approved Luminaire Make: Philips, Bajaj, Keselec.		
E182001	LED POST TOP 25W	4780	4,104.00
E182002	LED POST TOP 40W	Each	8,601.00
E182003	LED POST TOP 45W	Each	8,601.00
E182004	LED POST TOP 65W	Each	14,655.00
E182005	LED POST TOP 90W	Each	17,000.00

E-19 OVER HEAD LINES

Code No	Description	Unit	Rate Rs.
E190100	Supply and erection of P.C.C./R.C.C. pole as per REC manual no 15/1979 & as per PWD / DISCOM specification for electrical Works conforming to IS: 2905/1966 including excavation of pit and back filling with stone aggregate/boulders and soil in 0.45m consolidating each deposited layer of 0.45m by ramming and watering etc complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E190101	8.0 Mtr long as per PWD / DISCOM specification	Each	2,737.00
E190102	9.0 Mtr long (200 Kg)as per PWD / DISCOM specification	Each	3,423.00
E190103	9.0 Mtr long (400 Kg)as per PWD / DISCOM specification	Each	4,521.00
E190104	11.0 Mtr long(400 Kg)as per PWD / DISCOM specification	Each	4,658.00
E190200	Supply and erection of GI stay set as per PWD / DISCOM specification complete with long stay rod with anchor plate including stay clamps turn buckle and G.I stay wire tightened through strain insulator, in cement concrete 1:3:6 including excavation of pit-re-filling etc complete as reqd. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E190201	Stay set of dia 20mm,2.4m long stay rod and anchor plate 380x380x6.4mm	Each	1,507.00
E190202	Stay set of dia 16mm,1.8m long stay rod and anchor plate 300x300x6.4mm	Each	958.00
E190300	Supply and fixing of following LT Supporting accessories with nut bolt & Clamps made out as per standard Discom's specifications. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E190301	LT cross arm 600 mm long with clamp	Each	285.00
E190302	LT cross arm 1200 mm long with clamp	Each	481.00
E190303	Suspension clamp with eye hook & Pole clamp	Each	397.00
E190304	Dead end clamp with eye hook & Pole clamp	Each	479.00
E190305	Type A LT connector for Aerial bunched cable	Each	74.00
E190306	Type B LT connector for Aerial bunched cable	Each	107.00
E190400	Supply and fixing of LT porcelain pin insulator as per IS 1445-1997 suitable for working voltage 1100 volts including all accessories like hot dip GI forged spindle of 260mm long and nuts etc as reqd as per standard Discom specification. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work ,		

Code No	Description	Unit	Rate Rs.
	refer Annexure "A" attached with this BSR .		
E190401	105mm x 65mm	Each	55.00
E190402	105mm x 80mm	Each	59.00
E190403	120mm x 85mm	Each	75.00
E190500	Supply and fixing of porcelain shackle insulator as per IS:1443 1979 suitable for working on 1100 volts including hot dipped GI accessories and heavy duty hardwares etc as required as per PWD / DISCOM specification. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E190501	75mm x 90mm	Each	61.00
E190502	100mm x 110mm	Each	104.00
E190600	Supplying and drawing of ISO certified company made overhead steel core Aluminium conductor (ACSR) ISI marked (IS 398 part II-1996) on existing cross arms through insulator with all necessary T&P required including binding and twisting etc. complete in all respect as required as per PWD / DISCOM specification. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E190601	30 Sqmm of (6+1) 2.59mm (Weasel)	Mtr.	30.00
E190602	50 Sqmm of (6+1) 3.35 mm (Rabbit)	Mtr.	48.00
E190603	50 Sqmm of (6+1) 3.35 mm (Insulated Rabbit)	Mtr.	65.00
E190604	80 Sqmm of (6+1) 4.09 mm (Raccon)	Mtr.	62.00
E190605	100 sqmm of (6/4.72 mm+1/1.57 mm) (Dog)	Mtr.	85.00
E190606	ACSR Panther Aluminium 30/3 MM	Mtr.	202.00
E190607	AAA Conductor (Equivalent size Weasel)	Mtr.	28.00
E190700	Supply and fixing of 'V' type cross arms made of MS channel on the existing poles complete including all necessary nut and bolt etc with clamps as per PWD / DISCOM specification. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E190701	11kV cross arms (75 x 40 x 6.8 kg/mtr)	Each	903.00
E190800	Supply and fixing of top hamper on the existing pole complete including nut bolts etc as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E190810	Vertical type		
E190811	11 kV (.7m long) (65 x 65 x 6mm angle)	Each	343.00
E190812	11 kV (50 x 6 mm flat)	Each	130.00

Code No	Description	Unit	Rate Rs.
E190820	Horizontal type		
E190821	11 kV (65 x 65 x6mm angle)	Each	246.00
E190822	11 kV with double top hamper (65 x 65 x 6mm angle)	Each	315.00
E190900	Supply and fixing of Cross arms made out from 100 x 50 x 5 mm MS channel complete in all respect as required including nuts and bolts and clampas per PWD / DISCOM specification etc as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E190901	1.3 m long	Each	836.00
E190902	2 x 1.3 m long	Each	1,671.00
E191000	Supply and fixing of 50 x 6mm MS strip having two holes of 5/8" dia with cut for providing 6/8 SWG GI wire. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E191001	100 mm long	Each	21.00
E191002	80 mm long	Each	17.00
E191100	Supply and fixing of a set of 4 nos V cross arm made out of MS angle with bracing of MS flat 50 x 6 mm with nuts and bolts (as per specification of Discom) for 11 kV made up of 65 x 65 x6mm MS angle. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	2,331.00
E191200	Supply and fixing of pilot patti made from MS flat (as per specification of Discom) and suitable for PCC pole (50 x 6mm)/ R.S. joist (50 x 6mm). All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	41.00
E191300	Supply and fixing of ISO certified company made 11kV pin insulator(IS 731/ 1971) with minimum creepage distance of 300mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc (as per specificationof Discom). All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	171.00
E191400	Supply and fixing of ISO certified company made 11kV Disc insulator (IS 731/ 1971) with minimum creepage distance of 300mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc (as per specification of Discom). All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E191401	B & S type hardware 45 KN	Each	548.00
E191402	T & C type hardware 45 KN	Each	184.00

Code No	Description	Unit	Rate Rs.
E191403	B & S disc insulator 45 KN	Each	384.00
E191404	T & C disc insulator 45 KN	Each	343.00
E191500	Supply and fixing of PG clamps on overhead lines/jumpers, made of aluminium alloy 4600 of IS 617-1994 (with latest amendment if any) with steel nut and bolts conforming to IS 1363-1992 & IS 1367/1979-80 (with latest amendments if any) all ferrous metal parts intended for outdoor use except those made of stainless steel shall be protected by hotdip galvanising in accordance with IS 2633-1986 complete in all respect as required for ACSR conductor. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E191501	Dog	Each	85.00
E191502	Weasel/Rabbit	Each	62.00
E191503	Racoon	Each	63.00
E191600	Supplying and laying of 7/3.15 mm hot dipped galvanized stay wire as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Mtr	49.00
E191700	Supplying and fixing of straight type 1.5 mtr long cross arms made out from MS angle of size 50 x 50 x 6mm (2 Nos)for guarding on existing poles complete including 2 nos 150mm long MS flat of size 50 x 6mm bend into shape at both the ends duly welded clamps, nut and bolt etc as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Set	1,028.00
E191800	Supply and fixing of pillar box as per DISCOM / PWD specifications made of 2 mm thick powder coated CRCA sheet of 415 volts 3 phase 4 wire triple pole and neutral type, complete in all respect as required. Including knife switch of 400 amp. rating , HRC fuses with copper one piece U contacts base, brass studs and nuts, copper busbar for main and interconnection, MS angle frame of 50 x 50 x 6 mm grouted with C.C. of M-10 grade to achieve the height of 1.5 feet above the road level suitable for four outgoing. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	39,940.00
E191900	Supply and fixing of ISO certified company made 100 Amp, 11kV Horn gap fuse set IS 9385 on existing DP structure with 6 nos 24kV/22kV post insulator (IS:5350 part III), hot dipped hard ware,fuse wire of required size etc. complete in all respect as per specification given by Discom. (Type tested by ERDA/CPRI). All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	6,129.00

Code No	Description	Unit	Rate Rs.
E192000	Supply and fixing of ISO certified company made 11kV, 400 Amp 3pole, central pot rotating double break type isolator (IS:9921 part I toV) without earth blade operating mechanism with GI spring loaded reverse loop type fixed contact, solid hard drawn electrolytic copper tubular moving contact with silver/ nickel plated at end points, 9 nos post insulator of 12 kV (IS:2554 & IS 5350 part III), hot dipped galvanising hard ware, nut, bolts etc complete in all respect as per specification of Discom.(Type tested by ERDA/CPRI.) All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	16,183.00
E192100	Supply and fixing of ISO certified company made distribution type Lightning arrestor 9 kV, 10 kA (IS:3070) with mounting breaking to be installed on existing DP structure. (Type tested by ERDA/CPRI.) All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	3,153.00
E192200	Supply and fixing double pole structure for 11/0.4 Kv substation as per PWD / DISCOM specification complete in all respect as required including nuts and bolts etc (excluding the cost of poles) made of MS channel of 4 nos 100 x 50 x 6mm and 4 nos 75 x 40 x 6mm and MS flat 50 x 6mmas per PWD / DISCOM specifications. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	9,869.00
E192300	Supply and fixing of 1.6 mm thick MS 11 kV Danger plates as per IS :2551-1982 & specification of Discom on the existing poles complete in all respectas per PWD / DISCOM specification. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	45.00
E192400	Providing and fixing of single pole mounted structure set for isolatoras per PWD / DISCOM specification complete in all respect with nuts and bolts as required MS flat 50 x 6mm, MS angle 65 x 65 x6mm, MS channel 100 x 50 x 6mm. (Excluding cost of pole). All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	2,633.00
E192500	Supply and erection of RS joist of 116 x 100 mm, 11 Meter long with the welded/ bolted top hamper 65 x 65 x 6mm (0.7 Mtr long) making necessary arrangement for fixing 11 kV 'V' cross arm, LT bracket and guard wire bracket, grouted in ground 1/6 th of its length and fixed with cement, coarse and grit in 1:3:6 ratio in 1/5th of its length (40cm dia) from the bottom including two coats of aluminium paint over the complete length of joist. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	16,452.00

Code No	Description	Unit	Rate Rs.
E192600	Supplying and drawing of ISO certified company made XLPE insulated LT Aerial bunched Aluminium conductor cable confirming to IS 14255/1995 and IS 398 (Pt-4)/ 1994 on existing cross arms through I hook with all necessary T&P required including binding and twisting etc. complete in all respect as required as per PWD / DISCOM specification. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E192601	1X16 sq. mm. (insulated)	Mtr	21.00
E192602	1 X 25 sq. mm. + 1X25 sq. mm. (Bared)	Mtr	48.00
E192603	1 X 25 sq. mm. + 1X25 sq. mm. (insulated)	Mtr	55.00
E192604	3 X 16 sq. mm. + 1X16 sq. mm. (Bared)	Mtr	55.00
E192605	3 X 16 sq. mm. + 1X16 sq. mm. (insulated)	Mtr	58.00
E192606	3 X 25 sq. mm. + 1X25 sq. mm. (Bared)	Mtr	83.00
E192607	3 X 25 sq. mm. + 1X25 sq. mm. (insulated)	Mtr	87.00
E192608	3 X 50 sq. mm. + 1X35 sq. mm. (Bared)	Mtr	131.00
E192700	Supply & Erection of M S lattice structure of height 12.8 mtr as per DISCOMs approved design & details in alignment, including excavation of pit and Providing and laying of cement concrete in ratio 1:3:6 using 43 grade cement, river sand and 12 mm to 20 graded blast crusher broken in pit/ found cement plaster upto 0.50mtr. from top to bottom in 1:3:6 ratio and paint of tower of approved make two coat of red oxide paint and one coat of aluminium paint before installation and one coat of paint after erection work completed as per technical specifications & drawing of DISCOM. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	42,499.00
E192800	Supply & Erection of M S lattice structure of height 11.0 mtr as per DISCOMs approved design & details in alignment, including excavation of pit and Providing and laying of cement concrete in ratio 1:3:6 using 43 grade cement, river sand and 12 mm to 20 graded blast crusher broken in pit/ found cement plaster upto 0.50mtr. from top to bottom in 1:3:6 ratio and paint of tower of approved make two coat of red oxide paint and one coat of aluminium paint before installation and one coat of paint after erection work completed as per technical specifications & drawing of DISCOM. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	33,581.00
E192900	Supply of Fabricated 33 KV of 'V' type cross arms made of MS channel 100x50 ISMC (9.5Kg. Per Mtr.) on the existing poles complete including all necessary nut and bolt etc with clamps as per technical specifications & drawing of DISCOM. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,362.00

Code No	Description	Unit	Rate Rs.
E193000	Supply and fixing of top hamper on the existing pole complete including nut bolts etc as required. Vertical type 33 kV. 0.75mtr. IS 75x75x6mm as per tech specs. Of DISCOM (Steel weight 6.5Kg. Approx. per top hamper). All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	384.00
E193100	Supply & Errection of special stud structure for 33KV lattice structure made of M.S. angle, channer, flats complete in all respects with bracings including excavation of pit and providing and laying of cement concredtte in 1:3:6 as per technical specifications & drawing of DISCOM. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	19,189.00
E193200	Supply and fixing of ISO certified company made 33kV pin insulator with pin (IS 731/ 1971) with minimum creepage distance of 300mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc as per technical specifications & drawing of DISCOM. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	596.00
E193300	Supply and fixing of ISO certified company made 33kV Disc insulator 120KN (IS 731/ 1971) with minimum creepage distance of 300mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc (as per specificationof Discom). All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E193301	B & S type hardware 120KN	Each	1,150.00
E193302	B & S disc insulator 120KN	Each	1,060.00
E193400	Supply and fixing of guard bracket 2.2 mtr. long made from (75x40) ISMC 7.14Kg. Per Mtr. M.S. channel including necessary clamp and botls etc. as per technical specification & drawing of DISCOM. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,301.00
E193500	Supply and fixing M.S. channel (cut point) 100x50mm ISMC (9.5Kg. Per Mtr.) 2x1.8mtr. long with pilot patti 50x6mm thick necessary nuts and bolts etc. as per technical specification & drawing of DISCOM. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	2,739.00
E193600	Supply and installation of spike of M.S. rod 20mm dia 3.0mtr. long for earthing of (tower/pole) drive into earth by mechanical means sturcture connection the spike with cross arm top hamper PCC pole, lattics tower to earth etc. complete as per technical specification of DISCOM. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	672.00

Code No	Description	Unit	Rate Rs.
E193700	Painting over the existing poles above ground level including overhang making surface well clean and apply two coats of aluminium/ enamel paint as approved with required T & P etc as required.		
E193710	pole of 7 to 9 mtr long		
E193711	with one overhang	Each	114.00
E193712	with two overhang	Each	130.00
E193720	pole of 10 to 12 mtr long		
E193721	with one overhang	Each	144.00
E193722	with two overhang	Each	160.00
E193800	Providing and fixing of fuse box size 250(H) x 200(W) x 150(D) mm with base shape accomodating the pole partly, fabricated of 1.6mm MS sheet with hinged cover, dust and vermin proof, rubber gasket, locking arrangement, duly holded with 2 nos pole clamps of 25mm x 3mm flat with nut and bolts, complete with anticorrosive treatment, finished with two coat of approved enamel paint. The box shall be provided with 2/ 4 nos copper bus bar 150 x 20 x 3mm with brass screws suitable supports,earth terminal, inter connection, brass cable gland upto 10 Sqmm size cable, 2nos 16 Amp kitkat fuse complete in all respect.	Each	581.00
E193900	P&F of thermoplastic/ PVC cable junction boxes (United/ HPL make) of following sizes including clamps for holding the box, cost of DIN rail for MCB mounting, connectors for cables terminals, threaded cable glands made of polyamide material etc. complete in all respect.		
E193901	300mm X 200mm X125mm	Each	733.00
E193902	175mm X 150mm X100mm	Each	508.00
E194000	Fabrication ,supply and erection of new 11 KV pole 10 mtr height. (single phase/3 phase) R.S joist (230 Kg) structures with all necessary required items for stringing the ACSR conductors insulators, V - cross arms, chakri, top hamper, brackets, stay and other items including reconnection of existing service lines of service connections.	Each	15,528.00

E-20 LOCAL AREA NETWORKING

Code No	Description	Unit	Rate Rs.
E200100	Supply, Drawing and Testing of 4 pair, 23 AWG Solid Bare Copper wire insulated with PVC, UTP (Unshielded Twisted Pair), Category 6, Class E, 100 Ohm Impedance, Indoor Cable as per latest ammendments of ANSI/TIA/EIA-568 , The copper conductors should be balanced twisted in pairs, seperated by a cross-member fluted pair divider & protected by PVC Jacket. Certified performance in a 4-connector configuration upto 100 Mtrs channel requirements & transmission frequencies up to 250 Mhz. in existing MS/PVC Conduits/casing capping including making connections to Information outlets and Patch Panels with jack & ferruling at both ends for identification with necessary tools for punching, stripping, crimping and testing etc as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Mtr.	31.00
E200200	Supply, Drawing and Testing of 4 pair, 23 AWG Solid Bare Copper wire insulated with PVC, Category 6A , FTP (Foiled Twisted Pair), 100 Ohm Impedance, Indoor Cable as per latest ammendments of ANSI/TIA/EIA-568 , The copper conductors should be balanced twisted in pairs, Unscreened and Aluminum Foil Sheilding of Individual pairs protected by a Low Smoke Zero Halogen (LSZH) Jacket. Certified performance in a 4-connector configuration upto 100 Mtrs channel requirements & transmission frequencies up to 500 Mhz. Cable Should support Ethernet 10GBASE-T according to the standards. in existing MS/PVC Conduits/casing capping including making connections to Information outlets and Patch Panels with jack & ferruling at both ends for identification with necessary tools for punching, stripping, crimping and testing etc as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Mtr.	67.00
E200300	Supply and Installation of unsheilded/ sheilded Information outlets made of high impact plastic body with ABS, FR Grade with provision for protection against dust in jack/ FP, suitable for Cat 6/6A application complying to latest ammendments, According. to Cat. 6/6A channel, It should support channel as well as components requirements of Cat.6/6A standards at frequencies of up to 250 to 500 Mhz. Cat 6/6A unshielded/shielded Jack should be suitable to terminate 4 pair, 23/24 AWG solid/stranded wire diameters, using 100 Ohm unshielded/shielded balance twisted pair cable, the jack should have tooless/impact punch termination on reliable copper tin plated Insulation displacement contact, It complied with ANSI/TIA/EIA 568 standard. In existing modular/MS Boxes along with necessary connections as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical		

Code No	Description	Unit	Rate Rs.
	parameters of products/ work , refer Annexure "A" attached with this BSR.		
E200301	Cat 6, Un-sheilded Information Outlet	Each	266.00
E200302	Cat 6A, Sheilded Information Outlet	Each	587.00
E200400	Supply & fixing of square Faceplate for Flush / Surface Mount Information Outlets Single/Dual or Quad Aperture , material should be PC+ABS body, Suitable for RJ45 unshielded/shielded connection modules. Should match with I. O. OEM. Dimensions should be 86mm X 86mm as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E200401	Single Aperture	Each	103.00
E200402	Dual Aperture	Each	112.00
E200403	Quad Aperture	Each	125.00
E200500	Supply, Installation, Testing and Comissioning of Rack mounted 19" 1U, 24 Port Unloaded , 1.5-1.6 MM CRS chasis, powder coated, sheet steel, made of plastic (ABS), Modular Patch Panels (without I.O.) with Rear Cable management system and mounting hardware to mount the patch panel. Should have port identification numbers printed/engraved on front of the panel, . There should be a provision for each port/jack on the panel and reusable removable on field from the panel complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,843.00
E200600	Supply , Installation and Testing of 4 pair, 100 Ohm impedance, Cat 6/6A patch cords should be constructed of minimum 23/24 AWG, stranded bare Copper cable with FRPVC/LSZH Jacket, with an enhanced performance by factory moulded RJ45 connectors as per ANSI/TIA/EIA 568 suitable for Cat 6/6A application complying to latest ammendments Category 6/6A Standards, According. to TIA568, minimum requirement for 1G BASE-T/ 10G BASE-T performance. Patch cords shall be straight thru cable compatible with both T568-A and T568-B wiring schemes, Minimum 750 to 1000 mating cycles in plug contacts for long durability complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR.		
E200610	Cat 6, UTP (Un-sheilded Twisted Pair) Patch Cord		
E200611	0.50 Mtr	Each	171.00
E200612	1 Mtr	Each	212.00
E200613	2 Mtr	Each	280.00
E200614	3 Mtr	Each	321.00

Code No	Description	Unit	Rate Rs.
E200620	Cat 6A, FTP (Foiled Twisted Pair) Patch Cord		
E200621	0.50 Mtr	Each	375.00
E200622	1 Mtr	Each	444.00
E200623	2 Mtr	Each	540.00
E200624	3 Mtr	Each	621.00
E200700	Supply, Drawing and Testing, of stranded Multi mode (50/125 µm) glass optic fiber cable, as per latest ammendments of TIA/EIA 568/ISO/IEC 11801:2011/ IEC 60794-1-2 E1, E3,E11, F1/ EN 50173-1/ EN 187 000/ IEC 60974-2, 2-20, 2-21/ ITU G.652D, construction of LSZH outer sheath cable, cable should be used for LAN and WAN back bones, . With its LSZH sheathing these cables should be ideal for indoor/outdoor installations in existing MS/PVC /HDPE Conduits/ slotted channels with ferruling at both ends for identification complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E200701	6 fiber	mtr	129.00
E200702	12 Fiber	mtr	203.00
E200703	24 Fiber	mtr	278.00
E200800	Supply, Installation, OTDR Testing & Fusion Splicing of Fiber Multimode Pigtail (50/125 µm) made of glass fiber optic, should be fitted at one end with any one type of single ST/E-2000/SC/LC/MT-RJ/PC type connector in acc. with IEC 61754-20, as per latest ammendments of TIA/EIA 569 Standard Specification as per requirments complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	997.00
E200900	Supply, Installation, & Testing of Indoor duplex Multimode patch cord (50/125 µm made of glass fiber optic with LSZH jacket, Multimode G652.D Mounted on both sides with ST/E-2000/SC/LC/MT-RJ/PC type Duplex connectors in acc. with IEC 61754-20 as per latest ammendments of TIA/EIA 569B.3, as per requirements complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E200901	1 Mtr	Each	1,244.00
E200902	2 Mtr	Each	1,380.00
E200903	3 Mtr	Each	1,517.00
E200904	5 Mtr	Each	1,995.00
E201000	Supply, Installation, & Testing of 19" 1U Rack Mounted/ surface mounted aluminum/ CRCA 1.2mm powder coated, multimode glass Fiber Optic Cable Patch panel/LIU loaded with flangless/screwable adapters for ST/E-2000/SC/LC/MT-RJ/PC type, It should have easy		

Code No	Description	Unit	Rate Rs.
	removable Top plate with push buttons, there should be a splice tray installed in the Patch panel/LIU which can handle the fiber cores, splice tray should be PC+ABS material, it should include accessories like mounting hardware, gormetts, heat shrink tubes/sleeves, screws, nuts to install the panel for rack/wallmount applications as per requirement complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E201001	Multi Mode LIU 6 Ports	Each	5,872.00
E201002	Multi Mode LIU 12 Ports	Each	7,512.00
E201003	Multi Mode LIU 24 Ports	Each	11,749.00
E201100	Supply, Drawing and Testing, of stranded Single mode (9/125 μ m) glass optic fiber cable, as per latest ammendments of TIA/EIA 568/ISO/IEC 11801:2011/ IEC 60794-1-2, construction of LSZH outer sheath cable, cable should be used for LAN and WAN back bones, . With its LSZH sheathing these cables should be ideal for indoor/outdoor installations in existing MS/PVC /HDPE Conduits/ slotted channels with ferruling at both ends for identification complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E201101	6 fiber	Mtr	100.00
E201102	12 Fiber	Mtr	134.00
E201103	24 Fiber	Mtr	199.00
E201200	Supply, Installation, OTDR Testing & Fusion Splicing of Fiber Singlemode Pigtail (9/125 μ m) made of glass fiber optic, should be fitted at one end with any one type of single ST/E-2000/SC/LC/MT-RJ/PC type connector in acc. with IEC 61754-20, as per latest ammendments of TIA/EIA 569 Standard Specification as per requirments complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	853.00
E201300	Supply, Installation, & Testing of Indoor duplex Singlemode patch cord (9/125 μ m made of glass fiber optic with LSZH jacket, Multimode G652.D Mounted on both sides with ST/E-2000/SC/LC/MT-RJ/PC type Duplex connectors in acc. with IEC 61754-20 as per latest ammendments of TIA/EIA 569B.3, as per requirements complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E201301	Single Mode Patch Cord 1 Mtr.	Each	1,107.00
E201302	Single Mode Patch Cord 2 Mtr.	Each	1,244.00
E201303	Single Mode Patch Cord 3 Mtr.	Each	1,380.00
E201304	Single Mode Patch Cord 5 Mtr.	Each	1,653.00

Code No	Description	Unit	Rate Rs.
E201400	Supply, Installation, & Testing of 19" 1U Rack Mounted/ surface mounted aluminum/ CRCA 1.2mm powder coated, Singlemode glass Fiber Optic Cable Patch panel/LIU loaded with flangless/screwable duplex adapters for ST/E-2000/SC/LC/MT-RJ/PC type, It should have easy removable Top plate with push buttons, there should be a splice tray installed in the Patch panel/LIU which can handle the fiber cores, splice tray should be PC+ABS material, it should include accessories like mounting hardware, gormetts, heat shrink tubes/sleeves, screws, nuts to install the panel for rack/wallmount applications as per requirment complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR.		
E201401	6 Ports	Each	5,462.00
E201402	12 Ports	Each	7,375.00
E201403	24 Ports	Each	11,201.00
E201500	Supply, Installation, Testing and Commissioning of Wall mounted ISO 9001:2015 & 14001 or higher level certified company made Communication enclosure (Rack) of Minimum 500 MM Depth with made from CRCA & hot dip powder coated, front sturdy sheet steel frame folded from one piece and welded with minimum 5mm toughened glass door,Vertical Mounting Rail 1.6 MM with 'U'Marking , with All round protective channel on the door aperture, lock integrated on front door, top and bottom cover with cable entry provision with gland plates, integrated side walls, 2 pair of 19" angles with wall mounting provision on wall. Accessories like: 1 No of 19" 1U Horizontal Cable manager, 2 No of 90 cfm 230V AC Fan with 1 mts long cable, mounting hardware , 1 No of 19" 1U, mountable socket strips with 6 nos of 5A universal sockets with 2 mts long power chord for supplying power to switches, fans etc along with earth continuity kit, indicator, moulded power supply cable. fixing on wall with fastner of suitable capcity etc as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E201501	6 U wall mounted Enclosure	Each	6,691.00
E201502	9 U wall mounted Enclosure	Each	8,057.00
E201503	12 U wall mounted Enclosure	Each	10,243.00
E201504	15 U wall mounted Enclosure	Each	12,292.00
E201600	Supply , Installation, Testing and Comissioning of Floor standing ISO 9001:2015 & 14001 or higher level certified company made Communication enclosure (Rack) of 600 MM Depth with made from CRCA & hot dip powder coated,Vertical Mounting Rail 1.6 MM with 'U'Marking, front sturdy sheet steel frame folded from one piece and welded with 5mm toughened glass door, with All round protective channel on the door aperture, lock integrated on front door, top and		

Code No	Description	Unit	Rate Rs.
	bottom cover with cable entry provision with gland plates, integrated side walls, Accessories like: 5 Nos of 19" 1U Horizontal Cable manager, 2 Nos of vertical cable managers, 2 Nos of 90 cfm 230V AC Fan with 1 mts long cable, mounting hardware , 1 No of 19" 1U, mountable socket strips with 6 nos of 5A universal sockets with 2 mts long power chord for supplying power to switches, fans etc along with earth continuity kit, indicator, moulded power supply cable complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR.		
E201601	18U Floor Standing Enclosure	Each	19,808.00
E201602	22U Floor Standing Enclosure	Each	25,958.00
E201603	24U Floor Standing Enclosure	Each	29,374.00
E201604	27U Floor Standing Enclosure	Each	34,841.00
E201700	Supply , Installation, Testing and Comissioning of Floor Standing Server / ISO 9001:2015 & 14001 or higher level certified company made Communication Enclosure (Rack) of dimension 800 MM Wide X 2000H X 1000 MM Depth, 42U 19" made from CRCA & hot dip powder coated, L type angle Front & Rear on 6 x punched section, front minimum 5mm toughened glass door, rear MS door, swing handles with three Point Locking System on both doors, Top & Bottom cover with cable entry provision with gland plates, side openable/Unvented Screw fixed type panels, Accessories Like: 2 Nos of Vertical Cable manager for (L&R), 4 Nos of 1U Blanking Panel, 5 Nos of Horizontal Cable managers, 1 No of Keyboard tray, 3 Nos of heavy duty shelf (for mounting servers & components), castors wheel 6" (2 with Brake, 2 Without Brake), 4 Nos of 90 cfm 230V AC Fan with 1 mts long power cable, mounting hardware, 1 No of 19" 1U, Horizontal Power Distribution Unit mountable socket strips with 10 nos of 5/16A universal sockets with 16 Amp. MCB Indicator with fuse, 2 mts long power chord for supplying power to switches, fans etc along with earth continuity kit, moulded power supply cable. etc as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR.		
E201701	42U Floor Standing Enclosure	Each	69,680.00
E201800	Supply , Installation, Testing and Comissioning of Unmanaged Switch Plug-and-play - easy setup with no configuration or no software needed, following Port fast ethernet - 8 10/100/1000 MBPS gigabit auto-negotiation RJ45 ports, IEEE 802.3x flow control ,supports auto-MDI/MDIX, eliminating the need for crossover cables including making connection etc as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E201801	8 Port	Each	1,570.00
E201802	24 Port	Each	4,643.00

Code No	Description	Unit	Rate Rs.
E201900	Supply , Installation, Testing and Comissioning of Managed Layer-2 Intelligent 10/100 Ethernet Switch providing 24 x 10/100 MBPS Ethernet ports / with min 2 SFP Giga Ports (provision for Fiber Giga connectivity) with related LAN Base Software including making connections etc as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	35,517.00
E202000	Supply , Installation, Testing and Comissioning of Managed Layer-2 Intelligent Giga Ethernet Switch providing 24 x 10/100/1000 MBPS Giga Ethernet ports and with min 4 SFP Giga Ports (provision for Fiber Giga connectivity) with provision of minimum Stacking of 06 Switches with related LAN Base Software including making connections etc as required complete in all respect complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,02,477.00
E202100	Supply , Installation, Testing and Comissioning of Hot pluggable Small Form Factor Pluggable (SFP Module), 1000BASE-SX, 1.25/2.125G Fiber Channel, LC Type Duplex Connector, 850nm laser transmitter, Should support distance upto 500m on 50/125um of data rate upto 2.125 Gb/s on bi-directional data links. Should also support industrial temperature, should have metal enclosure for lower EMI. The transceiver should be ROHS Compliant. (For Each MM Fiber) complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	12,395.00
E202200	Supply , Installation, Testing and Comissioning of Hot pluggable Small Form Factor Pluggable (SFP Module), 1000BASE-LX, 1G Fiber Channel, LC Type Duplex Connector, 1310 nm laser transmitter, Should support distance upto 10 km on 9/125 um of data rate upto 1.25 Gb/s on bi-directional data links. Should also support industrial temperature, should have metal enclosure for lower EMI. The transceiver should be ROHS Compliant. (For Each SM Fiber) complete in all respect. Switch & SFP module should be of the same make. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR.	Each	30,338.00
E202300	Supply, installation, Testing and Commissioning of 1000 base-LX/LH single mode/Multi mode fibre to 1000 base-T copper giga bit , Media Convertor complete as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	6,616.00
E202400	Fiber Fusion Splicing with OTDR Testing of Fiber Single/ Multi mode (per splice) of glass Fiber Optic Cable including cleaning the cable and making splice as per standard practice complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	541.00

E-21 ELECTRICAL MOTOR PUMPSETS

Code No	Description	Unit	Rate Rs.
Note:	All the Pumps must be star rated as per notification of BEE, ministry of Power GOI.		
E210100	Labour charges for installation of submersible motor pump set including lowering/ delowering of pipes, cables, accessories etc. in tube-well/ open well complete including T&P, transportation of tripod, chain pulley block & any other material required for this purpose complete in all respect.		
E210101	Lowering only	Each	2,706.00
E210102	Delowering only	Each	1,895.00
E210103	Delowering and Lowering	Each	4,600.00
E210200	Providing and installation of chain pulley holded on CI round pulley duly supported on suitable MS channel/angle structure of 2x1500mm length and a 12mm MS bar. The structure be kept 1000 mm above the ground level and remaining portion in cement concrete complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	4,471.00
E210300	Providing & Laying of synthetic rope for submersible pump ISI marked (IS:5175) of following sizes. complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E210301	12mm (suitable up to 50 mm OD pipe)	Mtr.	30.00
E210302	16mm (suitable above 50mm & up to 75mm OD pipe)	Mtr.	38.00
E210303	20mm (suitable for 90 mm OD pipe)	Mtr.	43.00
E210400	Providing & Fixing of HDPE pipe ISI mark (IS:4984/2016) for water supply (suitable for submersible & jet pump) with required fittings ie socket, elbows, tee etc. complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E210410	for vertical installation		
E210411	40 mm OD 6 kg / cm ²	Mtr.	77.00
E210412	50 mm OD 6 kg / cm ²	Mtr.	98.00
E210413	63 mm OD 6 kg / cm ²	Mtr.	134.00
E210414	75 mm OD 6 kg / cm ²	Mtr.	189.00
E210415	90 mm OD 10 kg / cm ²	Mtr.	367.00
E210420	for Horizontal installation		

Code No	Description	Unit	Rate Rs.
E210421	40 mm OD 4kg/ cm2	Mtr.	58.00
E210422	50 mm OD 4 kg/ cm2	Mtr.	82.00
E210423	63 mm OD 4 kg/ cm2	Mtr.	120.00
E210424	75 mm OD 4 kg/ cm2	Mtr.	169.00
E210425	90 mm OD 6 kg/ cm2	Mtr.	326.00
E210500	Supplying and installation of 32mm dia GI pipe 'B' class Medium class G.I. Pipe confirming to IS : 1239 P - 1 (2004) with accessories like bend, socket etc. required for installation of hand pump complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	mtr	247.00
E210600	Providing & Fixing of Single Stage, water cooled, High Speed(2880 RPM), Horizontal, Centrifugal, Openwell Submersible pumps set pre filled with coolant water and fitted with mechanical seal - T/C Vs T/C, Thrust bearing shall be of carbon + S.S.The stator body of single phase pump shall be of SS and rest of all shall be of cast iron. All casting parts should be cathod electro deposition (CED) coated and other construction material should be confirming to IS : 14220: 2018 . The overall performance of pump shall confirm to BEE energy efficiency level of 3 star. Valid BEE certificate from OEM must be submitted for the same. Motor should be IE2 class as per IEC 60034-2-1: 2007, IEC 60034-30: 2008, & IS12615:2011, including making connection etc as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E210601	0.5 HP, 1-Ø, (7 -15) Mtr, (130 - 72) LPM	Each	8,854.00
E210602	1.0 HP, 1-Ø, (7 -12) Mtr, (405- 240) LPM	Each	12,125.00
E210603	1.5 HP, 1-Ø, (18 -26) Mtr, (126 - 78) LPM	Each	13,611.00
E210604	2.0 HP, 1-Ø, (12 -25) Mtr, (350 - 115) LPM	Each	14,885.00
E210605	3.0 HP, 3-Ø, (17 -27) Mtr, (680 - 300) LPM	Each	19,787.00
E210606	5.0 HP, 3-Ø, (14 -28) Mtr, (995-500) LPM	Each	22,722.00
E210607	7.5 HP, 3-Ø, (12 -32) Mtr, (1240-475) LPM	Each	28,319.00
E210608	10.0 HP, 3-Ø, (22 -36) Mtr, (1860 - 1020) LPM	Each	30,788.00
E210609	12.5 HP, 3-Ø, (19.5 -33) Mtr, (2150-1300) LPM	Each	53,674.00
E210610	15.0 HP, 3-Ø, (16 -32) Mtr, (2300-1250) LPM	Each	65,455.00
E210700	Supply Installation testing & Commissioning of Radial / mixed flow ISI marked water filled submersible motor pump sets suitable for 100/150mm dia borewell. The size of adopter fixed on top of the motor should exceed the top of coupler , for safegaurd the coupler. The construction material of motor and pump should match IS: 8034:2018 and IS 9283 guideline. The radial flow pumpset should		

Code No	Description	Unit	Rate Rs.
	operate at 5 star energy efficiency level of BEE and mixed flow pump set should operate at 3 star energy level of BEE, accompanied by valid BEE certificate. Motor should be IE2 class as per IEC 60034-2-1: 2007, IEC 60034-30: 2008, & IS12615:2011 with required accessories including making connection suitable for Bore well. The job includes labour part of lowering of riser pipe G.I./ H.D.P.E. with rope, cables & pump, installation of complete fitting and accessories, jointing of electrical cables up to switch board. All labour for testing of submersible pumps set and supply of water to water mains, complete in all respect . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E210710	100 mm diameter Submersible pump shall have following HP Rating, phase, Head range, Discharge range respectively.		
E210711	1.0 HP, 1-Ø, (10 - 83)Mtr, (40- 10) LPM	Each	14,906.00
E210712	1.5HP, 1-Ø, (11 - 94)Mtr, (40 - 10) LPM	Each	16,108.00
E210713	2.0 HP, 1-Ø, (7- 95)Mtr, (55-22) LPM	Each	17,212.00
E210714	3.0 HP, 1-Ø, (40 -170)Mtr, (60- 20) LPM	Each	25,737.00
E210715	5.0 HP, 1-Ø, (56 - 236)Mtr, (90 - 25) LPM	Each	31,929.00
E210720	150 mm diameter Submersible pump shall have following HP Rating, phase, Head range, Discharge range respectively.		
E210721	3.0 HP, 3-Ø, (54 -95)Mtr, (250-50) LPM	Each	40,492.00
E210722	5.0 HP, 3-Ø, (68 - 102)Mtr, (225-85) LPM	Each	42,883.00
E210723	7.5 HP, 3-Ø, (76 - 96)Mtr, (285-180) LPM	Each	46,532.00
E210724	10.0 HP, 3-Ø, (91 - 115)Mtr, (285-180) LPM	Each	53,088.00
E210725	12.5 HP, 3-Ø, (78 - 126)Mtr, (395-245) LPM	Each	55,378.00
E210726	15.0 HP, 3-Ø, (80 - 123)Mtr, (465-305) LPM	Each	60,265.00
E210800	Supply Installation testing & Commissioning of ISO certified manufacturer made Monoblock motor pump set ISI marked (IS:9079-2002) with TEFC motor, motor should be IE2 class as per IEC 60034-2-1: 2007, IEC 60034-30: 2008, & IS12615:2011. with Stainless steel Impellor, Stainless steel shaft, Mechanical seal, Single/Three phase (240 - 440 V) permanent split capacitor type (PSC), fitted with thermal overload protection, . Including cost of hardware etc on existing platform complete. Pump shall have following HP Rating, phase, Head, minimum Discharge respectively complete in all respect. Appropriate type test certificate / OEM test report shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E210801	0.5 HP, 1-Ø, (3 - 18)Mtr, (100-26) LPM	Each	5,484.00
E210802	1.0 HP, 1-Ø, (10-120)Mtr, (30-12) LPM	Each	8,052.00
E210803	1.5 HP, 1-Ø, (6-24)Mtr, (400-80) LPM	Each	11,804.00

Code No	Description	Unit	Rate Rs.
E210804	2.0 HP, 3-Ø, (6-27)Mtr, (425-100) LPM	Each	15,164.00
E210805	3.0 HP, 3-Ø, (14 - 26)Mtr, (760-600) LPM	Each	21,382.00
E210806	5.0 HP, 3-Ø, (24-44)Mtr, (680-370) LPM	Each	27,722.00
E210807	7.5 HP, 3-Ø, (20-32)Mtr, (1060-900) LPM	Each	37,176.00
E210808	10.0 HP, 3-Ø, 32- 48)Mtr, (830-450) LPM	Each	41,389.00
E210900	Supply Installation testing & Commissioning of ISO certified manufacturer made Dewatering Submersible Motor Pump set, motor should be IE2 class as per IEC 60034-2-1: 2007, IEC 60034-30: 2008, & IS12615:2011. with SS Impellor, body, shaft, mechanical seal etc. as required. Pump shall have following HP Rating, phase, Head, minimum Discharge respectively complete in all respect. Appropriate type test certificate / OEM test report shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E210901	1.0 HP, 3-Ø, (5 - 12)Mtr, (333 - 95) LPM	each	26,700.00
E210902	2.0 HP, 3-Ø, (5 - 18)Mtr, (480 - 66) LPM	each	31,524.00
E210903	3.0 HP, 3-Ø, (5 - 20)Mtr, (810 - 126) LPM	each	53,810.00
E210904	5.0 HP, 3-Ø, (5 - 24)Mtr, (1170 - 174) LPM	each	72,212.00
E211000	Supply Installation testing & Commissioning of ISO certified manufacturer made Drain Sewage pump Non-clog fully floodable submersible pump suitable to handle raw sewage suitable for up to 20 mm solid with Cast iron CED coated Impellor, CI body & housing, SS shaft, Mechanical seal etc. as required. Pump shall have following HP Rating, phase, Head, minimum Discharge respectively complete in all respect. Appropriate type test certificate / OEM test report shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E211001	1.0 HP, 3-Ø, (6 - 12)Mtr, (333 - 45) LPM	Each	20,251.00
E211002	2.0 HP, 3-Ø, (8 - 16)Mtr, (375 - 120) LPM	Each	27,475.00
E211003	3.0 HP, 3-Ø, (8 - 20)Mtr, (590 - 220) LPM	Each	34,518.00
E211100	Supply Installation testing & Commissioning of ISO certified manufacturer made Pressure boosting pump with 24 Ltr. MS Tank, pressure switch, pressure gauge, and all standard fittings fully automatic ON / OFF system, 2900 RPM with stainless steel casing, & impellor suitable for following capacity complete in all respect. Appropriate type test certificate / OEM test report shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E211101	0.5 HP (15 - 10) Mtr, (24 - 40) LPM	Each	20,058.00
E211102	0.75 HP (30 - 10) Mtr, (09 - 40) LPM	Each	23,219.00

Code No	Description	Unit	Rate Rs.
E211103	1.0 HP (25 - 15) Mtr, (30 - 48) LPM	Each	24,587.00
E211104	1.5 HP (37 - 20) Mtr, (24 - 48) LPM	Each	25,910.00
E211200	Providing & Fixing of CI foot valve complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E211201	Rocket type (for bore well) 50/ 60 mm	Each	339.00
E211202	Handi type (for open well) 80/ 100 mm	Each	613.00
E211300	Supply & fixing of GI pipes confirming to IS : 1239 P - 1 (2004) with flanges duly screwed & welded including rubber washer, nuts & bolts of 8mm dia complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E211301	B class 32mm dia	P mtr	268.00
E211302	B class 40mm dia	P mtr	302.00
E211303	B class 50mm dia	P mtr	384.00
E211304	B class 65mm dia	P mtr	500.00
E211305	B class 80mm dia	P mtr	672.00
E211306	B class 100mm dia	P mtr	884.00
E211400	Supply Installation testing & Commissioning of ISO certified company made DOL/Star-Delta Starter panel made out from 1.6 mm thick powder coated CRCA sheet, enclosure comprising of over load protection relay, short circuit & single phasing protection, Illuminated ON / OFF push buttons, ammeter, voltmeter, indicating lamps etc. suitable for following rating motors complete in all respect. Appropriate type test certificate / OEM test report shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E211410	For single phase Submersible / Monoblock pump		
E211411	0.5 HP to 3.0 HP (DOL starter)	Each	2,645.00
E211420	For Three phase Submersible / Mono block pump		
E211421	3.0 HP to 10.0 HP (DOL starter)	Each	4,629.00
E211422	3.0 HP to 10.0 HP (Star / Delta starter)	Each	6,803.00
E211423	12.5 HP to 17.5 HP (Star / Delta starter)	Each	10,430.00
E211424	20.0 HP to 25.0 HP (Star / Delta starter)	Each	11,838.00
E211425	30.0 HP to 35.0 HP (Star / Delta starter)	Each	19,048.00
E211426	40.0 HP to 50.0 HP (Star / Delta starter)	Each	30,034.00

Code No	Description	Unit	Rate Rs.
E211500	Supply of Horizontal Foot Mounted IE2 type 2 Pole TEFC, S1 duty, IP-55, 415 Volts Squirrel cage Enclosure confirming to protection IP55 suitable for operation on 415 +/- 10%V, 3 Phase 50 HZ +/- 5% AC supply with ambient 50 C class F insulation with temperature rise limited to class B Induction Motors confirming to IS-325 & IS 12615 - 2011 with latest amendments.of the following rating		
E211501	0.37 KW	Each	5,332.00
E211502	0.55 KW	Each	6,905.00
E211503	0.75 KW	Each	7,133.00
E211504	1.1 KW	Each	7,784.00
E211505	1.5 KW	Each	8,923.00
E211506	2.2 KW	Each	11,461.00
E211507	3.0 kW	Each	13,469.00
E211508	3.7 KW	Each	14,234.00
E211509	5.5 KW	Each	23,237.00
E211510	7.5 KW	Each	24,051.00
E211511	11 KW	Each	42,037.00
E211512	15 KW	Each	49,251.00
E211513	18.5 KW	Each	63,295.00
E211514	22 KW	Each	70,211.00
E211515	30 kW	Each	1,04,432.00
E211516	37 kW	Each	1,26,796.00
E211517	45kW	Each	1,63,182.00
E211518	55 KW	Each	2,19,691.00
E211519	75 KW	Each	2,74,372.00
E211520	90 KW	Each	3,16,507.00
E211521	110KW	Each	3,99,775.00
E211522	125KW	Each	4,69,079.00
E211523	132KW	Each	4,91,345.00
E211524	160KW	Each	5,38,227.00
E211525	180 kW	Each	5,66,612.00
E211526	200KW	Each	6,28,393.00
E211527	225KW	Each	6,64,454.00
E211528	250KW	Each	7,03,865.00
E211529	275 kW	Each	7,45,171.00
E211530	315KW	Each	7,63,093.00

Code No	Description	Unit	Rate Rs.
E211600	Supply, Installation, Testing, Commissioning of Horizontal Foot Mounted IE2 type 4 Pole TEFC, S1 duty, IP-55, 415 Volts Squirrel cage Enclosure confirming to protection IP55 suitable for operation on 415 +/- 10%V, 3 Phase 50 HZ +/- 5% AC supply with ambient 50 C class F insulation with temperature rise limited to class B Induction Motors confirming to IS-325 & IS 12615 - 2011 with latest amendments. of the following rating		
E211601	0.37 KW	Each	5,597.00
E211602	0.55 KW	Each	7,328.00
E211603	0.75 KW	Each	7,437.00
E211604	1.1 KW	Each	8,445.00
E211605	1.5 KW	Each	9,243.00
E211606	2.2 KW	Each	12,259.00
E211607	3.0 kW	Each	12,959.00
E211608	3.7 KW	Each	15,644.00
E211609	5.5 KW	Each	21,653.00
E211610	7.5 KW	Each	25,119.00
E211611	11 KW	Each	40,248.00
E211612	15 KW	Each	50,028.00
E211613	18.5 KW	Each	66,576.00
E211614	22 KW	Each	74,198.00
E211615	30 KW	Each	99,702.00
E211616	37 KW	Each	1,23,032.00
E211617	45 KW	Each	1,49,127.00
E211618	55 KW	Each	2,04,948.00
E211619	75 KW	Each	2,49,427.00
E211620	90 KW	Each	2,90,547.00
E211621	110KW	Each	3,51,911.00
E211622	125KW	Each	4,00,886.00
E211623	132KW	Each	4,12,353.00
E211624	160KW	Each	4,83,795.00
E211625	180KW	Each	5,14,577.00
E211626	200KW	Each	5,87,305.00
E211627	225KW	Each	6,03,871.00
E211628	250KW	Each	6,50,481.00
E211629	275KW	Each	6,58,595.00

Code No	Description	Unit	Rate Rs.
E211630	315KW	Each	7,44,558.00
E211631	355 kW	Each	10,21,642.00
E211632	375 kW	Each	11,67,413.00
E211700	Supply, Installation, Testing, Commissioning of Horizontal Foot Mounted IE2 type 6 Pole TEFC, S1 duty, IP-55, 415 Volts Squirrel cage Enclosure confirming to protection IP55 suitable for operation on 415 +/- 10%V, 3 Phase 50 HZ +/- 5% AC supply with ambient 50 C class F insulation with temperature rise limited to class B Induction Motors confirming to IS-325 & IS 12615 - 2011 with latest amendments. of the following rating		
E211701	0.37 KW	Each	7,779.00
E211702	0.55 KW	Each	7,979.00
E211703	0.75 KW	Each	8,988.00
E211704	1.1 KW	Each	9,856.00
E211705	1.5 KW	Each	12,655.00
E211706	2.2 KW	Each	15,123.00
E211707	3.0 kW	Each	22,088.00
E211708	3.7 KW	Each	23,004.00
E211709	5.5 KW	Each	23,915.00
E211710	7.5 KW	Each	42,732.00
E211711	11 KW	Each	53,228.00
E211712	15 KW	Each	69,533.00
E211713	18.5 KW	Each	90,432.00
E211714	22 KW	Each	98,151.00
E211715	30 KW	Each	1,52,800.00
E211716	37 KW	Each	2,05,496.00
E211717	45 KW	Each	2,46,144.00
E211718	55 KW	Each	2,80,263.00
E211719	75 KW	Each	3,37,385.00
E211720	90 KW	Each	4,22,182.00
E211721	110KW	Each	4,70,772.00
E211722	125KW	Each	5,13,124.00
E211723	132KW	Each	5,49,558.00
E211724	160KW	Each	5,72,225.00
E211725	180KW	Each	6,31,116.00
E211726	200KW	Each	6,55,394.00

Code No	Description	Unit	Rate Rs.
E211727	225KW	Each	6,80,878.00
E211728	250KW	Each	7,06,367.00
E211729	275KW	Each	8,17,594.00
E211730	315KW	Each	11,24,534.00
E211800	Supply, Installation, Testing, Commissioning of Horizontal Foot Mounted IE3 type 2 Pole TEFC, S1 duty, IP-55, 415 Volts Squirrel cage Enclosure confirming to protection IP55 suitable for operation on 415 +/- 10%V, 3 Phase 50 HZ +/- 5% AC supply with ambient 50 C class F insulation with temperature rise limited to class B Induction Motors confirming to IS-325 & IS 12615 - 2011 with latest amendments.of the following rating		
E211801	0.37 KW	Each	6,097.00
E211802	0.55 KW	Each	7,941.00
E211803	0.75 KW	Each	8,207.00
E211804	1.1 KW	Each	8,955.00
E211805	1.5 KW	Each	10,263.00
E211806	2.2 KW	Each	13,181.00
E211807	3.0 kW	Each	15,492.00
E211808	3.7 KW	Each	16,371.00
E211809	5.5 KW	Each	26,725.00
E211810	7.5 KW	Each	27,664.00
E211811	11 KW	Each	48,345.00
E211812	15 KW	Each	56,640.00
E211813	18.5 KW	Each	72,792.00
E211814	22 KW	Each	80,745.00
E211815	30 kW	Each	1,20,097.00
E211816	37 kW	Each	1,45,819.00
E211817	45kW	Each	1,87,661.00
E211818	55 KW	Each	2,52,648.00
E211819	75 KW	Each	3,15,531.00
E211820	90 KW	Each	3,63,985.00
E211821	110KW	Each	4,59,744.00
E211822	125KW	Each	5,39,441.00
E211823	132KW	Each	5,65,049.00
E211824	160KW	Each	6,18,966.00
E211825	180 kW	Each	6,51,603.00

Code No	Description	Unit	Rate Rs.
E211826	200KW	Each	7,22,655.00
E211827	225 kW	Each	7,64,123.00
E211828	250KW	Each	8,09,448.00
E211829	275 kW	Each	8,56,947.00
E211830	315KW	Each	8,77,559.00
E211831	355 kW	Each	16,73,390.00
E211900	Supply, Installation, Testing, Commissioning of Horizontal Foot Mounted IE3 type 4 Pole TEFC, S1 duty, IP-55, 415 Volts Squirrel cage Enclosure confirming to protection IP55 suitable for operation on 415 +/- 10%V, 3 Phase 50 HZ +/- 5% AC supply with ambient 50 C class F insulation with temperature rise limited to class B Induction Motors confirming to IS-325 & IS 12615 - 2011 with latest amendments. of the following rating		
E211901	0.37 KW	Each	6,434.00
E211902	0.55 KW	Each	8,430.00
E211903	0.75 KW	Each	8,554.00
E211904	1.1 KW	Each	9,715.00
E211905	1.5 KW	Each	10,632.00
E211906	2.2 KW	Each	14,097.00
E211907	3.0 kW	Each	14,906.00
E211908	3.7 KW	Each	17,992.00
E211909	5.5 KW	Each	24,903.00
E211910	7.5 KW	Each	28,889.00
E211911	11 KW	Each	46,285.00
E211912	15 KW	Each	57,534.00
E211913	18.5 KW	Each	76,568.00
E211914	22 KW	Each	85,328.00
E211915	30 KW	Each	1,14,662.00
E211916	37 KW	Each	1,41,490.00
E211917	45 KW	Each	1,71,497.00
E211918	55 KW	Each	2,35,692.00
E211919	75 KW	Each	2,86,842.00
E211920	90 KW	Each	3,34,130.00
E211921	110KW	Each	4,04,700.00
E211922	125KW	Each	4,61,025.00
E211923	132KW	Each	4,74,211.00

Code No	Description	Unit	Rate Rs.
E211924	160KW	Each	5,56,366.00
E211925	180KW	Each	5,91,770.00
E211926	200KW	Each	6,75,405.00
E211927	225KW	Each	6,94,455.00
E211928	250KW	Each	7,48,056.00
E211929	275KW	Each	7,57,386.00
E211930	315KW	Each	8,56,242.00
E211931	355 kW	Each	11,74,892.00
E211932	375 kW	Each	13,42,527.00
E212000	Supply, Installation, Testing, Commissioning of Horizontal Foot Mounted IE3 type 6 Pole TEFC, S1 duty, IP-55, 415 Volts Squirrel cage Enclosure confirming to protection IP55 suitable for operation on 415 +/- 10%V, 3 Phase 50 HZ +/- 5% AC supply with ambient 50 C class F insulation with temperature rise limited to class B Induction Motors confirming to IS-325 & IS 12615 - 2011 with latest amendments. of the following rating		
E212001	0.37 KW	Each	8,950.00
E212002	0.55 KW	Each	9,178.00
E212003	0.75 KW	Each	10,339.00
E212004	1.1 KW	Each	11,336.00
E212005	1.5 KW	Each	14,553.00
E212006	2.2 KW	Each	17,395.00
E212007	3.0 kW	Each	25,401.00
E212008	3.7 KW	Each	26,454.00
E212009	5.5 KW	Each	27,506.00
E212010	7.5 KW	Each	49,143.00
E212011	11 KW	Each	61,213.00
E212012	15 KW	Each	79,964.00
E212013	18.5 KW	Each	1,03,998.00
E212014	22 KW	Each	1,12,877.00
E212015	30 KW	Each	1,75,723.00
E212016	37 KW	Each	2,36,321.00
E212017	45 KW	Each	2,83,067.00
E212018	55 KW	Each	3,22,306.00
E212019	75 KW	Each	3,87,993.00
E212020	90 KW	Each	4,85,509.00

Code No	Description	Unit	Rate Rs.
E212021	110KW	Each	5,41,389.00
E212022	125KW	Each	5,90,093.00
E212023	132KW	Each	6,31,995.00
E212024	160KW	Each	6,58,064.00
E212025	180KW	Each	7,25,785.00
E212026	200KW	Each	7,53,709.00
E212027	225KW	Each	7,83,010.00
E212028	250KW	Each	8,12,323.00
E212029	275KW	Each	9,40,236.00
E212030	315KW	Each	12,93,216.00

E-22 AIR COOLING & AIRCONDITIONING

Code No	Description	Unit	Rate Rs.
E220100	Supply , Installation, Testing and Comissioning of factory assembeled double skin central evaporative cooling plant having specifications as per A, B, C, D, E, F,G A. Air washer section comprising 50 mm thick pre air filter made out from washable Aluminium wiremesh filter with 90 % down to 10 microns B. Humidification section comprising of Wet pads 200 mm thick impregnated cellulose paper media (Celdec pads) of imported origin with 2 bend PVC eliminator,internal casing with blank off's of wet section in SS-304 construction C. Fan Section comprising of belt driven, DIDW backward curved fan with outlet velocity less than or equal to 10 m/s and minimum efficiency of 70% AMCA certified centrifugal fan suitable for required cfm at 50 mm static pressure D. TEFC motor of IE-2 class as required with pulley, belt E. The unit shall be fabricated with frame work hollow extruded aluminium profile with 0.80 mm precoated GSS on outside and on inside complete with 25 mm thick CFC free PUF insulation of minimum 40 kg/cum density sandwiched in between inner and outer skins, SS -304 (18 g) Sump tank, 25mm C-PVC piping, make up, drain & quick fill and drain connection, Butterfly/Gate valves for pumps, make up, drain & quick fill and drain connections of sump, 2 no. Pumps of suitable capacity and necessary fittings, stand, anti vibration pads etc.as required. F. Starter panel DOL/Star-Delta suitable for operation of Blower motor & pump made out of 1.6 mm thick sheet steel powder coated enclosure comprising of over load protection relay, short circuit & single phasing protection, ON / OFF push buttons, ammeter, voltmeter, indicating lamps, MCB, contactor etc.(As per Specification of PWD BSR & direction of Engineer Incharge) complete in all respect. G. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E220101	50000 CFM	Each	7,60,711.00
E220102	40000 CFM	Each	6,27,561.00
E220103	30000 CFM	Each	4,69,139.00
E220104	25000 CFM	Each	3,98,865.00
E220105	20000 CFM	Each	3,24,767.00
E220106	15000 CFM	Each	2,45,439.00

Code No	Description	Unit	Rate Rs.
E220107	12000 CFM	Each	2,04,036.00
E220108	10000 CFM	Each	1,70,652.00
E220109	8000 CFM	Each	1,38,523.00
E220110	7000 CFM	Each	1,30,574.00
E220111	6000 CFM	Each	1,07,621.00
E220112	5000 CFM	Each	1,03,537.00
E220200	P & F of Fire retardent , non porous double layer Canvas of required size with GI frame ,Gasket Nut Bolts for air cooling Plants/AHU/FCU etc complete with making connections etc as required All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sq Mtr	1,874.00
E220300	Supply & fixing of evaporative cooling Celdec pads of 200mm Thick made out from impregnated cellulose paper media of imported origin including fixing in Air washer complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	P Sqft	650.00
E220400	Supply , Installation, Testing and Comissioning of ducting made from GSS of class VIII & fabricated as per IS:655 and as per approved drawings & designs including the cost of hangers, supports, angle, expansion fasteners , closed cell neoprene gasket T&P etc. as required of following gauge:- All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E220401	0.63mm (24 G)	Sqm	645.00
E220402	0.80mm (22 G)	Sqm	819.00
E220403	1.00mm (20 G)	Sqm.	1,016.00
E220404	1.25mm (18 G)	Sqm.	1,273.00
E220500	Supply , Installation, Testing and Comissioning of ducting made from aluminium sheet metal fabricated as per IS:655 with minimum galvanising coating not less then 100 GSM and as per approved drawings & designs including the cost of hangers, supports , angle , expansion fasteners , closed cell neoprene gasket T&P etc. as required of following gauge:- All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E220501	0.60mm	Sq Mtr	738.00
E220502	0.80mm	Sq Mtr	896.00
E220503	1.00mm	Sq Mtr	1,102.00
E220504	1.20mm	Sq Mtr	1,356.00

Code No	Description	Unit	Rate Rs.
E220600	Supplying, installing, testing and balancing of single louvered of extruded Aluminium Powder coated supply/return air Linear Grilles with fixed bars at front or vertical bars at rear having 0, 15 and 30 degrees deflection. Angle / Round edged flanges with fixed or removable core including fixing with steel screws etc. complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sq.m	5,999.00
E220700	Supplying, installing, testing and balancing of double louvered of extruded Aluminium Powder coated supply/return air grills of various sizes, Each grill shall be with fixed horizontal front bar at 0 deflection and back adjustable vertical louvers, air distribution grid for straightening the air flow through the collar and register including fixing with steel screws etc. complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E220701	Supply air grill with key operated volume control damper	Sqm.	11,965.00
E220702	Return air grill without volume control damper	Sqm.	8,469.00
E220800	Supplying, installing, testing and balancing of extruded Aluminium powder coated Air Diffuser and complete with Flush, 20mm flanges with PVC/neoprene gasket, anti – smudge frame and removable inner core to facilitate the adjustable of air control damper, square/round/ rectangular as required.including fixing with steel screws etc. complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E220801	Supply Air Diffuser with Volume Control damper	Sqm.	9,401.00
E220802	Return Air Diffuser without Volume Control damper	Sqm.	5,907.00
E220900	Supplying, installing and balancing of extruded Aluminium powder coated fresh air inlet louvers with bird screen & volume control damper fixing with steel screws etc. complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sqm.	13,407.00
E221000	Supply , installation, testing & balancing of 20 Gauge G I Damper with brass bushes and 6" pitch multiblade box type galvanised sheet steel construction volume control damper for Ducting and air washers to be provided with suitable links and quadrants for control of volume of air as per specifications complete as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sq Mtr	5,651.00
E221100	Supply and fixing of acoustic lining of ducts with following thick, resin bonded glass fibre insulation rigid board with density 48kg/cum fixed in frame work covered with reinforced black fibre glass tissue and		

Code No	Description	Unit	Rate Rs.
	finished with 0.50 mm perforated aluminium sheet with 3mm perforation at 6mm center to center fixed with cadmium plated screws etc. complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E221101	25 mm thick fiber glass	Sqm	738.00
E221102	12 mm thick fiber glass	Sqm.	587.00
E221200	Supply and fixing duct insulation with 50 mm thick Expanded Polystyrene Thermocol (ESP) sheet of density 24 kg/cu.m after applying two coats of cold setting adhesive (CPRX Compound) and binding sheet with chicken wire mesh and applying cement mortar plaster (1:4) including primer & painting (suitable for outdoor application) matching with building colour or as per direction of Engineer in charge as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sqm.	868.00
E221300	Supply and fixing aluminium foil faced resin bonded 50 mm thick fibre glass insulation of density 24 kg/cu.m after applying two coats of cold setting adhesive (CPRX Compound) sealing all joints with self adhesive tape & finished with 26 G Aluminium cladding. complete in all respect. (For Outdoor applications-air conditioning ducts) All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sqm.	968.00
E221400	Supply & fixing of external thermal closed-cell Nitrile rubber Insulation material FM/UL approved with high water vapor diffusion resistance and low thermal conductivity should be certified 'Class O' in Fire Propagation as per BS 476 Part 6 in form of sheet on duct including cost of adhesive (CPRX Compound) complete as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E221401	9mm thick for indoor Application	Sqm	499.00
E221402	13mm thick for indoor Application	Sqm	613.00
E221403	13mm thick for Outdoor Application with 26 SWG Aluminium Cladding	Sqm	939.00
E221404	19mm thick for Outdoor Application with 26 SWG Aluminium Cladding	Sqm	1,075.00
E221500	Supplying, installing of external thermal closed cell cross linked polyethelene (XLPE) foam insulation made out from non-fibrous, fire retardant (FR), closed cell, tri-dimensional chemically crosslinked polyethylene foam. should be certified 'Class O' in Fire Propagation and 'Class 1' in Surface Spread of Flame as per BS 476 Part 6 & Part 7 respectively in the form of sheet on ducts including cost of adhesive, tape complete as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/		

Code No	Description	Unit	Rate Rs.
	work , refer Annexure "A" attached with this BSR .		
E221501	9mm thick	Sqm	570.00
E221502	13mm thick	Sqm	714.00
E221600	Supply and fixing duct insulation with 50 mm thick Expanded Polystyrene Thermocol (ESP) sheet of density 24 kg/cu.m after applying two coats of cold setting adhesive (CPRX Compound) and binding sheet with chicken wire mesh and applying 26 G aluminium cladding complete as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sq Mtr	800.00
E221700	Supply , Installation, Testing and Comissioning of expanded polysterene over deck insulation having thickness of 50 mm and density of 36 Kg / m3 including binding of fibre cloth and applying of two coats of UV paint suitable for exposed atmosphere complete as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sq Mtr	1,077.00
E221800	Supply , Installation, Testing and Comissioning of ISO certified company made Window type Air conditioners as per BEE star rating complete with copper power cable upto 3 Mtr, wireless Remote, suitable for working between 180-260V with low & high voltage cutoff and 50 hz ,1 phase AC supply capable of performing, cooling, dehumidification, air circulation R-32/R-410 /R-407 Green Refrigerant with Scroll / rotary compressor with min 5 year OEM warranty both compressor and PCB,complete with fixing including T&P & labour etc as required complete in all respect as specified of following capacity. NABL accredeated as per IS/ISO/IEC 17025 standards / CPRI/ ERDA lab testing reports as per IS 1391(Part-1) 2017 with OEM certificate must submitted to engineer in charge. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E221801	1.0 TR with 3 star rating of BEE (ISEER not less then 3.0)	Each	28,138.00
E221802	1.0 TR with 5 star rating of BEE (ISEER not less then 3.3)	Each	31,106.00
E221803	1.5 TR with 3 star rating of BEE (ISEER not less then 3.0)	Each	32,358.00
E221804	1.5 TR with 5 star rating of BEE (ISEER not less then 3.3)	Each	36,326.00
E221900	Supply , Installation, Testing and Comissioning of ISO certified company made Air Cooled Hi Wall split type Air conditioners with latest star rating system as per BEE amended upto date complete with Indoor unit(IDU), Out door unit (ODU), surface / concealed copper Refrigerant piping with insulation (closed cell elastomeric nitrile rubber tubular pipe section) upto 3 Mtr (IDU to ODU), copper power cable upto 3.5 Mtr (IDU to ODU), R-32/R-410/ R-407 Green Refrigerant, wireless Remote control, suitable for working between 180-260V with low & high voltage cutoff and 50 hz ,1 phase AC supply capable of performing cooling, dehumidification, air		

Code No	Description	Unit	Rate Rs.
	circulation of following capacity with Scroll / rotary compressor. Min 5 year OEM warranty both compressor and PCB.		
	NABL accredited as per IS/ISO/IEC 17025 standards / CPRI/ ERDA lab testing reports as per IS 1391(Part-2) 2018 with OEM certificate must submitted to engineer in charge. All as per pre approved by Engineer in charge. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E221910	Non Invertor Type		
E221911	0.75 TR with 3 star rating of BEE (ISEER not less than 3.5)	Each	30,716.00
E221912	1.0 TR with 3 star rating of BEE (ISEER not less than 3.5)	Each	36,151.00
E221913	1.5 TR with 3 star rating of BEE (ISEER not less than 3.5)	Each	43,711.00
E221914	1.8/2.0 TR with 3 star rating of BEE (ISEER not less than 3.5)	Each	50,874.00
E221920	Invertor Type		
E221921	1.0 TR with 3 star rating of BEE (ISEER not less than 3.5)	Each	40,675.00
E221922	1.0 TR with 5 star rating of BEE (ISEER not less than 4.5)	Each	47,316.00
E221923	1.5 TR with 3 star rating of BEE (ISEER not less than 3.5)	Each	47,220.00
E221924	1.5 TR with 5 star rating of BEE (ISEER not less than 4.5)	Each	54,377.00
E221925	1.8/2.0 TR with 3 star rating of BEE (ISEER not less than 3.5)	Each	61,693.00
E221926	1.8/2.0 TR with 5 star rating of BEE (ISEER not less than 4.5)	Each	68,484.00
E222000	Supply , Installation, Testing and Commissioning of ISO certified company made Air Cooled Floor standing Tower type split Air conditioners complete with Indoor unit(IDU), Out door unit (ODU), surface / concealed copper Refrigerant piping with insulation (closed cell elastomeric nitrile rubber tubular pipe section) upto 3 Mtr (IDU to ODU), copper power cable upto 3.5 Mtr (IDU to ODU), R-32/R-410/R-407 Green Refrigerant, wireless Remote control, suitable for working between 180-260V with low & high voltage cutoff and 50 hz ,1 phase AC supply capable of performing cooling, dehumidification, air circulation of following capacity with Scroll / rotary with min 5 year OEM warranty both compressor and PCB.		
	NABL accredited as per IS/ISO/IEC 17025 standards / CPRI/ ERDA lab testing reports as per IS 1391 with OEM certificate must submitted to engineer in charge. All as per pre approved by Engineer in charge. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E222010	Non Invertor Type		
E222011	2.2/2.4 TR	Each	1,07,789.00
E222012	3.0/3.3 TR	Each	1,19,811.00
E222013	3.6 TR	Each	1,26,424.00

Code No	Description	Unit	Rate Rs.
E222014	4.0 TR	Each	1,30,471.00
E222015	4.6 TR	Each	1,33,489.00
E222100	SITC of ISO certified company made air cooled ducted split type air conditioning machine with each having a capacity and details as mentioned below suitable for operation on R-32/R-410A R-407 Green refrigerant comprising of single/twin Scroll / Rotary / Reciprocating type compressor hermetically sealed complete with automatic capacity, safety switches, lubrication system, with min 5 year OEM warranty both compressor and PCB, Suitable capacity squirrel cage induction motor with class 'B' insulation suitable for operation on 415 + 10% volts, 50 Hz, A.C. supply for Blower motor, Necessary drive arrangement for blower motor, Matching Air cooled condenser with necessary fittings for refrigerant piping connections, necessary structural support for mounting condensers, Microprocessor based control panel complete with accessories, machine isolation / disconnect switch, valves and accessories to inter connect compressor and condenser including pressure testing, vacuum. Necessary starters suitable for Indoor & outdoor unit complete with O/L, U/V, phase reversal protection, single phase preventors etc complete as required. NABL accredited as per IS/ISO/IEC 17025 standards / CPRI/ ERDA lab testing reports as per IS 1391 with OEM certificate must be submitted to engineer in charge. All as per pre approved by Engineer in charge. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work, refer Annexure "A" attached with this BSR.		
E222110	Ductable Split type		
E222111	4 TR	Each	1,07,017.00
E222112	5.5 TR	Each	1,29,111.00
E222113	7.5 TR	Each	1,58,217.00
E222114	8.5 TR	Each	1,70,144.00
E222115	11 TR	Each	2,18,692.00
E222116	16.5/ 16.7 TR	Each	3,34,726.00
E222200	Supply, Installation, Testing and Commissioning of ISO certified company made Air Cooled Cassette type Air conditioners complete with Indoor unit (IDU), Outdoor unit (ODU), R-32/R410A/ R-407 Green Refrigerant, wireless Remote, inbuilt drain pump, suitable for 400/230V, 50 Hz, 1 / 3 phase AC supply, capable of performing cooling, dehumidification, Air circulation, filtration & ventilation of following capacity with Scroll / reciprocating / rotary compressor with min 5 year OEM warranty both compressor and PCB as specified. NABL accredited as per IS/ISO/IEC 17025 standards / CPRI/ ERDA lab testing reports as per IS 1391 with OEM certificate must be submitted to engineer in charge. All as per pre approved by		

Code No	Description	Unit	Rate Rs.
	Engineer in charge. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E222201	1.5 Ton	Each	80,511.00
E222202	1.9/ 2 Ton	Each	89,678.00
E222203	3/3.2 Ton	Each	1,23,728.00
E222204	3.8/4 Ton	Each	1,57,311.00
E222300	Supply , Installation, Testing and Comissioning of Interconnecting refrigerant copper pipe for split of DHE Grade C12200- ASTM B68, B75, chemical composition of copper %- 99.0 Min and Phosphorus %- 0.015 to 0.040 . For Annealed copper tube :- Tensile strength = 210 Mpa wih elongation % = 40 Min . Ink Mark Brand Printing on Hard Tubes should be present. Material Test Certificate required with each supplied material. Piping between each set of indoor & outdoor units of different sizes as per OEM requirement & specifications including chase cutting, supports, making good the same with sand cement plaster etc. as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Kg	1,199.00
E222400	Supply & fixing of external thermal closed cell elastomeric nitrile rubber Insulation material FM/UL approved with high water vapor diffusion resistance and low thermal conductivity should be certified 'Class O' in Fire Propagation as per BS 476 Part 6 in form of tubular insulation between each set of indoor & outdoor units as per specificationsnitrile including cost of adhesive complete as per specification and as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E222410	6mm thick insulation		
E222411	6mm thick insulation and 6 mm internal Dia	Mtr	21.00
E222412	6mm thick insulation and 10 mm internal Dia	Mtr	25.00
E222413	6mm thick insulation and 13 mm internal Dia	Mtr	28.00
E222414	6mm thick insulation and 16 mm internal Dia	Mtr	31.00
E222415	6mm thick insulation and 19 mm internal Dia	Mtr	34.00
E222416	6mm thick insulation and 22 mm internal Dia	Mtr	37.00
E222417	6mm thick insulation and 25 mm internal Dia	Mtr	39.00
E222418	6mm thick insulation and 28 mm internal Dia	Mtr	48.00
E222419	6mm thick insulation and 32 mm internal Dia	Mtr	55.00
E222420	9mm thick insulation		
E222421	9mm thick insulation and 6 mm internal Dia	Mtr	24.00
E222422	9mm thick insulation and 10 mm internal Dia	Mtr	28.00

Code No	Description	Unit	Rate Rs.
E222423	9mm thick insulation and 13 mm internal Dia	Mtr	33.00
E222424	9mm thick insulation and 16 mm internal Dia	Mtr	35.00
E222425	NOTE: Add @ 50 % for using nitrile rubber insulation with Aluminium foil coating as required.	Mtr	
E222500	Providing & Fixing of ISI marked (IS : 15778 - 2007) Rigid CPVC drain water piping 6 kg/ cm ² with fittings like elbow, socket, Tee etc & support with MS hanger on ceiling or recessed in wall with chasing & plastering with 6 mm thick closed cell elastomeric nitrile rubber insulation complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E222501	20 mm dia	Mtr.	183.00
E222502	25 mm dia	Mtr.	229.00
E222600	Providing & Fixing of ISI marked (IS : 4985 - 2000) Hard rigid PVC 25mm drain water piping with fittings like elbow, socket, Tee etc & support with MS hanger on ceiling or recessed in wall with chasing & plastering with 6 mm thick closed cell elastomeric nitrile rubber insulation complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Mtr.	140.00
E222700	Supply & Fixing of FR PVC insulated & sheathed 3 core flexible copper conductor as per PWD specification for electrical Works confirming to IS:694 and as per IS 8130 : 2013 of 1.1 kV grade .Wire should be made from 99.99% purity copper, class 5 stranding in acc. to IEC 60228 for lower watt loss , oxygen free (<10 ppm) for less chances of oxidization and higher silver content for gives better conductivity , insulation PVC type A ,flame retardant as per IS 10810-53, better amperage rating as per VDE 0298 part 4 including making connection etc. as required. OEM Must have its own in house NABL lab setup for all testing facilities for wires. All as per pre approved by Engineer in charge, making connections. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E222701	1.5 Sq.mm	Mtr.	49.00
E222702	2.5 Sq.mm	Mtr.	78.00
E222703	4.0 Sq.mm	Mtr.	122.00
E222704	6.0 Sq.mm	Mtr.	180.00
E222800	Supply, Fixing and testing of following capacity ISO certified company made wall mounted stabilizer having output voltage variation from 200 V to 250 V(+/-5%) with input voltage variation from 170 V to 260 V, time delay facility from 2 to 4 minute and high cutoff at 270 V with providing of 16 Amp plug top making connection etc complete in all respect. NABL accredited / CPRI/ ERDA lab testing reports with OEM certificate must submitted to engineer in		

Code No	Description	Unit	Rate Rs.
	charge. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E222801	3 kVA	Each	2,690.00
E222802	4 kVA	Each	3,233.00
E222803	5 kVA	Each	3,845.00
E222900	Making hole in stone masonry/ RCC wall/ RCC slab with core cutter for accomodating refrigerant pipe/ drain pipe/ MS pipe/ cables etc of following dia		
E222901	50 mm dia per running inch length	per inch	71.00
E222902	100 mm dia per running inch length	per inch	135.00
E222903	150 mm dia per running inch length	per inch	199.00
E222904	200 mm dia per running inch length	per inch	263.00
E223000	Providing and making wall openings in existing stone masonry wall complete with all requited T & P , Scaffolding and providing lintel of required size and strength, repairing ,plastering and cleaning the site debris as required.	Cu. Ft.	568.00
E223100	Providing and making wall openings in existing Bricks masonry wall complete with all requited T & P ,Scaffolding and providing lintel of required size and strength, repairing ,plastering and cleaning the site debris as required.	Cu. Ft.	492.00
E223200	Supply & fixing MS powder coated stand suitable for 1.0/1.5/ 2.0 Tr outdoor type of Split AC. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,055.00
E223300	Supply & fixing MS powder coated stand suitable for 2.5/3.0/4.0 Tr outdoor type of Split/Ductable/Tower AC. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,779.00
E223400	Dismantlaing of existing duct from site of any gauge including removing of Sand cement/ Nitrile rubber insulation cost include shifting of duct to store/ yard and romoving of debries from site including labour, scaffolding etc as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sq Mtr	85.00
E223500	Supply , Installation, Testing and Comissioning of wall mounted Push Button station for AHU/Air washers made out from powder quoted CRCA sheet of 16 SWG , illuminated ON/OFF push button including making connections etc as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	2,478.00

Code No	Description	Unit	Rate Rs.
E223600	Supply , Installation, Testing and Comissioning of ISO certified company made self contained drinking water coolar with BEE Rated energy efficient hermetic sealed type compressor,non CFC refrigerent suitable for operation on 230V/1pH/50Hz ac supply,Full stainless steel (S304)body and tank , stainless steel water tray,minimum two nos faucets and suitable drainage system complete in all respect with 300mm height MS fabricated and painted plateform. complete in all respect of the following capacity. NABL accredeated / CPRI/ ERDA lab testing reports with OEM certificate must submitted to engineer in charge. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E223601	cooling capacity 150 Ltr./Hr. and storage capacity 150 Ltrs	Each	56,770.00
E223602	cooling capacity 80 Ltr./Hr. and storage capacity 120 Ltrs	Each	48,407.00
E223700	Supply and Installation of Box type EU13 Hepa Filter of 99.997% efficiency down to 0.3 micron particle size installed in zero leakage Aluminium frame as per ISO 14644-1 clean room including sealing and packing material cost like silicon and hardware cost and Labour cost for the dismantling of existing worn out filters & shifting the same to the store as required as under. NABL accredeated / appropriated lab testing reports with OEM certificate must submitted to engineer in charge. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E223701	305 mm Thick	Sq Mtr	29,134.00
E223702	150 mm thick	Sq Mtr	21,127.00
E223800	Supply and Installation of Box type EU13 Hepa Filter of 99.997% efficiency down to 0.3 micron particle size installed in zero leakage Aluminium frame as per ISO 14644-1 clean room including sealing and packing material cost like silicon and hardware cost and Labour cost. NABL accredeated / appropriated lab testing reports with OEM certificate must submitted to engineer in charge. . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E223801	305 mm Thick	Sq Mtr	27,305.00
E223802	150 mm thick	Sq Mtr	19,316.00
E223900	Providing & Fixing of ISO certified company made submersible pump of rating 18 W to 24 Watts ,minimum water discharge capacity 2800 LPH and suitable for central/large size desert cooler complete with making connections, testing etc as required. NABL accredeated / appropriated lab testing reports with OEM certificate must submitted to engineer in charge. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	each	715.00

Code No	Description	Unit	Rate Rs.
E224000	Dismantling of split air conditioner of any capacity/any type including existing indoor unit & outdoor unit , refrigerant piping , connecting cables , drain pipe etc. including shifting of dismantled material to store complete as required	Job	647.00
E224100	Providing & Fixing of 26 SWG thick Aluminium sheet cladding on existing refrigerant copper pipe /insulated chiller pipe or any other surface with nut & bolts complete as required. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Sq Mtr	419.00
E224200	Providing & Fixing of BIS certified Oil filled radiator having following fins with temperature control setting sound free operation with minimum 1 year warranty & temperature setting, Rated Voltage:-230 V, Rated Wattage:-2400 W made out from CRCA sheet with powder coating, tubular type element castor wheel, 1.5 mtr PVC power cord along with 16 Amp plug top. net weight should not be less than 12 Kg and minimum dimensions are 520 X 165 X 710mm complete in all respect. NABL accredited / appropriated lab testing reports with OEM certificate must submitted to engineer in charge. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E224201	9 Fins	Each	10,734.00
E224202	11 Fins	Each	11,686.00
E224203	13 Fins	Each	13,180.00

E-23 TRANSFORMERS & DG SETS

Code No	Description	Unit	Rate Rs.
E230100	Supply installation testing & Commissioning of star rated Copper wound distribution Transformer (All the distribution transformer must be star rated as per notification of (BEE) ministry of power, Goverenment of India) of following rating 11/0.433KV Delta-Star Connected, Vector Group Dyn 11, ONAN Cooled & as per BEE star level- 2 & BIS approved as per IS 2026-1977 & losses as defined as per IS 1180 part I 2014. including standard accessories like conservator, silica gel breather,Bucholz relay, radiator, fins, HT cable box & LT cable boxes, Off -LTC (+5% to - 10% @ 2.5%) temperature rise of 40 degree C in oil / 45 degree C in winding , ISI marked drain valve, Dial type Temperature gauge, first filling of transformer oil as per IS :335-1953 , Epoxy based paint, including carrying of pre-commission Testing & Charging of Transformer complete in all respect. NABL accredeated / CPRI/ ERDA lab testing reports with OEM certificate must submitted to engineer in charge .Transformer must be tested from CTL test lab of discom (if reqd.) before charging of transformer & complete installaion must be certified from Electrical Inspectorate office as per Indian Electricity rule, CTL testing charges & Inspection charges shall be reimbursed by the department to the contractor as per actual expenditure. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E230101	500KVA	Each	8,10,114.00
E230102	630KVA	Each	9,28,111.00
E230103	800 KVA	Each	11,11,662.00
E230104	1000 KVA	Each	13,01,978.00
E230105	1250 KVA	Each	16,03,526.00
E230106	25 KVA	Each	40,506.00
E230107	40 KVA	Each	64,809.00
E230108	63 KVA	Each	1,02,074.00
E230109	100 KVA	Each	1,62,023.00
E230110	160 KVA	Each	2,59,236.00
E230111	200 KVA	Each	3,24,046.00
E230112	250 KVA	Each	4,05,057.00
E230113	315 KVA	Each	5,10,372.00
E230114	400 KVA	Each	6,48,091.00
E230115	750 KVA	Each	10,42,183.00

Code No	Description	Unit	Rate Rs.
E230116	1600 KVA	Each	20,52,513.00
E230117	2000 KVA	Each	25,65,641.00
E230118	2500 KVA	Each	32,07,051.00
E230200	S I T C of star rated Aluminium wound distribution Transformer of following rating 11/0.433KV Delta-Star Connected, Vector Group Dyn 11, ONAN Cooled & as per BEE star level- 2 & BIS approved as per IS 2026- 1977 & losses as defined as per IS 1180 part I 2014. including standard accessories like conservator, silica gel breather, radiator, fins, HT cable box & LT cable boxes, temperature rise in winding/oil 35-40 degree C upto 200 KVA & 40-45 degree C for above 200 KVA, ISI marked drain valve, Dial type Temperature gauge, first filling of transformer oil as per IS :335-1953, Epoxy based paint, including carrying of pre-commission Testing & Charging of Transformer complete in all respect .NABL accredited / CPRI/ ERDA lab testing reports with OEM certificate must submitted to engineer in charge .Transformer must be tested from CTL test lab of discom (if reqd.) before charging of transformer & complete installaion must be certified from Electrical Inspectorate office as per Indian Electricity rule, CTL testing charges & Inspection charges shall be reimbursed by the department to the contractor as per actual expenditure. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E230201	63 KVA	Each	1,25,425.00
E230202	100 KVA	Each	1,52,337.00
E230203	160KVA	Each	2,26,475.00
E230204	200 KVA	Each	2,92,029.00
E230205	250 KVA with Off -LTC (+5% to - 10% @ 2.5%)	Each	3,45,826.00
E230206	315 KVA with Off -LTC (+5% to - 10% @ 2.5%)	Each	4,50,711.00
E230207	400 KVA with Off -LTC (+5% to - 10% @ 2.5%)	Each	5,31,406.00
E230208	500 KVA with Off -LTC (+5% to - 10% @ 2.5%)	Each	6,52,785.00
E230209	25 KVA	Each	49,772.00
E230210	40 KVA	Each	79,635.00
E230211	630 KVA with Off -LTC (+5% to - 10% @ 2.5%)	Each	8,22,509.00
E230300	Supply and Fixing of ISO/ BIS certified company made accessories of Transformer above 500 KVA Rating i.e. Winding temperature indicator (WTI), Oil temperature indicator (OTI) , Magnetic Oil level Gauge (MOG), Bucholz relay with Alarm & trip Contacts & Marshalling Box including making connection & testing etc as required complete in all respect. Appropriate OEM test reports of all items shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	40,929.00

Code No	Description	Unit	Rate Rs.
E230400	Supply & Installation of D.P. Structure With AIR BREAK SWITCH having following specifications:- All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E230400A	DP : Double pole structure on 2 no ISMB 150 x 100 mm, 10 mtr high using 7 no MS channel each of size 100 mm x 50 mm x 2500 mm complete in all respect with nuts, springs washers, clamps as required.		
E230400B	GO:Off load type gang operated 3-pole vertical flute type switch suitable for 11KV ; 400A ,3-ø, central post rotating double break isolator complete with MS hardware , copper moving & fixed contact ,assembly of 9 nos pin insulator ,GI pipe of suitable length for operation.		
E230400C	DO: 3nos Vertical / Horizontal mounted 11kv horn gap fuse set /drop out 11kv barrel fuses mounted on 6no pin insulators		
E230400D	LA: 3 piece non linear resistor type. lighting arrestor of approved make suitable for 3 wire, 11kv Overhead line with rated voltage of 9kv rms & nominal discharge current rating of 5 ka & complete with galvanized clamping arrangement GI bolts, nuts, washer etc as required.		
E230400E	JUMPERS: 3 no 11kv acsr conductors mounted on pin type insularors as required. 6.GENERAL:The go shall be operated by hand operated liver properly earthed with provision for locking mounted at 3'	Set	63,624.00
E230500	Supply , Installation, Testing and Comissioning of 11KV, 630 A, 25 kA / 1 Sec, SF6 / VCB Indoor type panel HT board, free standing motor operated & withdrawal type fabricated from 2 mm thick CRCA sheet steel , With Ammeter, Voltmeter, PF Meter, KWH Meter, MDI Meter, Selector Switches as required, CRT-CT of required ratio (15VA ; CI-1.0 / 0.5) PT (11 KV /110V/ $\sqrt{3}$) , Fuses , IP42 Protection, 4 / 8 /10 / 12-window Annunciation Panel , AC/ DC Control voltage 24/48/ 110/230V , LED Indication lamps , S/C, O/C & E/F Protection (IDMT) Relays Alarm & trip contacts for Transformer protection (High oil temperature , Buchholz protection ,high winding temperature), power pack 2 x 12 V,etc complete in all respect Ready To Use(RTU),OEM Must have BIS certificate and & shall have submit NABL / CPRI / ERDA lab type test reports before execution complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	4,32,733.00
E230600	Supply , Installation, Testing and Comissioning of 11 KV, 630 A, 20kA / 3 sec, Out door, Extensible type Ring main unit (RMU) in suitable RCC foundation with 2 no. Load break switch & 1 no. VCB / SF6 circuit breaker with over load, Earth fault, short circuit relay, copper bus bar, earthing switch, mechanical ON / OFF / Earth indication, Voltage presence indicator, Ring core protection CT 2.5 VA, 10P10 as per transformer rating, Shunt trip coil, Anti reflex	Set	3,57,634.00

Code No	Description	Unit	Rate Rs.
	operating handle, right angle boots etc. OEM Must have BIS certificate and & shall have submit NABL / CPRI / ERDA lab type test reports before execution as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E230700	Supply , Installation, Testing and Comissioning of factory made 11 KV, 630 A, 20kA / 3 sec, Out door Extensible type IP54 for panel & IP67 for main circuits Ring main unit (RMU) IEC 62271-200 in suitable RCC foundation with 2 no. Load break switch & 1 no. VCB / SF6 circuit breaker with over load, Earth fault, short circuit relay, copper bus bar, bus support and insulation marerial epoxy resin,ring core protection & metering CT, Auxiliary relay for WTI, OTI ,Bucholz alarm & trip along with annuciator panel, master trip relay, mechanical ON / OFF / Earth indication, Voltage presence indicator, Shunt trip coil, 24 V DC power pack, Digital multi function meter, with Bus PT panel with 3 Nos single phase voltage transformers of the ratio $11kV/\sqrt{3} / 110 V/\sqrt{3}$, 25 VA, Class 1.0 with HT fuses in the primary and MCB on the secondary side, Voltmeter with selector switch, R Y B phase indication, Anti reflex operating handle, right angle boots etc. OEM Must have BIS certificate and & shall have submit NABL / CPRI / ERDA lab tpye test reports before execution as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Set	4,74,589.00
E230800	Supply , Installation, Testing and Comissioning of 1 no. VCB / SF6 circuit breaker coupled with existing extensible type RMU with over load, Earth fault, short circuit relay, copper bus bar, Ring core protection CT 2.5 VA, 10P10 as per transformer rating, mechanical ON / OFF / Earth indication, Voltage presence indicator, Anti reflex operating handle, right angle boots etc. as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Set	3,25,929.00
E230900	Supply , Installation, Testing and Comissioning of following capacity IK10 Sandwich Type Rising Mains / Bus Bar trunking Confirming to IEC 61439 part 1 & part 6 standard & IS 8623 P-II for use on 3 phase 4 wire , 50% internal earth , 415 volts, 50Hz A.C. supply , class F insulation, rated insulation voltage 1000V, impulse withstand voltage 12 KV, min. seismic zone 4 as per IS1892, with IP-54 enclosure made of 1.6mm thick sheet steel duly powder coated in convenient sections complete with 4 Nos aluminium bus bars, necessary joints & expansion joints, fire barrier at each floor, provision of tapping at every metre, continuous earthing with 2 Nos aluminium strip of suitable size (one on each side) including, G.I. clamping brackets, angle iron bracket, steel fasteners, connecting to earthing system etc. OEM Must have BIS certificate and & shall have submit NABL / CPRI / ERDA /ASTA lab type test reports		

Code No	Description	Unit	Rate Rs.
	before execution as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E230901	400 amps 25 KA SC for 1 sec	Mtr	16,327.00
E230902	500 amps 30 KA SC for 1 sec	Mtr	18,065.00
E230903	630 amps 40 KA SC for 1 sec	Mtr	19,805.00
E230904	800 amps 50 KA SC for 1 sec	Mtr	22,114.00
E230905	1000 amps 50 KA SC for 1 sec	Mtr	25,939.00
E230906	1250 amps 50 KA SC for 1 sec	Mtr	31,619.00
E230907	1600 amps 50 KA SC for 1 sec	Mtr	39,493.00
E230908	2000 amps 65 KA SC for 1 sec	Mtr	47,144.00
E230909	2500 amps 65 KA SC for 1 sec	Mtr	50,622.00
E231000	Supply , Installation, Testing and Comissioning of following capacity End Feed Unit Confirming to ANSI C37.23 standard & IS 8623 P-II suitable for Sandwich typy for use on 3 phase 4 wire 415 volts, 50Hz A.C. supply made with 1.6mm thick steel sheet enclosure duly powder coated with provision of MCCB/ACB (but without MCCB/ACB) complete with necessary joints including clamping brackets, angle iron bracket, steel fasteners, connecting to earthing system etc. OEM Must have BIS certificate and & shall have submit NABL / CPRI / ERDA lab type test reports before execution as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E231001	For 400 Amp. (Without MCCB)	Each	12,341.00
E231002	For 500 Amp. (Without MCCB)	Each	13,356.00
E231003	For 630 Amp. (Without MCCB)	Each	15,080.00
E231004	For 800 Amp. (Without ACB)	Each	17,447.00
E231005	For 1000/1250 Amp. (Without ACB)	Each	96,654.00
E231006	For 1600 Amp. (Without ACB)	Each	1,02,789.00
E231007	For 2000 Amp. (Without ACB)	Each	1,08,585.00
E231008	For 2500 Amp. (Without ACB)	Each	1,14,381.00
E231100	Supply , Installation, Testing and Comissioning of following capacity Plug in / Tap off Box suitable for Sandwich type bus bar trunking Confirming to ANSI C37.23 standard & IS 8623 P-II & IEC-60947-2-2000 for use on 3 phase 4 wire 415 volts, 50Hz A.C. supply made with 1.6mm thick steel sheet enclosure duly powder coated with provision of MCB/MCCB / ACB (but without MCB/MCCB/ACB) complete with necessary joints including clamping brackets, angle iron bracket, steel fasteners, connecting to earthing system etc. as required complete in all respect. All as per pre approved by Engineer		

Code No	Description	Unit	Rate Rs.
	in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E231101	up to 32 amps (Suitable for MCB) without MCB	Each	4,684.00
E231102	63 amps (Suitable for MCCB) without MCCB	Each	7,662.00
E231103	100/125 amps (Suitable for MCCB) without MCCB	Each	8,800.00
E231104	160/200/250 amps (Suitable for MCCB) without MCCB	Each	9,936.00
E231105	400 amps (Suitable for MCCB) without MCCB	Each	14,621.00
E231106	630 amps (Suitable for MCCB) without MCCB	Each	18,032.00
E231200	Supply , Installation, Testing and Comissioning of Tinned copper flexible joint with enclosure of following capacity with Transformer / DG / Panel as required complete in all respect. OEM Must have BIS certificate and & shall have submit NABL / CPRI / ERDA lab type test reports before execution as required complete in all respect All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E231201	1000 Amp. Rating	Each	46,249.00
E231202	1250 Amp.	Each	78,787.00
E231203	1600 Amp.	Each	82,269.00
E231204	2000 Amp.	Each	96,041.00
E231300	Supply, Installation, Testing & Commissioning of HT metering cubical panel as approved By DISCOMs fabricated out of 14 SWG CRCA sheet steel in two compartment & MS angle of size 60mmX6mm having provision for Following: (i)Provision for fixing Trivector Meter (To be supplied by DISCOMs) (ii)Provision for fixing of combined CT PT Set (To be supplied by DISCOMs), (iii)TT Block, (iv) 6mm Bakelite sheet on all sides, (V) 3/6 core copper cable for interconnections etc. as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	21,254.00
E231400	Supply , Installation, Testing and Comissioning of ISO certified company made 11KV, 630A, 350 MVA, on load , oil immersed Metal Clad load break switch complete in all respect With first filling of oil , fuses etc as required complete in all respect. OEM Must have BIS certificate and & shall have submit NABL / CPRI / ERDA lab type test reports before execution as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,63,129.00
E231500	Supply , Installation, Testing and Comissioning of Silent DG Set (As per latest CPCB emission norms) having specifications as per A, B, C, D, E, F,G,H A. 1500 RPM Diesel Engine conform to BS:649/5514 of suitable		

Code No	Description	Unit	Rate Rs.
	BHP Engine shall have residential silencer (isolated from main DG chamber), up to 3 M exhaust piping (with insulation & cladding) as required .		
	B. AC Brush less SPDP Alternator conform to BS 5000 (part 99) or IS 4722.-2001 . Alternator shall be self regulated with standard Alternator Protection(Over voltage , over speed & under voltage, under speed warning & shutdown).Engine & Alternator mounted on a common base Frame & coupled through a flexible coupling or close coupled		
	C. Standard canopy with Weatherproof, powder coated Accoustic enclosure for DG set for sound attenuation fabricated from 1.6 mm CRCA sheet steel (structure) with side wall fabricated from 1.6 mm CRCA sheet & filled with glass wool (96Kg/m3)/ Foam. as per IS 8183 the doors of 28/40/50/85 mm thick as per rating and fabricated from 1.6mm CRCA sheet packed with accoustic material,All doors/ opening are sealed with neoprene/EPDN gaskets. The enclosure has built in fuel tank, with protection and tripping of DG set against temperature of more than 50 degree centigrade		
	D. Electronic / Mechanical governor, Manual & electric Start ,Batteries with battry charger, Engine instruments panel,AVM pads All controls for operation of DG set are from outside the enclosure with DG control panel having Microprocessor based Genset monitoring & control system, MCCB/ACB of suitable rating, Ammeter, Voltmeter, PF meter, frequency meter, KWH meter,digital fuel display meter, Ind.lamps etc. mounted inside enclosure , visible and accessible from outside. The enclosure should be suitable for following capacity DG sets and alternator. Noise level shall be less than 75 dB at a distance of 1 Mtrs. duly certified by authorised agency etc. complete in all respect of following capacity :		
	E. (A) Accoustic glass wool wall thickness should not be less then 40mm and not less then 20mm PU foam upto rating 100 KVA. (B).Accoustic glass wool wall thickness should not be less then 65mm and not less then 50mm PU foam upto rating 250 KVA. (C)Accoustic glass wool wall thickness should not be less then 100mm for rating above 250 KVA.		
	F. First filling of the fuel tank shall be done by contractor and the prevailing fuel cost at that time shall be reimbursed to the contactor by department.		
	G. Servicing of the DG set (as per OEM guidelines) during the DLP period shall be done by contractor including all consumables,actual charges shall be reimbursed to the contractor by department/client complete in all respect.		
	H. OEM Must have BIS certificate and & shall have submit NABL / CPRI / ERDA/ CPCB standards approved lab type test reports before execution as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with		

Code No	Description	Unit	Rate Rs.
	this BSR .		
E231510	Air Cooled & Naturally Aspirated(with Axial Flow Fan)		
E231511	15 KVA at 0.8 pf 415V 50Hz 3-ø	Each	3,37,716.00
E231512	20 KVA at 0.8 pf 415V 50Hz 3-ø	Each	4,05,543.00
E231513	25 KVA at 0.8 pf 415V 50Hz 3-ø	Each	4,34,611.00
E231514	30 KVA at 0.8 pf 415V 50Hz 3-ø	Each	4,62,066.00
E231515	40 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	6,16,088.00
E231516	50 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	7,70,109.00
E231517	62.5 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	9,62,637.00
E231518	75/80 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	12,32,175.00
E231520	Radiator Cooled & Turbo Charged /AC		
E231521	20 KVA at 0.8 pf 415V 50Hz 3-ø	Each	3,93,419.00
E231522	25 KVA at 0.8 pf 415V 50Hz 3-ø	Each	4,32,729.00
E231523	30 KVA at 0.8 pf 415V 50Hz 3-ø	Each	4,50,842.00
E231524	40 KVA at 0.8 pf 415V 50Hz 3-ø	Each	5,64,003.00
E231525	50 KVA at 0.8 pf 415V 50Hz 3-ø	Each	6,43,393.00
E231526	62.5 KVA at 0.8 pf 415V 50Hz 3-ø	Each	6,54,884.00
E231527	70 KVA at 0.8 pf 415V 50Hz 3-ø	Each	7,16,593.00
E231528	82.5 KVA at 0.8 pf 415V 50Hz 3-ø	Each	8,08,877.00
E231529	100 KVA at 0.8 pf 415V 50Hz 3-ø	Each	9,28,304.00
E231530	125 KVA at 0.8 pf 415V 50Hz 3-ø	Each	9,43,610.00
E231531	140 KVA at 0.8 pf 415V 50Hz 3-ø	Each	11,72,503.00
E231532	160 KVA at 0.8 pf 415V 50Hz 3-ø	Each	12,67,709.00
E231533	180 KVA at 0.8 pf 415V 50Hz 3-ø	Each	13,99,182.00
E231534	200 KVA at 0.8 pf 415V 50Hz 3-ø	Each	15,17,200.00
E231535	250 KVA at 0.8 pf 415V 50Hz 3-ø	Each	18,66,027.00
E231536	320 KVA at 0.8 pf 415V 50Hz 3-ø	Each	23,67,663.00
E231537	380 KVA at 0.8 pf 415V 50Hz 3-ø	Each	27,22,752.00
E231538	500 KVA at 0.8 pf 415V 50Hz 3-ø	Each	36,37,869.00
E231539	35 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	4,93,503.00
E231540	225 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	16,79,425.00
E231541	300 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	22,19,684.00
E231542	365 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	26,15,274.00
E231543	400 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	29,10,295.00
E231544	600 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	43,65,443.00

Code No	Description	Unit	Rate Rs.
E231545	625/630 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	45,83,715.00
E231546	650 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	47,29,230.00
E231547	750 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	54,56,804.00
E231548	800 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	58,20,591.00
E231549	900 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	65,48,164.00
E231550	1000 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	72,75,738.00
E231551	1250 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	90,94,673.00
E231552	1500 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	1,09,13,607.00
E231553	1650 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	1,20,04,968.00
E231554	1875 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	1,36,42,009.00
E231555	2000KVA at 0.8 pf 415V 50Hz 3-Ø	Each	1,45,51,477.00
E231556	2255 KVA at 0.8 pf 415V 50Hz 3-Ø	Each	1,64,06,790.00
E231600	Supply , Installation, Testing and Comissioning of Auto main failure (AMF) Panel fabricated from CRCA sheet steel 2 mmThick , Powder coated finish , Engine Start & Stop commands, control Relays , Ammeter & Voltmeter with selector switches, Control & 2 nos 4 pole Power Contactors with 2 no. of required size 4 pole MCCB, Timers, Electronic Hooter ,Visual & Alarm indication for faults, UPS, operator interface panel complete in all respect suitable for following capacity DG sets. OEM Must have BIS certificate and & shall have submit NABL / CPRI / ERDA lab type test reports before execution as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E231610	PLC Based:		
E231611	20 to 40 KVA	Each	87,913.00
E231612	50 to 82.5 KVA	Each	1,08,202.00
E231613	100 to 140 KVA	Each	1,29,937.00
E231614	160 to 200 KVA	Each	1,69,547.00
E231615	250 to 320 KVA	Each	2,27,511.00
E231616	380 KVA	Each	2,63,737.00
E231617	500 KVA	Each	3,03,348.00
E231620	Electro-Mechanical Relay Based		
E231621	20 to 40 KVA	Each	64,729.00
E231622	50 to 82.5 KVA	Each	86,465.00
E231623	100 to 140 KVA	Each	1,08,202.00
E231624	160 to 200 KVA	Each	1,47,811.00
E231625	250 to 320 KVA	Each	2,05,775.00

Code No	Description	Unit	Rate Rs.
E231626	380 KVA	Each	2,42,001.00
E231627	500 KVA	Each	2,81,611.00
E231700	Providing, Fixing, Jointing, Testing & Commissioning of Medium duty MS B class pipes conforming to IS 3589 / 1239 part-I for DG Exhaust applications including cutting, welding etc & fittings like elbows, flanges, tapers, reducer, gaskets etc. fixing the pipe on the wall/ceiling with suitable clamps, hanger and nuts bolts . including the cost of thermal insulation with 50 mm thick layers of LRB rock wool as per IS : 8183-1993 (64 kg/m3 density) & 26 SWG aluminium sheet claddings etc complete as required complete in all respect. OEM Must have BIS certificate and & shall have submit NABL/ OEM lab appropriate type test reports before execution as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E231701	80 mm dia	Mtr.	1,137.00
E231702	100 mm dia	Mtr.	1,594.00
E231703	125 mm dia	Mtr.	2,067.00
E231704	150 mm dia	Mtr.	2,442.00
E231705	200 mm dia	Mtr.	3,788.00
E231800	Supply, installation and testing of metal flexible coupling (bellow) of following dia required for horizontal length more than 3 mtr.as per standard of guide line of D.G. set company complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E231801	80 mm dia	Each	8,934.00
E231802	100 mm dia	Each	10,356.00
E231803	125 mm dia	Each	11,777.00
E231804	150 mm dia	Each	14,756.00
E231805	200 mm dia	Each	16,889.00
E231900	Supply & fabrication steel structure with MS channel / angle / joist / ISMB / sheet etc. including welding, rivetting, cutting, nut & bolt , one coat of primer & two coat of enamel paint etc. as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Kg	92.00
E232000	Earth work in excavation/ by mechanical means (Hydraulic Excavator)/ manual means over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 sum on plan) including disposal of excavated earth, lead upto 50 m and lift upto 1.5 m, disposed earth to be levelled and neatly dressed:	Cum	640.00

Code No	Description	Unit	Rate Rs.
E232100	Random Rubble stone masonry for with hard stone in foundation and plinth in Cement Sand mortar above 30 CM thick wall in:		
E232101	Dry Masonry.	Cum.	1,848.00
E232102	Cement Mortar 1:6 (1-Cement : 6-Sand).	Cum.	2,772.00
E232200	Providing and laying in position cement concrete including curing, compaction etc. complete in specified grade excluding the cost of centering and shuttering - All work up to plinth level.		
E232201	M10 grade Nominal Mix 1: 3: 6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size).	Cum.	4,435.00
E232202	M15 grade Nominal Mix 1: 2: 4 (1 cement : 2 coarse sand : 4 graded stone aggregate 40mm nominal size).	Cum.	5,913.00
E232300	Plaster on new surface on wall in cement sand mortar 1:3 including racking of joints etc. complete fine finish :		
E232301	25 mm thick	Sqm.	259.00
E232302	20mm thick	Sqm	222.00
E232303	12mm thick	Sqm	185.00
E232400	Finishing wall with water proofing cement paint of approved brand and manufacture and or required shade to give an even shade including all scaffolding:		
E232401	New work (Two or more coats applied @ 3.84 kg/10 sqm).	Sqm	74.00
E232500	Providing and fixing welded mesh/expanded metal mesh in frame work, flat iron beading 20x3mm including top cross laps inside and out sides welding, iron bolts, crews, clips etc. including two coat of red oxide and two coat of enamel paint or more required complete with frame work with 50 X 50 X 6mm angle iron post 30 cm in ground embeded in cement concrete 1:3:6 (30X30X45cm) at corner and every three mtr including painting with one coat of primer and two coat of enamel paint work will be done as per direction of engineer incharge of size complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E232501	Welded mesh 25 mmx 25 mm x 2.1 mm	Sqm.	903.00
E232600	Replacement of existing transformer oil confirming to IS: 335 after removing of old oil and remove from site (old oil shall be retained by the contractor)	Ltr	92.00
E232700	Charges for Testing of transformer oil for its viscosity and dielectric strength including collection of sample from top and bottom of the existing transformer tank and submission of test report complete with all T & P , labour etc as required .	Per Job	2,570.00

Code No	Description	Unit	Rate Rs.
E232800	Charges for Collection , Filtration and dehydration of existing transformer oil with the help of high vacuum filtration machine and cleaning of core-coil assembly by hot oil for removal of sludge / dust particles etc. as required.	Per Ltr	16.00
E232900	Supply and filling of fresh transformer oil as per IS: 335 in existing transformer along with submission of oil test report for its physical and chemical properties. The oil shall be clear and free from any suspended matter or sediments complete as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Per Ltr	108.00
E233000	Repairing of LT/HT bushings of Distribution Transformers including replacement of brass studs , porcelain insulators , nut bolts , oil seals , gaskets etc. complete as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E233010	LT Bushing Set		
E2330101	63 KVA	Set	2,300.00
E2330102	100 KVA	Set	2,706.00
E2330103	160 KVA	Set	3,112.00
E2330104	200 KVA	Set	3,654.00
E2330105	250 KVA	Set	4,195.00
E2330106	315 KVA	Set	4,600.00
E2330107	400 KVA	Set	5,142.00
E2330108	500 KVA	Set	6,224.00
E2330109	630 KVA	Set	7,036.00
E2330110	800 KVA	Set	10,148.00
E2330111	1000 KVA	Set	13,530.00
E2330112	1250 KVA	Set	17,589.00
E2330113	16000 KVA	Set	20,972.00
E233020	HT Bushing Set		
E233021	63 KVA to 500 KVA	Set	2,706.00
E233022	630 KVA to 1600 KVA	Set	4,465.00
E233100	Replacement of Silica gel Breather of Distribution Transformers of following capacities complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E2331001	63 KVA	Each	609.00
E2331002	100 KVA	Each	677.00

Code No	Description	Unit	Rate Rs.
E2331003	160 KVA	Each	879.00
E2331004	200 KVA	Each	1,015.00
E2331005	250 KVA	Each	1,353.00
E2331006	315 KVA	Each	1,488.00
E2331007	400 KVA	Each	2,029.00
E2331008	500 KVA	Each	2,436.00
E2331009	630 KVA	Each	2,977.00
E2331010	800 KVA	Set	3,383.00
E2331011	1000 KVA	Set	3,788.00
E2331012	1250 KVA	Set	4,059.00
E2331013	16000 KVA	Set	4,195.00
E233200	Replacement of gasket of Distribution Transformers of following capacities complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/work , refer Annexure "A" attached with this BSR .		
E233201	63 KVA to 500 KVA	Set	1,556.00
E233202	630 KVA to 1600 KVA	Set	2,706.00
E233300	Supply & fixing of 33 KV off load type gang operated 3 Pole horizontal type switch rating 800 A, 3- phase, central post rotating double break isolator complete with MS hardwares, copper moving & fixed contacts assembly of 9 Nos. Post Insulators conforming to IS-5350 Part III and IS-2544 with GI pipe of suitable length for operation.	Each	36,255.00
E233400	Supply and fixing of 33KV Horn Gap fuse set/Drop Out fuse set Horizontal/ Vertical mounted type, 3 Nos. barrel fuses mounted on 6 Nos. Post Insulators type E-32. Each 33 KV Post Insulator be a unit with 2x24 KV post insulators and ratings of 33 KV Horn Gap fuses with post insulators as under: Nominal System Voltage K(rms) - 33 KV Rated voltage KV(rms) - 36KV Rated frequency(Hz) - 50 Hz One minute Power frequency - 70 withstand voltage KV(rms) (To earth& between poles) Impulse withstand voltage KV peak - 170 (To earth& between poles) Permissible temperature rise above - 40 deg Ambient temp (50 deg cent.) cent. Rated current (amp) - 200	Each	12,987.00

Code No	Description	Unit	Rate Rs.
E233500	Supply, installation, testing & commissioning of 36 KV outdoor type Vacuum Circuit Breaker having rated current 1250 A, fault level – 25 KA (rms) conforming to M-2 class and IS-13118/IS-3427/IS-10118 PartIII/ IS-2165-1977 & IS-3716-1976 with principal parameters of Circuit Breaker as under: No. of Poles - 3 Rated Voltage (Nominal/Max) - 33/36 KV Rated frequency - 50 Hz System neutral earthing - Effectively grounded Insulation Level Impulse withstand voltage - 170KV Peak One minute Power frequency withstand voltage - 70KV (rms) Short time current for 3 sec - 25KA Breaking Capacity Symmetrical - 25KA Asymmetrical - As per relevant standard. Rated making capacity - 2.5x25KA Total breaking time - 3 cycles (max) Total closing time - 4 cycles (max) Creepage distance - 900mm or more Mounting - Steel pedestal Operating Mechanism - Motor operated spring charged closing mechanism or magnetic actuator. Type - Bimetallic/Aluminium Alloy type clamp suitable for both horizontal/vertical take off. Suitable for ACSR Dog conductor. Complete as per technical specifications and/or as directed by Engineer.	Each	3,52,435.00
E233600	Supply, installation, testing & commissioning of 800 A, 36 KV indoor type, triple pole metal clad truck mounted horizontal draw out type circuit breaker enclosed in cubicle made of CRCA sheet steel of minimum 3 mm thickness, comply with IS-13118, IEC-56 and confirming to M-2 class. The cubicle panel shall be vermin proof and dust-tight and shall be of folded type construction. The switchgear and control gears complete with all necessary supporting framework, nuts and bolts etc for securing the same to the floor conforming to IEC62271/100-200 with ingress protection as IP-5X. The Indoor panel switch gear (circuit breakers, CTs, PTs etc) and control gear (relays, meters etc) shall be mounted on the same panel excluding civil works with principal parameters as under No. of Poles - 3 Rated Voltage - 36 KV Rated Insulation Level Lightning Impulse voltage - 170 KV(Peak) One minute Power Frequency withstand voltage - 70 KV(rms) Frequency - 50 Hz Rated normal current - 800 A Short circuit breaking capacity - 25 KA Symmetrical - 25 KA Asymmetrical - As per relevant standards Rated making capacity - 2.5x25 KA Operating mechanism - motor operated spring charged closing mechanism Heater/lamp/socket - 240V Control voltage - 110 VDC Vacuum Circuit Breakers with three interrupters mounted on same carriage having fixed & moving contacts in sealed envelop with vacuum below 10⁻⁶ torr. Make of vacuum interrupter as BEL, CGL, Siemens, ABB & Astom etc. complete as per technical specifications and/or as directed by Engineer.	Each	9,98,089.00

Code No	Description	Unit	Rate Rs.
E233700	Supply, Installation, testing & commissioning of 36 KV Potential Transformer of ratio 33000/110V, Burden-30VA with Accuracy class-0.5 conforming to IS-3156 excluding civil works complete with following parameters. Insulation Level Impulse withstand voltage - 170 KV One minute Power frequency withstand voltage on Primary winding - 70 KV rms Secondary winding - 2 KV rms Frequency - 50 Hz Winding connection - Star/Star Rated Voltage factor - 1.2 continuous and 1.5 for 30 secs Type of Insulation - Resin cast One of the secondary terminals of the VTS shall be solidly earthed complete as per technical specifications and /or as directed by engineer.	Each	40,239.00
E233800	Supply, Installation, testing & commissioning of 36 KV current Transformer of ratio 240-120-60/5A-5A-5A, Burden-60VA, class of Accuracy-5P for relaying & 0.5 S for metering and shall be conforming to IS-2705 excluding civil works complete with following parameters. Insulation level Impulse withstand voltage - 170KV One minute Power frequency withstand Voltage Primary winding - 70KV rms Secondary winding - 03KV rms Frequency - 50 Hz Rated continuous thermal current - 120% of rated primary current Short time thermal rating - 25 KA for 3 seconds Rated output Core I Core II 60 VA 30 VA complete as per technical specifications and /or as directed by engineer.	Each	45,219.00
E233900	Supply, installation, testing & commissioning of 33KV Control & Relay Panel duly mounted with protective relays, metering equipments etc. required for the satisfactory operation of 33KV side of 33/0.4KV Power Transformers. The C/R cubicles of folded type construction with front base frame and door frame fabricated from CRCA sheet steel 10 SWG (3mm) thickness, while the side, roof & doors fabricated out of 14 SWG (2mm) thick CRCA sheet steel. The height of panel inclusive of base channel height of 102 mm of not more than 2312 mm, width of 750 mm or suitable to accommodate equipments and panel of depth 610 mm with dust & vermin proof and suitable for tropical use. The complete panel incorporates all necessary meters, instruments relays, control switches, indicating lamps, mimic buses, audible & visual alarms. The enclosure provide minimum degree of protection equivalent to IP-51 as per IS 2147. The relays offered conforming to latest issue of IS: 3231 & IS-8686. For over current & earth fault numerical relays be provided. In three phase protection relay, the setting for over current element be 50-200% (in steps of 10%) and for earth fault element from 10 to 80% (in steps of 10%). Relay should also have features of self diagnosis, minimum last five abnormal events recording over current & earth fault including fault level & phase along with date & time, on line	Each	1,88,672.00

Code No	Description	Unit	Rate Rs.
	display of current and communicable with open protocol having RS-485 port. The panel be equipped with Annunciation scheme for indicating all annunciations equipped for the trip & non trip alarms. All indicating instruments of Switch Board type back connected suitable for flush mounting and provided with dust & vermin proof case for tropical use. All indicating instruments conforming to latest edition of IS-2419/1963. complete as per technical specifications and /or as directed by engineer.		
E234000	Supply, Installation, testing and commissioning of 33 KV Double Pole structure with Air Break Switch having following specifications.a) DP : Double Pole structure made of two nos. 11 m long PCC poles (400Kg) & 7 nos. MS Channel size 100x50x6mm complete with earthing of the structure as per REC standards in all respect with nuts, springs washers, clamps as required.b) GO: Off load type gang operated three pole Horizontal type switch suitable for 33KV, 800A, 3phase central post rotating double break isolator complete with MS Hardware, copper moving & fixed contacts, assembly of 9 Nos. Post Insulators, GI pipe of suitable length for operation.c) DO: 3 Nos. Horizontal/Vertical mounted 33KV Horn Gap fuse set / Drop Out fuse set, 33KV barrel fuses mounted on 6 Nos. Post insulators.e) LA: 3 piece non linear resistor type lightening arrestor of approved make suitable for 3 wire, 33KV oh line with rated voltage 30KV rms & nominal discharge current rating of 10 KA & complete with galvanized clamping arrangement, GI bolts, nuts, washers etc. as required.e)Jumpers:3 Nos. ACSR Dog Conductor mounted on pin type insulators as required. The GO shall be operated by hand operated liver properly earthed with provision for locking mounted at 3'. Complete as per technical specifications and /or as directed by engineer.	Set	95,140.00
E234100	Supply, receving, storing,inspection, handling , assembling ,installing in correct alligned position, effecting proper connections, testing and commissioning of copper wound Transformers 33/0.433 KV, Three Phase, 50 Hz, DYN 11, ONAN type , Standard accessories with off load tap changer (+5% to -10% in steps of 2.5%), winding / Top --- temperature rise of 450/400 C first fill oil, having permissible totak less values not exceeding 7.5% of the maximum total loss values for 11 KV as per energy efficiency level - 2 at basic Insulation level conforming to ISS 2026 (Part- I to Part - II), latest ammended and IS 1180 Part-I : 2014.		
E234101	Transformers described as above and as per the following continuous rating		
E234102	100 KVA	Each	9,41,649.00
E234103	160 KVA	Each	10,46,276.00
E234104	200 KVA	Each	11,62,529.00
E234105	250 KVA	Each	12,91,699.00
E234106	315 KVA	Each	14,35,221.00
E234107	400 KVA	Each	15,94,690.00

Code No	Description	Unit	Rate Rs.
E234108	500 KVA	Each	17,71,878.00
E234109	630 KVA	Each	19,68,753.00
E234110	750 KVA	Each	21,87,503.00
E234111	1000 KVA	Each	24,30,559.00
E234112	1250 KVA	Each	26,33,106.00
E234113	1600 KVA	Each	31,19,218.00
E234114	2000 KVA	Each	35,64,820.00
E234115	2500 KVA	Each	38,07,876.00
E234200	Supply, Installation, Testing and Commissioning of indoor type floor mounted metal clad, 11 KV Bus Coupler VCB panel upto 630 A equipped with following switchgears and accessories designed & tested as per latest standard i.e. IEC 62271-200, suitable for STC 25KA/3 and IAC A-FLR for 25kA/1sec. Make of Panel, Vacuum Interrupter and VCB should be of same make.		
E234201	Bus Coupler upto 630 Amp. VCB	Each	3,78,100.00
E234300	Supply, Installation, Testing and Commission of indoor type floor mounted metal clad, 11 KV Outgoing VCB panel UPTO 630A equipped with following switchgears and accessories designed & tested as per latest standard i.e. IEC 62271-200, suitable for STC 25KA/3 and IAC A-FLR for 25kA/1sec. Make of Panel, Vacuum Interrupter and VCB should be of same make.		
E234301	1. 11 KV , analog/digital type, selector switch for voltmeter and protection fuses/MCB for HT metering upto 12 KV on outgoing 2. Ammeter, analog type, selector switches for ammeters. 3. Microprocessor based numerical relay with O/L, E/F and S/C protection. 4. Set of dual core dual ratio 3CTs of suitable ratio with sec 1 A of 15 VA burden and accuracy Class – 0.5 for metering and class 5P10 for protection 5. Multifunction Meter		
E234302	Outgoing upto 630 A VCB	Each	4,48,444.00
E234400	Supply, Installation, Testing and Commissioning of indoor type floor mounted metal clad, 33 KV Incomer VCB panel up to 630 A equipped with following switchgears and accessories designed & tested as per latest standard i.e. IEC 62271-200, suitable for STC 31.5KA/3 and IAC A-FLR for 31.5kA/1sec. Make of HT Panel, Vacuum Interrupter and VCB should be of same make.		
E234401	33 KV / 110 Volts PT Class 0.5 accuracy and 100 VA burden with 1No. Voltmeter (0-36 KV), analog type, selector switch for voltmeter and protection fuses/MCB for HT metering upto 36 KV on incomer, Ammeter, analog type, selector switches for ammeters, Microprocessor based numerical relay with O/L, E/F and S/C protection, Set of dual core dual ratio 3CTs of suitable ration with sec 1 of 15 VA burden and accuracy Class – 0.5 for metering and class 5P10 for protection, Multifunction Meter.	Each	10,55,162.00

Code No	Description	Unit	Rate Rs.
E234500	Supply, Installation, Testing and Commissioning of indoor type floor mounted metal clad, 33 KV Bus Coupler VCB panel upto 630 A equipped with following switchgears and accessories. STC 31.5KA/3 and Internal Arc test A-FLR for full short circuit current for 1 sec. duration. Make of HT Panel, Vacuum Interrupter and VCB should be of same Make.		
E234501	Bus Coupler 1 No 630 Amp. VCB	Each	12,48,608.00
E234600	Supply, Installation, Testing and Commissioning of indoor type floor mounted metal clad, 33 KV Incomer cum outgoing VCB panel up to 630 A equipped with following switchgears and accessories designed & tested as per latest standard i.e. IEC 62271-200, suitable for STC 31.5KA/3 and IAC A-FLR for 31.5kA/1sec. Make of HT Panel, Vacuum Interrupter and VCB should be of same make.		
E234601	33 KV / 110 Volts PT Class 0.5 accuracy and 100 VA burden with 1No. Voltmeter (0-36 KV), analog type, selector switch for voltmeter and protection fuses/MCB for HT metering upto 36 KV , Ammeter, analog type, selector switches for ammeters, Microprocessor based numerical relay with O/L, E/F and S/C protection, Set of dual core dual ratio 3CTs of suitable ratio with sec 1 of 15 VA burden and accuracy Class – 0.5 for metering and class 5P10 for protection, Multifunction Meter	Each	9,76,025.00
E234700	Supply of indoor type floor mounted metal clad, incoming 6.6 KV VCB panel equipped with following switchgears and accessories.		
E234701	1. 6.6 KV / 110 Volts PT Class 0.5 accuracy and 100 VA burden with 1No. Voltmeter (0-7 KV), analog/digital type, selector switch for voltmeter and protection fuses/MCB for HT metering upto 7 KV on incomer 2. Ammeter, analog type, selector switches for ammeters 3. Microprocessor based numerical relay with O/L, E/F and S/C protection 4. Set of dual core dual ratio 3CTs of suitable ratio with sec of 1 A of 15 VA burden and accuracy Class – 0.5 for metering and class 5P10 for protection 5. Multifunction Meter		
E234702	Incoming upto 630 Amp. VCB	Each	5,36,375.00
E234703	Incoming from 630 to 1250 Amp. VCB	Each	5,89,132.00
E234800	Supply, Installation, Testing and Commissioning of indoor type floor mounted metal clad, 6.6 KV Bus Coupler VCB panel equipped with following switchgears and accessories.		
E234801	Bus Coupler upto 630 Amp. VCB	Each	4,04,479.00
E234802	Bus Coupler from 630 to 1250 Amp. VCB	Each	4,30,858.00
E234900	Supply of indoor type floor mounted metal clad, outgoing 6.6 KV VCB panel equipped with following switchgears and accessories.		
E234901	1. 6.6 KV, analog/digital type, selector switch for voltmeter and protection fuses/MCB for HT metering upto 6.6 KV on outgoing 2. Ammeter analog type, selector switches for		

Code No	Description	Unit	Rate Rs.
	ammeters. 3. Microprocessor based numerical relay with O/L, E/F and S/C protection. 4. Set of dual core dual ratio 3CTs of suitable ratio with sec 1 A of 15 VA burden and accuracy Class – 0.5 for metering and class 5P10 for protection 5. Multifunction Meter		
E234902	Outgoing upto 630 A VCB for Transformer	Each	4,66,030.00
E234903	Outgoing from 630 A to 1250 A VCB for Transformer	Each	5,01,202.00
E234904	1. 6.6 KV / 110 Volts PT Class 0.5 accuracy and 100 VA burden with 1No. Voltmeter (0-7 KV), analog/digital type, selector switch for voltmeter and protection fuses/MCB for metering 2. Ammeter analog type, selector switches for ammeters. 3. Microprocessor based numerical motor protection relay 4. Set of dual core dual ratio 3CTs of suitable ratio with sec 1 A of 15 VA burden and accuracy Class – 0.5 for metering and class 5P10 for protection 5. Multifunction Meter		
E234905	Outgoing up to 200A Vacuum Contactor Panel	Each	5,01,202.00
E234906	Outgoing from 200A to 400 A Vacuum Contactor Panel	Each	5,27,581.00
E235000	Supply of indoor type floor mounted metal clad, incoming 3.3 KV VCB panel equipped with following switchgears and accessories.		
E235001	1. 3.3 KV, analog/digital type, selector switch for voltmeter and protection fuses/MCB for HT metering upto 7 KV on incomer 2. Ammeter, analog type, selector switches for ammeters. 3. Microprocessor based numerical relay with O/L, E/F and S/C protection. 4. Set of dual core dual ratio 3CTs of suitable ratio with sec of 1 A of 15 VA burden and accuracy Class –0.5 for metering and class 5P10 for protection 5. Multifunction Meter		
E235002	Incoming upto 630 Amp. VCB	Each	5,36,375.00
E235003	Incoming from 630 to 1250 Amp. VCB	Each	5,89,132.00
E235100	Supply, Installation, Testing and Commissioning of indoor type floor mounted metal clad, 3.3 KV Bus Coupler VCB panel equipped with following switchgears and accessories.		
E235101	Bus Coupler upto 630 Amp. VCB	Each	4,04,479.00
E235102	Bus Coupler from 630 to 1250 Amp. VCB	Each	4,30,858.00
E235200	Supply of indoor type floor mounted metal clad, outgoing 3.3 KV VCB panel equipped with following switchgears and accessories.		
E235201	1. 3.3 KV / 110 Volts PT Class 0.5 accuracy and 100 VA burden with 1No. Voltmeter (0-3.3 KV), analog/digital type, selector switch for voltmeter and protection fuses/MCB for HT metering upto 3.3 KV on outgoing		

Code No	Description	Unit	Rate Rs.
	2. Ammeter analog type, selector switches for ammeters. 3. Microprocessor based numerical relay with O/L, E/F and S/C protection. 4. Set of dual core dual ratio 3CTs of suitable ratio with sec 1 A of 15 VA burden and accuracy Class – 0.5 for metering and class 5P10 for protection 5. Multifunction Meter		
E235202	Outgoing upto 630 A VCB for Transformer	Each	4,66,030.00
E235203	Outgoing from 630 A to 1250 A VCB for Transformer	Each	5,01,202.00
E235204	1. KV / 110 Volts PT Class 0.5 accuracy and 100 VA burden with 1No. Voltmeter (0-3.45 KV), analog/digital type, selector switch for voltmeter and protection fuses/MCB for metering 2. Ammeter analog type, selector switches for ammeters. 3. Microprocessor based numerical motor protection relay 4. Set of dual core dual ratio 3CTs of suitable ratio with sec 1 A of 15 VA burden and accuracy Class – 0.5 for metering and class 5P10 for protection 5. Multifunction Meter		
E235205	Outgoing up to 200A Vacuum Contactor Panel for motor feeder	Each	1,53,790.00
E235206	Outgoing from 200A to 400 A Vacuum Contactor for motor feeder	Each	1,65,396.00
E235300	SITC of battery bank of min 150 AH capacity comprising SMF/VRLA batteries , MS / Teakwood battery stand , interconnect wiring etc as required complete in all respect of rating:		
E235301	24 V DC	Each	80,017.00
E235302	48 V DC	Each	1,60,032.00
E235303	110 V DC	Each	2,46,204.00
E235400	SITC of FCBC (Float cum boost charger)suitable for 415V +/-10%, 50 Hz , 1-ø / 3 -ø Input & 24/ 48 /110 V DC OutputNatural Cooled, free standing in Sheet Steel enclosure,SCR controlled , regulation +/-1% , Efficiency > 75% on FLAC/ DC Instruments, Selector Switch ,Built in DC Distribution Board (6 No MCB), indication , control as required of following rating:		
E235401	15A + 15A	Each	76,324.00
E235402	20 A + 20 A	Each	89,250.00
E235403	25 A + 25 A	Each	1,02,667.00
E235500	SITC of floor mounted drowout type PMCC (Indoor, Dury, dust proff IP-4x front operated with 2 mm thick sheet metal compartmentalised) with all accessible parts, head shrinkable sleeves, SMC/DMC bus bar supports, padlocking facility on outgoing feeders etc.		

Code No	Description	Unit	Rate Rs.
E235501	Incommer feeder for transformer 630A/800A,50KA,ACB 3 pole,AI Bus Bars,Digital Multifunction meter compatable to SCADA, metering, Protection CT's,IDMT 3O/C&1 E/F, indicating lamps,control fuse ,wiring etc.complete in all respect of the size appxo 900(D)X.2400(H)X1000(D)X	Each	2,86,653.00
E235502	Incommer feeder for transformer 1000A,50KA,ACB 3 pole,AI Bus Bars, Digital Multifunction meter compatable to SCADA,metering,Protection CT's,IDMT 3O/C&1 E/F,indicating lamps,control fuse ,wiring etc.complete in all respect of the size appxo 900(D)X.2400(H)X1000(D)X	Each	2,98,083.00
E235503	Incommer feeder for transformer 1250 A,50KA,ACB 3 pole,AI Bus Bars,Digital Multifunction meter compatable to SCADA, metering, Protection CT's,IDMT 3O/C&1 E/F,indicating lamps,control fuse ,wiring etc.complete in all respect of the size appxo 900(D)X.2400(H)X1000(D)X	Each	3,19,187.00
E235504	Incommer feeder for transformer 1600 A,50KA,ACB 3 pole,AI Bus Bars, Digital Multifunction meter compatable to SCADA,metering,Protection CT's, IDMT 3O/C&1 E/F,indicating lamps,control fuse ,wiring etc.complete in all respect of the size appxo 900(D)X.2400(H)X1000(D)X	Each	3,47,325.00
E235505	Bus Coupler Feeder, 630/800 A ACB ,50KA,3 Pole without release with AI Bus Bars, Protection CT's ,IDMT 3 O/C & 1 E/F,Indicating Lamps,Control Fses and wiring etc.complete in all respect. (Size : 900(W) x 2400 (H) x 1000 (D)	Each	2,46,204.00
E235506	Bus Coupler Feeder, 1000 A ACB ,50KA,3 Pole without release with AI Bus Bars, Protection CT's ,IDMT 3 O/C & 1 E/F,Indicating Lamps,Control Fses and wiring etc.complete in all respect. (Size : 900(W) x 2400 (H) x 1000 (D)	Each	2,59,394.00
E235507	Bus Coupler Feeder, 1250 A ACB,50 KA, 3 Pole without release with AI Bus Bars, Protection CT's ,IDMT 3 O/C & 1 E/F,Indicating Lamps,Control Fses and wiring etc.complete in all respect. (Size : 900(W) x 2400 (H) x 1000 (D)	Each	2,81,377.00
E235508	Bus Coupler Feeder, 1600 A ACB,50KA, 3 Pole without release with AI Bus Bars, Protection CT's ,IDMT 3 O/C & 1 E/F,Indicating Lamps,Control Fses and wiring etc.complete in all respect. (Size : 900(W) x 2400 (H) x 1000 (D)	Each	3,02,480.00
E235509	250 A MCCB Incomer with metering CTs , multi fuction meter compatible to scada ,Ampermeter with SS,Voltmeter with SS,Indicating Lamps,Control Fuse,wiring etc.complete in all respect. Size:900(W)X2400(H)X1000(D)	Each	59,792.00
E235510	400 A MCCB Incomer with Meetering CT's,multi fuction meter compatible to scada ,Ampermeter with SS,Voltmeter with SS,Indicating Lamps,Control Fuse,wiring etc.complete in all respect. Size:900(W)X2400(H)X1000(D)	Each	67,706.00
E235600	LT outgoing Feeder without starters for the following ratings		

Code No	Description	Unit	Rate Rs.
E235601	250 A MCCB as outgoing CT's, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 900(W)X2400(H)X1000(D)	Each	49,241.00
E235602	160 A MCCB as outgoing CT's, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 600(W)X2400(H)X1000(D)	Each	41,327.00
E235603	125 A MCCB as outgoing CT's, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 600(W)X2400(H)X1000(D)	Each	37,810.00
E235604	MCCB up to 100A as outgoing CT's, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 600(W)X2400(H)X1000(D)	Each	37,810.00
E235605	630 A to 1250 A Empty Panel (Without switchgears) Size 900 (W) x 2400 (H) x 1000 (D)	Each	61,551.00
E235700	Compact Substation		
E235701	Note: A) Standard accessories for Transformer:- 1. Name, Rating & Terminal Marking Plate 2. Plain Unidirectional CI Rollers 3. Lifting Lugs 4. off Load Tap Link 5. Winding Temperature Indicator		
E235702	B) Standard accessories for Enclosure:- 1. Name, Rating & Terminal Marking Plate 2. Base Frame 3. Hooters 4. Lifting Lugs 5. Louvers 6. Earthing Terminals 7. Lighting Plug Socket 8. MCB 9. Trip Indications 10. Heaters		
E235703	Compact Substation consists of with 11KV non extensible one way RMU + 1600 KVA 11/0.433KV Dry type Distribution Transformer with Off Load Tapping Link + 4 Pole ACB(2500Amp.) at LT Side along with standard accessories.	Each	46,30,500.00
E235704	Compact Substation consists of with 11KV non extensible one way RMU + 1250 KVA 11/0.433KV Dry type Distribution Transformer with Off Load Tapping Link + 4 Pole ACB(2000Amp.) at LT Side along with standard accessories.	Each	41,67,450.00
E235705	Compact Substation consists of with 11KV non extensible one way RMU + 1000 KVA 11/0.433KV Dry type Distribution Transformer with OLTC & RTCC Panel + 4 Pole ACB(1600Amp.) at LT Side along with standard accessories.	Each	35,72,100.00
E235706	Compact Substation consists of with 11KV non extensible one way RMU + 800 KVA 11/0.433KV Dry type (CRT) Distribution Transformer with Off Load Tapping Link + 4 Pole ACB (1250Amp.) at LT Side along with standard accessories.	Each	31,75,200.00
E235707	Compact Substation consists of with 11KV non extensible one way RMU + 630 KVA 11/0.433KV Dry type Distribution Transformer with Off Load Tapping Link + 4 Pole ACB (1000Amp) at LT Side along with standard accessories.	Each	27,65,070.00

Code No	Description	Unit	Rate Rs.
E235708	Compact Substation consists of with 11KV non extensible one way RMU + 500 KVA 11/0.433KV Dry type Distribution Transformer + 4 Pole MCCB at LT Side along with standard accessories and OCTC tapping Link.	Each	23,68,170.00
E235709	Compact Substation consists of with 11KV non extensible one way RMU + 400 KVA 11/0.433KV Dry type Distribution Transformer + 4 Pole MCCB at LT Side along with standard accessories and OCTC tapping Link.	Each	22,49,100.00
E235710	Compact Substation consists of with 11KV non extensible one way RMU + 315 KVA 11/0.433KV Dry type Distribution Transformer + 4 Pole MCCB at LT Side along with standard accessories and OCTC tapping Link.	Each	21,16,800.00
E235711	Compact Substation consists of with 11KV non extensible one way RMU + 250 KVA 11/0.433KV Dry type Distribution Transformer + 4 Pole MCCB at LT Side along with standard accessories and OCTC tapping Link.	Each	19,71,270.00
E235712	Compact Substation consists of with 11KV non extensible one way RMU + 200 KVA 11/0.433KV Dry type Distribution Transformer + 4 Pole MCCB at LT Side along with standard accessories and OCTC tapping Link.	Each	17,19,900.00
E235713	Compact Substation consists of with 11KV non extensible one way RMU + 160 KVA 11/0.433KV Dry type Distribution Transformer + 4 Pole MCCB at LT Side along with standard accessories and OCTC tapping Link.	Each	16,53,750.00

E-24 FIRE PROTECTION WORK

Code No	Description	Unit	Rate Rs.
E240100	Supplying, Installation, Testing & Commissioning of central govt./ state govt. authorised Fire authority approved Electric Driven Main fire pump for Sprinkler / Hydrant applications suitable for automatic operation and consisting of following details given as A, B, C, D, E,F,G and H. (A) Horizontal Single / Multi stage Centrifugal End suction, back pull out type pump complete for delivery of below mentioned discharge ,including bypass arrangement for Testing of pump (B) Material of construction : Pump Casing - Cast Iron, Impellor - Bronze, Shaft - SS 410, Packing - Mechanical Seal (C) Pump shall be capable of furnishing not less than 150 % of rated capacity at a head not less than 65 % of the rated head. The shut off head shall not exceed 120 % of rated head (D) Squirrel cage induction motor should be IE2 class as per IEC 60034-2-1: 2007, IEC 60034-30: 2008, & IS12615:2011 suitable for 3 phase, 415 V, 50 HZ, Ac supply 2900 / 1450 RPM T.E.F.C confirming to IP:55 , of required HP suitable for the above pump ,along with flexible coupling , coupling guard complete in all respect . (E) Common bed plate fabricated from mild steel channel for installation of pump and Motor including anti vibration pads. (F) Pump must be inspected by third party like RITES / PDIL at manufacturer's premises and inspection report is to be submitted. (G) Suitable cement concreat foundation (1:3:6) duly plastered with (1:4) ratio (H) All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E240101	1620 LPM suitable for 56 Mtr Head, single stage, 2900 RPM	Each	1,49,613.00
E240102	1620 LPM suitable for 70 Mtr Head, single stage, 2900 RPM	Each	1,89,108.00
E240103	2280 LPM suitable for 70 Mtr Head, single stage, 2900 RPM	Each	2,53,054.00
E240104	2280 LPM suitable for 88 Mtr Head, multi stage, 1500 RPM	Each	4,67,646.00
E240105	2850 LPM suitable for 70 Mtr Head, multi stage, 1500 RPM	Each	4,98,076.00
E240106	2850 LPM suitable for 88 Mtr Head, multi stage, 1500 RPM	Each	5,77,066.00
E240107	4500 LPM suitable for 70 Mtr Head, single stage, 1500 RPM	Each	6,00,324.00
E240108	4500 LPM suitable for 88 Mtr Head, multi stage, 1500 RPM	Each	7,47,774.00
E240200	Supplying, Installation, Testing & Commissioning of central govt./ state govt. authorised fire authority approved Diesel Engine driven Pump suitable for automatic operation as per discharge defined		

Code No	Description	Unit	Rate Rs.
	beolw consisting of the following details given as A, B, C, D, E ,F and G .		
	(A) Horizontal Single / Multi stage Centrifugal End suction, back pull out type pump complete for delivery of below mentioned discharge ,including bypass arrangement for Testing of pump		
	(B) Material of construction : Pump Casing - Cast Iron, Impellor - Bronze, Shaft - SS 410, Packing - Mechanical Seal		
	(C)Pump shall be capable of furnishing not less than 150 % of rated capacity at a head not less than 65 % of the rated head. The shut off head shall not exceed 120 % of rated head		
	(D) Radiator cooled Diesel Engine developing suitable BHP for the below mentioned discharge at 1500 / 1800 RPM, flexible coupling and coupling guard with the Pump, common bed plate for mounting of the Engine and Pump,Antivibration damping arrangement by cushy foot, Diesel Engine starting Panel for starting of the engine automatically if the Normal electrical supply fails with a unit of battery bank of 12/24v,180 Ah, Lead Acid Battery with Boost / Trickle charger as required for operation of Diesel engine, Exhaust Pipe of suitable diameter minimum 10 M length (with insulation & Cladding), with muffler, day oil tank of 300 Lts capacity with piping		
	(E) Pump is to be inspected by third party like RITES / PDIL at manufacturer's premises and inspection report is to be submitted.		
	(F) Suitable cement concreat foundation (1:3:6) duly plastered with (1:4) ratio		
	(G). First filling of the fuel tank shall be done by contractor and the prevailing fuel cost at that time shall be reimbursed to the contactor by department.		
	Appropriate OEM/ NABL lab test reports shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E240201	1620 LPM suitable for 56 Mtr Head, single stage, 1800 RPM	Each	4,48,533.00
E240202	1620 LPM suitable for 70 Mtr Head, single stage, 1800 RPM	Each	4,74,865.00
E240203	2280 LPM suitable for 70 Mtr Head, single stage, 1800 RPM	Each	5,53,855.00
E240204	2280 LPM suitable for 88 Mtr Head, multi stage, 1500 RPM	Each	6,98,671.00
E240205	2850 LPM suitable for 70 Mtr Head, multi stage, 1500 RPM	Each	7,75,180.00
E240206	2850 LPM suitable for 88 Mtr Head, multi stage, 1500 RPM	Each	8,47,588.00
E240207	4500 LPM suitable for 70 Mtr Head, single stage, 1500 RPM	Each	9,02,759.00
E240208	4500 LPM suitable for 88 Mtr Head, multi stage, 1500 RPM	Each	10,05,447.00
E240300	Supplying, Installation, Testing & Commissioning of central govt./ state govt. authorised fire authority approved Horizontal single stage Jockey pump with CI Body, Bronze impellor, SS shaft, mechanical seal coupled with Squirrel cage induction motor should		

Code No	Description	Unit	Rate Rs.
	be IE2 class as per IEC 60034-2-1: 2007, IEC 60034-30: 2008, & IS12615:2011 for automatic operation suitable for three phase, 415 V, 50 Hz AC supply with synchronous speed of 2900 RPM ,T.E.F.C type confirming to IP:55 with flexible coupling and coupling guard with the pump ,Common bed plate fabricated from mild steel channel Suitable cement concreat foundation duly plastered with anti vibration pads.complete in all respect. Appropriate OEM/ NABL lab test reports shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E240301	180 LPM suitable for 88 Mtr	Each	1,04,414.00
E240302	180 LPM suitable for 70 Mtr	Each	91,249.00
E240303	180 LPM suitable for 56 Mtr	Each	75,451.00
E240400	SITC of central govt./ state govt. authorised fire authority approved Vertical multistage Jockey pump with SS Body, SS impellor, SS shaft, mechanical seal coupled with Squirrel cage induction motor for automatic operation suitable for three phase, 415 V, 50 Hz AC supply with synchronous speed of 2900 RPM ,T.E.F.C type confirming to IP:55 with flexible coupling and coupling guard with the pump ,Common bed plate fabricated from mild steel channel ,Suitable cement concreat foundation duly plastered with anti vibration pads complete in all respect. Appropriate OEM/ NABL lab test reports shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E240401	180 LPM suitable for 88 Mtr	Each	1,14,946.00
E240402	180 LPM suitable for 70 Mtr	Each	97,701.00
E240500	Supplying, Installation, Testing & Commissioning of central govt./ state govt. authorised fire authority approved single stage Centrifugal End suction, back pull type Terrace pump with Bronze impellor, SS shaft, mechanical seal coupled with Squirrel cage induction motor (IE-2 class) for automatic operation suitable for three phase, 415 V, 50 Hz AC supply ,T.E.F.C type confirming to IP:55 with flexible coupling and coupling guard with the pump ,Common bed plate fabricated from mild steel channel ,Suitable cement concreat foundation duly plastered with anti vibration pads.aincluding cost of suitable rating Control panel as per rating of Motor with 4 pole MCB, automatic DOL starter, Single phase Preventor , overload protection rely, contactors, MCBs , interlocking wiring , ferruling, potential free contact etc complete in all respect. Appropriate OEM/ NABL lab test reports shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E240501	450 LPM with 35 mtr head	Each	76,450.00
E240502	900 LPM with 35 mtr head	Each	95,353.00
E240503	1620 LPM with 35 mtr head	Each	1,22,556.00

Code No	Description	Unit	Rate Rs.
E240600	Providing & fixing 100mm dia bourden type, Stainless steel dial type pressure Gauge (0 - 16 Kg) range, 3 / 8 " BSP bottom entry on Pump Delivery Line complete with Ball valve complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	849.00
E240700	Supplying, Installation, Testing & Commissioning of pressure switches for Main, Jockey, Terrace pump and standby Diesel pumps, including necessary control wiring From pressure switch upto control panel and Ball valve complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	2,035.00
E240800	Providing & fixing vane type water flow switches with contacts for installation in 50 mm to 150 mm dia M.S. pipe for a service pressure up to 20 Kg / Sq.cm complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	4,847.00
E240900	Providing & fixing pressure transducer in M.S. Pipe line (pressure range 3.5 kg/cm ²) suitable for 12 volts/24 volt DC. Including connection etc. as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	3,694.00
E241000	Supplying, Installation, Testing & Commissioning of floor mounted dust and vermin proof compartmentalised cubical type main fire pump control panel made out of CRCA sheet , required hardware ,duly treated for derusting in 7 tank process with dephosphating and with powder coating on both side of panel in desired shade The panel having PU/ Neoprene rubber gasket of not less than 3mm thickness , separate detachable gland plate M.S. base channel ,hinged door with locking arrangement for equipment/switchgear . Thickness of sheet shall not be less than 1.6 mm up to 600 mm length / width of any compartment and be of 2.0 mm above 600 mm. Load bearing structure shall be of 2.0 mm thick sheet supported by base M.S. channel if required . Side walls and cable alley compartments having bolted type doors and having accessories/ switch gear (as per Specf Ch-06 & 08) as below:- complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,91,452.00
	Incomer		
	400 Amp. TPN MCCB (adj.O/L) with Extended ROM, 36 kA, with Thermal magnetic release, Analouge Ammeter, Voltmeter, Selector switches,CT, Indicating Lamps, 500 Amps FP Alum. Bus bar with with heat shrinkable sleeves.		

Code No	Description	Unit	Rate Rs.
	Out going		
	(a) 200 Amp. TPN MCCB(adj.O/L) with Extended ROM, 36 kA, with Thermal magnetic release, Analogue Ammeter, Voltmeter, Selector switches,CT, Indicating Lamps for 'ON', 'OFF', 'TRIP' 1 no. DOL Starter of rating upto 75 HP with thermal over load relay, timer, push buttons, Auto / Manual selector switch, Single phase preventor - 2 Sets		
	(b) 63 Amp. TPN MCCB (adj.O/L) with Extended ROM, 16 kA, with Thermal magnetic release, Digital Ammeter, Voltmeter, Selector switches, CT, Indicating Lamps for 'ON', 'OFF', 'TRIP' 1 no. DOL Starter of 5 - 15 HP with thermal over load relay, timer, push buttons, Auto / Manual selector switch, Single phase preventor - 1 Set		
	(c) One no. Diesel Engine Auto Starting kit with Auto Manual selector switch & 3 attempt starting device, timers, relays, Indicating lamp for High / Low Lub. Oil pressure, High water temperature and engine ON indication, DC ammeter & voltmeter		
	(d) System controller to control Operation Main Electric pumps, Diesel pump, jockey pump in sequence consisting of relays, timers, sensors, annuciation window for fault indication.		
	(e) Appropriate Test Certificate/ report of product/accessories from OEM/Panel Manufacturer shall be submitted.		
E241100	Providing, Fixing, Jointing, Testing & Commissioning of Heavy duty MS C class pipes conforming to IS 3589 / 1239 part-I for hydrent and sprinkler applications including cutting, screwing, welding etc & malleable iron fittings like elbows, tees, flanges, tapers, reducer, with compressed asbestos gaskets etc. fixing the pipe on the wall/ceiling with suitable clamps, hanger and nuts bolts as per approved spacing. complete with painting of one coats of Red Oxide and two or more coats of synthetic enamel paint of Post office red shade complete as required.Complete installtion shall be pressure tested at 14kg/sqcm for 24 hr as per practice complete in all respect. Appropriate Test Certificate/ report of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E241101	20 mm dia	Mtr.	251.00
E241102	25 mm dia	Mtr.	303.00
E241103	32 mm dia	Mtr.	392.00
E241104	40 mm dia	Mtr.	444.00
E241105	50 mm dia	Mtr.	620.00
E241106	65 mm dia	Mtr.	757.00
E241107	80 mm dia	Mtr.	915.00
E241108	100 mm dia	Mtr.	1,303.00
E241109	125 mm dia	Mtr.	1,607.00

Code No	Description	Unit	Rate Rs.
E241110	150 mm dia	Mtr.	1,908.00
E241111	200 mm dia, 6.0 mm thick	Mtr.	2,633.00
E241112	250 mm dia, 6.35 mm thick	Mtr.	3,462.00
E241113	300 mm dia., 7.0 mm thick	Mtr.	4,564.00
E241200	Providing, Fixing, Jointing, Testing & Commissioning of Heavy duty MS C class pipes conforming to IS 3589 / 1239 part-I for hydrent and sprinkler applications underground rings including cutting, screwing, welding etc & malleable iron fittings like elbows, tees, flanges, tapers, reducer with compressed asbestos gaskets, nuts, bolts etc. including laying of pipe in excavted trench of 1.0 mtr depth with cleaning,wrapping and coating of the pipe with 4 mm thick tar based polymaric corrosion protection tape including applying uniform coat of cold pipekot primer as per IS; 10221 for protection against corrision.complete in all respect. (Excavtion of trench shall be paid extra as per Item no E130500). Complete installtion shall be pressure tested at 14kg/sqcm for 24 hr as per practice complete in all respect.Appropriate Test Certificate/ report of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E241201	80 mm dia	Mtr.	1,049.00
E241202	100 mm dia	Mtr.	1,489.00
E241203	150 mm dia	Mtr.	2,174.00
E241204	200 mm dia, 6.0 mm thick	Mtr.	3,006.00
E241300	Supplying and fixing cylindrical air vessel of continuous welded construction for pump room made of 450 mm dia,fabricated out of 10 mm thick dished ends and 8 mm thick MS sheet, 2000 mm in height with air release valve on top and flanged connection to riser, drain arrangement with 25 mm dia drain valve,air release valve,safety valve pressure gauge with required accessories and painting with two coats of Red Oxide and two coat of post office red enamel paint as required complete in all respect. Appropriate Test Certificate/ report of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	21,037.00
E241400	Supplying and fixing cylindrical air vessel of continuous welded construction fixed at riser top made of 250 mm dia, fabricated out of 8 mm thick MS sheet, 1200 mm in height with air release valve on top and flanged connection to riser, drain arrangement with 25 mm dia drain valve,release valve,safety valve pressure gauge with required accessories and painting with two coats of Red Oxide and two coat of post office red enamel paint as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	8,087.00

Code No	Description	Unit	Rate Rs.
E241500	Supplying and Fixing of Y type strainer fabricated out of cast iron/ steel body, strainer shall have 1.6 mm. thick stainless steel sheet perforated screen with 3 mm. dia holes with flange at both ends complete with nuts, bolts, washers, gaskets etc of following sizes. complete in all respect. Appropriate Test Certificate/ report of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E241501	80 mm dia	Each	5,129.00
E241502	100 mm dia	Each	6,225.00
E241503	150 mm dia	Each	9,295.00
E241504	200 mm dia	Each	13,006.00
E241600	Supplying and fixing, testing & commissioning of double flanged sluice valve conforming to IS 780 -1984 of rating PN 16 with non rising spindle, bronze /gun metal seat ISI marked complete with nuts, bolts, washers, gaskets,flanges of following sizes as required. complete in all respect.Appropriate Test Certificate/ report of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E241601	80 mm dia	Each	6,039.00
E241602	100 mm dia	Each	7,895.00
E241603	150 mm dia	Each	11,344.00
E241604	200 mm dia	Each	20,900.00
E241605	250 mm dia	Each	33,885.00
E241700	Providing and constructing masonry chamber 90 x 90 x 100 cms inside with brick work in cement mortar 1:5 (1cement : 5fine sand) for water meter ,M.S. cover (6mmthick sheet with locking arrangement, 600 x600 with M.S. frame etc. all epoxy coated and R.C.C. top slab 1:2:4 mix(1 Cement : 2 coarsesand : 4 graded stone aggregate 20mm nominalsize) including necessary excavation, back filling foundation concrete 1:5:10 mix (1 cement : 5 fine sand and 10 graded stone aggregate 20mmnominal size) leaving a pocket of 30x30 cmwith out concrete and filled with pebbles andinside plastering with cement mortar 1:4 (1 cement : 4 coarse sand) 12 mm thick finishedwith a floating coat of neat cement and outside plaster finished rough complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	15,016.00

Code No	Description	Unit	Rate Rs.
E241800	Supply, installation, testing and commissioning of dual plate non-return valve (PN-16) of following sizes confirming to IS:5312 -1975 complete with flanges,rubber gasket, nut,bolts, washers etc. complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E241801	65 mm dia	Each	4,032.00
E241802	80 mm dia	Each	5,584.00
E241803	100 mm dia	Each	7,135.00
E241804	150 mm dia	Each	10,206.00
E241805	200 mm dia	Each	17,105.00
E241900	Supplying, fixing, testing commissioning of butterfly valve (PN 16) with Bronze/ Gunmetal seat duly ISI marked conforming to IS 13095-1991 complete with flanges,Nuts, Bolts, washers, gaskets of following sizes as required complete in all respect. Appropriate Test Certificate/ report of product/accessories from OEM shall be submitted.All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E241901	50 mm dia	Each	2,177.00
E241902	65 mm dia	Each	2,362.00
E241903	80 mm dia	Each	2,624.00
E241904	100 mm dia	Each	3,644.00
E241905	150 mm dia	Each	5,044.00
E241906	200 mm dia	Each	9,818.00
E241907	250 mm dia	Each	14,868.00
E242000	Providing, installation, testing and commissioning of Brass ball valves (PN-16) duly ISI marked confirming to IS : 9890-1981 complete with flanges,Nuts, Bolts, washers, gaskets etc of following sizes as required complete in all respect. Appropriate Test Certificate/ report of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E242001	20 mm dia.	Each	524.00
E242002	25 mm dia.	Each	675.00
E242003	32 mm dia	Each	1,095.00
E242004	40 mm dia	Each	1,550.00
E242005	50 mm dia	Each	2,211.00

Code No	Description	Unit	Rate Rs.
E242100	Providing & fixing testing & commissioning of installation control valve of cast iron body and brass/bronze working parts comprising of water motor alarm, bronze seat clapper, and clapper arm, hydraulically driven mechanical gong bell to sound continuous alarm when the wet riser/Sprinkler system activates, pressure gauges, emergency releases, strainer, pressure switch, cock valve complete with drain valve and bypass, test control box, ball valves, MS pipe of required size, flanges, orifice plate, gasket etc. of size 150 mm dia as required complete in all respect. Appropriate Test Certificate/ report of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	36,781.00
E242200	Providing, Fixing, Testing & Commissioning of single headed oblique pattern hydrant landing valve (internal/external) ISI marked confirming to IS:5290-1983 (Type-A) /IS: 908 - 1975 with 80 mm dia flanged inlet & 63 mm dia instantaneous type female outlet coupling with cast iron wheel complete with cap and chain, twist release type plug and all accessories complete in all respect. Appropriate Test Certificate/ report of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E242201	Stainless Steel (SS 316) material	Each	5,492.00
E242202	Gun Metal material	Each	7,844.00
E242300	Supplying and fixing orifice plate made of 6 mm thick stainless steel with orifice of required size in between flange & landing valve of external and internal hydrant to reduce pressure to working pressure of 3.5 kg/cm ² complete with rubber gasket, GI bolts, nuts, washers etc. as required complete in all respect. Appropriate Test Certificate/ report of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,081.00
E242400	Supplying and fixing of Non-percolating flexible hose (RRL type-A) ISI marked confirming to IS:636, 63 mm dia, 15 mtr. Long RRL hose pipe with instantaneous type 63 mm dia male and female couplings (Confirming to IS:903) duly bound and riveted to hose pipes with copper rivets and copper wire etc. as required complete in all respect. Appropriate Test Certificate/ report of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	IS:5132 - 1969	
E242401	With Stainless steel Coupling	Each	4,349.00
E242402	With Gun Metal Coupling	Each	5,385.00

Code No	Description	Unit	Rate Rs.
E242500	Supplying & fixing Short Branch Pipe with Nozzle ISI marked conforming to IS: 903, made of following material , fitted with 20mm (nominal internal diameter) bore nozzle, for projecting water in form of solid jet. The Branch shall have 63mm Male Instantaneous Inlet, suitable for use with 63 mm size Fire fighting hoses. H.P. tested to 21 kgf/cm ² for 2.5 minutes complete in all respect. Appropriate Test Certificate/ report of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E242501	Stainless Steel (SS 316) material	Each	1,843.00
E242502	Gun Metal material	Each	2,531.00
E242600	Supplying and fixing first -Aid Fire hose reel wall mounted swinging type with MS construction spray painted in post office Red, conforming to IS 884-1985 with upto date amendments, complete with the following as required. (A) 30 m long 20 mm (nominal internal) dia water hose (B) 20 mm (nominal internal) dia gun metal globe valve & nozzle 5mm orifice (C) Drum and brackets for fixing the equipments on wall. (D) Connections from riser with 25 mm dia stop valve (gun metal) & M.S. pipe complete in all respect. Appropriate Test Certificate/ report of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E242601	with Thermoplastic (Textile reinforced) hose Type -2 as per IS: 12585 -1988	Each	9,086.00
E242602	with High Pressure Braided Rubber Hose as per IS:5132 - 1969	Each	9,692.00
E242700	Supplying and fixing Fire Brigade In let Connection of CI body with Gun Metal/stainless steel male instantaneous inlet couplings complete with PVC blank cap and chain as required for 150mm dia MS pipe connection, conforming to IS 903 as required of following way :- complete in all respect. Appropriate Test Certificate/ report of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E242701	2 Way	Each	6,243.00
E242702	3 Way	Each	7,761.00
E242703	4 Way	Each	9,278.00

Code No	Description	Unit	Rate Rs.
E242800	Providing and fixing of Gun Metal/stainless steel Fire brigade Suction hose coupling (draw out connection) with nut for female coupling as per IS:902-1974 complete with 100mm dia valve, complete with nut bolts and rubber insertion complete as required complete in all respect. Appropriate Test Certificate/ report of product/accessories from OEM shall be submitted.All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	7,305.00
E242900	Supplying and fixing of Hose Cabinet made of 1.6 mm thick MS sheet with 6 mm thick glazed glass doors including necessary locking arrangement suitable to accommodate external hydrant with butterfly valve, 2 Nos 15 Mtr. Long Hose pipe, 1 No. branch pipe, mounted on wall duly painted with post office red externally and white internally with synthetic enamel paint complete in all respect, for internal/external hydrant complete as required. Appropriate Test Certificate/ report of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E242901	size 750 mm x 600 mm x 250 mm	Each	5,399.00
E242902	size 2100 mm x 900 mm x 715 mm	Each	14,171.00
E243000	Providing & fixing of size 0.9 M wide x 1.8 M height Indoor Hose Cabinet shutter suitable for accomodating hydrants made of Tubular rectangular pipe (50X25mm) having central opening 6mm thick glass glazed door having necessary locking arrangement, painting (one coat primer & two coats of paint) suitable for housing 2 Nos. RRL hose pipe, 1 no branch pipe, first Aid hose Reel etc . as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	8,403.00
E243100	Providing, fixing, testing & commissioning of 15 mm dia size quartzoid bulb type sprinkler heads suitable for 68 degree centigrade rating standard response (UL/FM/LPC/TAC Listed/Approved) chrome plated complete in all respect of the following type complete in all respect. Appropriate Test Certificate/ report of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E243101	Pendant/ Upright type	Each	223.00
E243102	Sidewall Sprinklers (ordinary)	Each	252.00
E243103	Extended Throw Sidewall type .	Each	324.00
E243104	Concealed type	Each	743.00

Code No	Description	Unit	Rate Rs.
E243200	Providing & fixing 10 SWG chrome plated brass 100 mm dia decorative flanges(rossette) / escutcheon plates fixed at junction of Sprinkler piping with the false ceiling complete in all respect. Appropriate Test Certificate/ report of product/accessories from OEM shall be submitted.All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	59.00
E243300	Providing, fixing, testing and commissioning 25mm diameter inspecting and testing assembly with gunmetal isolation valve gunmetal sight glass bypass valve and connected to 50mm drain line complete as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	4,201.00
E243400	Supply & Fixing of Fire Man's Axe with carbon steel head & rubber moulde handel and confirming to IS :926 with length approx 0.4 M & weight 3.0 Kg. complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	717.00
E243500	Supply and Fixing of Stainless Steel Flexible Hose Pipe, Made of Corrugated Stainless Steel, Rated Pressure 200psi –Assembly complete with: Inlet nipple with 1" NPT male thread, outlet reducer with 1/2" NPT female thread to sprinkler head, 700mm Square Bar, Centre Clamp & 2 Nos side brackets. complete as required complete in all respect. Appropriate Test Certificate/ report of product/accessories from OEM shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E243501	700 mm Long	Each	925.00
E243502	1000 mm Long	Each	1,066.00
E243600	SITC of UL 10th edition / EN54 VDS approved IP40 Analog addressable Multi criteria (two optical/Smoke sensor to reduce false alarm) type Photo smoke detector with mounting base & LED etc including the cost of all accessories,connecting wires,fixing arrangement, Labour, T&P etc. as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E243601	with inbuilt isolator or with isolator base	Each	3,159.00
E243700	SITC of IP40 Analouge Addressable type Heat Detectors (Thermal Detectors): GRADE-I with solid state design with sensing element combination of fixed type and rate of rise of temperature mounting base & LED shall have UL 10th edition / EN54 VDS approved certification etc including the cost of all accessories,connecting wires,fixing arrangement, Labour, T&P etc. as required complete in		

Code No	Description	Unit	Rate Rs.
	all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E243701	with inbuilt isolator or with isolator base	Each	2,948.00
E243800	Supply installation testing and commisioning of IP 40 Beam detector along with Addressable interface module having a coverage area with a distance of min. 10 m and max. 100 m, Operating temperature range: -20 C to +55 C, Response sensitivity of 40% , shall have UL/EN54 certification including transmitter and receiver unit with mounting base & LED etc including the cost of all accessories,connecting wires,fixing arrangement, Labour, T&P etc. as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	55,576.00
E243900	Supply, Installation, Testing and Commissioning of IP 40 Stand alone Loop Powered Addressable sounder with 5 different tone variants selection options & adjustable sound pressure by 5 levels, the sound pressure 90 dB , it should be programmed from the panel. Shall have EN54 /UL Certification including the cost of all accessories,connecting wires,fixing arrangement, Labour, T&P etc. as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
	with inbuilt isolator or with isolator module	Each	2,856.00
E244000	Supply, Installation, Testing and Commissioning of IP52 Addressable (MCP) Manual Break Glass/ flap Unit (Double action) shall have UL/EN54 certification shall be constructed of Lexan with clearly visible operating instructions provided on the cover. The word FIRE should appear on the front of the stations in raised letters, including the cost of all accessories,connecting wires,fixing arrangement, Labour, T&P etc. as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E244001	with inbuilt isolator or with isolator module	Each	3,230.00
E244100	Supply, Installation, Testing and Commissioning of Stand alone Loop Powered Addressable strobe light Shall have EN54 /UL Certification.including the cost of all accessories,connecting wires,fixing arrangement, Labour, T&P etc. as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E244101	with inbuilt isolator or with isolator module	Each	2,272.00
E244200	SITC addresable automatic fire duct detector for monitoring of ventilation ducts with air velocity of 20 m/s which can perform alarm pattern analysis, with even response sensitivity for all fires with		

Code No	Description	Unit	Rate Rs.
	smoke development with 1 no outlet tube 7.5 cm long with housing complete , Shall have EN54 /UL Certification including the cost of all accessories,connecting wires,fixing arrangement, Labour, T&P etc. as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E244201	with inbuilt isolator or with isolator base.	Each	6,960.00
E244300	SITC of Response Indicator for addressable type detectors as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	610.00
E244400	Supply installation testing and commisioning of Addressable control (input/output) modules/ Relay Module for shutting down lifts, AHU's, Acknowledgement of Sprinkler system etc. with potential free contact monitoring Shall have EN54 /UL Certification. including the cost of all accessories,connecting wires,fixing arrangement, Labour, T&P etc. as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E244401	with inbuilt isolator or with isolator module	Each	4,074.00
E244500	Supply, Installation, Testing and Commissioning of Microprocessor based inteligent, Analogue addressable fire alarm panel with CPU redundancy & min 640 charactor/ 6" touch screen display , shall have UL 10th edition / EN54 VDS approved certification, modular, expandable networkable loop Fire Alarm Control Panel with each loop capacity of min 125 detectors per loop with total of 250 detectors & devices with Loop length up to 1.5 KM. Minimum 5000 history event facility . Panel shall be Compatible for Seamless integration with PA system and both system should be of the same make. The panel shall have 230 + 5 % volts power supply, Automatic battery charger 24V, sealed lead acid maintenance free batteries sufficient for 24 hours normal working and then be capable of operating the system for 30 minutes during emergency conditon. Loop interface cards, communication module, inbuilt networking port (both RS485 & Ethernet),Serial port for printer, two supervisory inputs,two position key switch and USB port for programming. including the cost of all accessories,connecting wires,fixing arrangement, Labour, T&P etc. as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E244501	1 - Loop Panel	Each	1,65,943.00
E244502	2 - Loop Panel	Each	2,05,358.00
E244503	Add Extra for per Loop expansion beyond Two Loop	per Loop	43,474.00

Code No	Description	Unit	Rate Rs.
E244600	Supply, Installation, Testing and Commissioning Active Repeater Panel for Fire Alarm System with UL/EN54 certification with inbuilt networking port (both RS485 & Ethernet), Serial port for printer, two supervisory inputs, two position key switch and USB port for programming. The Repeater Panel shall allow users to acknowledge, reset, silence, program, view history events etc (All functions similar to main panel) The user interface of the repeater panel shall be same as the Main Controller with menu driven user interface with smart search including the cost of all accessories, connecting wires, fixing arrangement, Labour, T&P etc. as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work, refer Annexure "A" attached with this BSR.	Each	67,405.00
E244700	Supply, installation testing and commissioning of EN-54 Certified IP based PA controller capable of adding 12 ZONE and expandable upto 50 zones with full digital functionality same with FACP OEM, it shall contain 12 speaker line outputs. 5000 fault warning and event conditions log. Built in message manager for 60 emergency/ business calls up to 60 minutes. It also contains EN-54 certified Call Station with extension keypad to serve minimum 12 zones, gooseneck microphone with supervised electret microphone, integrated loudspeaker for system sounds, customizable function and speed dial buttons. Possible to use keys (push buttons) for Zone select, source select, level control, emergency on/off, message on/off, failure acknowledge/reset. Call Station is completely supervised by system controller. Power Amplifier of 480 W in a 3U high housing with 70 V / 100 V and 8 ohm outputs, Dual inputs with priority switching, 100 V input for slave operation on 100 V speaker line, Mains, battery back-up, including the cost of all accessories, connecting wires, fixing arrangement, Labour, T&P etc. as required complete in all respect. OEM appropriate test certificate shall be submitted. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work, refer Annexure "A" attached with this BSR.	Each	3,41,903.00
E244800	Supply, installing, testing & commissioning of PA system Operator Console of following wattage to be installed with Conventional fire alarm system complete with following capacity, channel mixing amplifier, 1 no cardioid goose neck microphone, 1 no professional grade cassette deck/ CD Player, 16 zone floor selector console, equipment rack complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work, refer Annexure "A" attached with this BSR.		
E244801	1 x 120 Watt	Each	28,099.00
E244802	1x 240 Watt	Each	42,176.00
E244803	1x 350 Watt	Each	53,437.00

Code No	Description	Unit	Rate Rs.
E244900	SITC 6 watt Speaker mounted in M S sheet box with perforated front mesh for PA and Emergency System complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	815.00
E245000	Supply and installation with bracket / supports water based fire extinguisher Stored pressure type EN PED Approved and CE marked conforming to current and valid BIS certification IS 15683:2018 suitable for A class of fires Complete with delivery hose, squeeze grip release valve, locking arrangement, pressure gauge . Extinguisher should be pressurized using high grade Dry Nitrogen as per IS 1747 standard. OEM declaration should be submitted. Serial no. and date of manufacturing should be embossed or printed on the body of the fire extinguisher. The firm should submit the product certificate from an EN notified body & product performance test report from NABL accredited Lab as per IS 15683. . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E245001	Capacity - 6 Ltrs.	Each	2,883.00
E245002	Capacity - 9 Ltrs.	Each	3,446.00
E245100	Supply & Fixing ISI marked conforming to current and valid BIS certification IS 15683:2006 approved Poratable Fire Exitnguisher, Mech. Foam type (AFFF) of following capacity with gun-metal cap and nozzle and Complete with delivery hose, squeeze grip release valve, locking arrangement, pressure gaug complete in all respect. Extinguisher should be pressurized using high grade Dry Nitrogen as per IS 1747 standard, OEM declaration should be submitted. Serial no. and date of manufacturing should be embossed or printed on the body of the fire extinguisher. The firm should submit the product certificate from an EN notified body & product performance test report from NABL accredited Lab as per IS 15683. . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E245101	Capacity - 6 Ltrs.	Each	2,838.00
E245102	Capacity - 9 Ltrs.	Each	3,366.00
E245200	Supply & Fixing of current and valid BIS certification IS: 15683:2018 approved Portable fire Extinguisher, Carbon-dioxide type flat base including valve, discharge hose of not less than 10 mm dia. min. 600 mm long & complete in all respects including initial fill with CO2 gas confirming to IS:307-1966 filled to a filling ratio of not more than 0.667 and wall suspension bracket . bidder must have valid PESO license to refill and store compressed gas cylinders as per Gas Cylinder rules 2004 , vessel should be PESO Approved. carbon dioxide gas shall conform to IS 15222 with latest amendment. Co2 Cylinder shall be conform to all the requirement given in IS		

Code No	Description	Unit	Rate Rs.
	7285:2004. Serial no. and date of manufacturing should be embossed or printed on the body of the fire extinguisher. The firm should submit the product certificate from an EN notified body & product performance test report from NABL accredited Lab as per IS 15683. . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E245201	Capacity 3.0 Kg.	Each	9,041.00
E245202	Capacity 4.5 Kg.	Each	10,361.00
E245300	Supply & Fixing of ABC Type (MAP 50) type powder Fire Extinguisher (Stored Pressure type) of following capacity duly current and valid BIS certification conforming to IS: 15683:2006, with Dry chemical powder used as extinguishing agent should be Mono Ammonium Phosphate 50% concentration conforming to IS 14609:1999. OEM will produce supplier certificate complete with squeeze grip release valve, locking arrangement, pressure gauge and bracket including initial fill and wall suspension complete in all respect. Serial no. and date of manufacturing should be embossed or printed on the body of the fire extinguisher. The firm should submit the product certificate from an EN notified body & product performance test report from NABL accredited Lab as per IS 15683. . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E245301	2 kg	Each	3,002.00
E245302	4 kg	Each	4,460.00
E245303	6 kg	Each	5,061.00
E245304	9 kg	Each	7,036.00
E245400	Supply & Fixing of ISI marked conforming to IS : 2878 Fire Extinguisher, Trolley mounted, CO2 (gas pressure) type capacity 22.5 Kg. with gun-metal cap.delivery hose horn, trolley, handle, wheel type release valve, locking arrangement complete in all respect. bidder must have valid PESO license to refill and store compressed gas cylinders as per Gas Cylinder rules 2004 , vessel should be PESO Approved. carbon dioxide gas shall conform to IS 15222 with latest amendment. Co2 Cylinder shall be conform to all the requirement given in IS 7285:2004. Serial no. and date of manufacturing should be embossed or printed on the body of the fire extinguisher. The firm should submit the product certificate from an EN notified body & product performance test report from NABL accredited Lab as per IS 15683. . All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	23,612.00

Code No	Description	Unit	Rate Rs.
E245500	Supplying and Fixing of fire bucket stand made out of MS angle with one coat of primer and two coat of enamel paint of approved shade including platform and associated civil works each stand should have four nos fire buckets of 24 gauge galvanized steel sheet, standard 9 litre capacity and of round bottom shape, painted white inside and red outside and black on the bottom, inscribed with letters "Fire" in black and gold as per IS 2546-1974 at approved location as per direction of Engineer incharge complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	4,713.00
E245600	Providing, Fixing, of Photo luminescent Self charge EXIT Sign boards of approximate size 12" x 6" The colour combination and letter size shall be in accordance with IS: 9457-1980, IS: 12349-1988. complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	991.00
E245700	Refilling of 2 Kg ABC type fire Extinguisher including replacement of defective parts like discharge hosepipe, nozzle,Squeeze Grip valve, lock guard or pin,pressure gauge etc.as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	408.00
E245800	Refilling of 4 Kg ABC type fire Extinguisher including replacement of defective parts like discharge hosepipe, nozzle,Squeeze Grip valve, lock guard or pin,pressure gauge etc.as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	808.00
E245900	Refilling of 6 Kg ABC type fire Extinguisher including replacement of defective parts like discharge hosepipe, nozzle,Squeeze Grip valve, lock guard or pin,pressure gauge etc.as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,208.00
E246000	Refilling of 9 Kg ABC type fire Extinguisher including replacement of defective parts like discharge hosepipe, nozzle,Squeeze Grip valve, lock guard or pin,pressure gauge etc.as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,799.00
E246100	Refilling of 9 ltr.Foam type fire Extinguisher including replacement of defective parts like discharge hosepipe, nozzle,Squeeze Grip valve, lock guard or pin,pressure gauge etc.as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,315.00

Code No	Description	Unit	Rate Rs.
E246200	Refilling of 4.5 Kg CO2 gas type fire Extinguisher including replacement of cartridge, defective parts like discharge hosepipe, nozzle,Squeeze Grip valve, lock guard or pin,pressure gauge etc.as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,106.00
E246300	Refilling of 22.5 Kg CO2 gas type fire Extinguisher including replacement of cartridge, defective parts like discharge hosepipe, nozzle,Squeeze Grip valve, lock guard or pin,pressure gauge etc.as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	4,742.00
E246400	Refilling of 9 ltr capacity water stored pressure type fire Extinguisher including replacement of cartridge, defective parts like discharge hosepipe, nozzle,Squeeze Grip valve, lock guard or pin,pressure gauge etc.as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	1,119.00
E246500	Painting (at least two coats or as required) on all type of portable fire extinguishers as per colour code including removal and cleaning of old paint etc.as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	224.00
E246600	Painting (at least two coats or as required) on all type of trolley mounted type fire extinguishers as per colour code including removal and cleaning of old paint etc.as required complete in all respect. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .	Each	447.00

E-25 HIRE CHARGES FOR PA SYSTEM & TEMPORARY LIGHTING

Code No	Description	Unit	Rate Rs.
E250200	Hire charges for LED Flood light luminaire (white or warm white as required)for 200- 250 watt with the standard housing ,pole & mounting accessories with wiring, connection with skilled operator to operate system as and when etc as required. (If work contineue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	601.00
E250300	Hire charges for weather proof round LED Rope/neon flex LED / Flexible strip type LED having 2 to 5 watts/meter capacity and consisting suitable power adapter with mains , switchgear etc complete with connection with skilled operator to operate system as and when etc as required. (If work contineue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Mtr/day	8.00
E250400	Hire charges for IP 66 protected programmable RGB LED flood light with alluminium alloy housing and having 180 degree bracket adjustment complete with driver switchgear , wiring, connection , testing etc. with skilled operator to operate system as and when etc as required. (If work contineue for more then one day , rates for next subsequent days will be 50% of the original rates.)		
E250401	100 watt	Each/Day	514.00
E250402	150 watt	Each/Day	583.00
E250403	180 watt	Each/Day	858.00
E250404	300 watt	Each/Day	1,200.00
E250500	Hire Charges for LED Screen Day light type of suitable size for Display complete with mounting arrangement/scaffolding, masking of mounting stand, signal booster, network switch /splitter, data and power cables and sound system arrangement etc. with skilled operator to operate system as and when etc as required. (If work contineue for more then one day , rates for next subsequent days will be 50% of the original rates.)	sq.ft/ day	266.00
E250600	Hire Charges for HD Video camera suitable for HDMI output, recording in DVD/hard disk fuction complete with two operator as and when etc as required. (If work contineue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	5,594.00
E250700	Hire charges for video Projection Arrangement (excluding screens) with 3 Nos. Video Camera (PWM 120 sony NX 5Z7/Equivalent) including mixer (Pansonix MX70/Data Video MX500/ Equivalent) Complete with required HDMI/VGA etc. wiring VTR, switchers, with skilled operator to operate system as and when etc as required. (If work contineue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	35,800.00

Code No	Description	Unit	Rate Rs.
E250800	Hire charges of Crane with operators for video camera for 360° movement complete arrangement with skilled operator to operate system as and when etc as required. (If work continue for more than one day , rates for next subsequent days will be 50% of the original rates.)	Job / day	10,743.00
E250900	Providing experienced and Highly skilled/skilled/ semi-skilled/Un Skilled labour for electric repair/ maintenance / operation of Air conditioning/Air cooling/Fire fighting/Lift/DG set/CCTV/EPABX or any other electromechanical systems as per requirement (one shift of 8 Hrs per day for 26 Working Days in a month)		
E250901	Highly skilled Labour	Each Per Month	9,956.00
E250902	skilled Labour	Each Per Month	8,197.00
E250903	Semi skilled labour	Each Per Month	7,845.00
E250904	Un skilled labour	Each Per Month	7,493.00
E250910	Add for extra working on Holidays.		
E250911	Highly skilled Labour	Each Per Day	383.00
E250912	skilled Labour	Each Per Day	315.00
E250913	Semi skilled labour	Each Per Day	301.00
E250914	Un skilled labour	Each Per Day	288.00
E250920	NOTE: Over time rates shall be two times of that category.		
E250930	NOTE: Part time rates up to 4 Hours shall be charged @ 50% of that category .		
E250940	NOTE: Part time rates for more than 4 Hours but less than 8 Hours shall be charged @ 100% of that category .		
E251000	Charges for Providing of experienced and Highly skilled/ skilled/semi-skilled/ Un skilled labour for electric repair/ maintenance/operation of Air conditioning /Air cooling / Fire fighting /Lift/D G set /CCTV/EPABX or any other electromechanical services/ systems as required.(One shift of 8 Hours per day)		
E251001	Highly Skilled Labour	shift / day	383.00
E251002	Skilled Labour	shift / day	315.00
E251003	Semi skilled labour	shift /	301.00

Code No	Description	Unit	Rate Rs.
E251004	Un skilled labour	day shift / day	288.00
E251005	Hire charges for 42" HD LED/Plazma TV complete with mounting arrangement , connections, testing etc. with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Job / day	3,581.00
E251100	Hire charges for 50/55" HD LED/Plazma TV complete with mounting arrangement , connections, testing etc.with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Job / day	5,251.00
E251200	Hire charges for Equipments Required for Public Address & Sound System for a very important public function/ VVIP visits including transportation,T&P,Scaffolding, testing and connections with trial etc. with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)		
E251201	VERTEK / RCF TT+ (55/56) 3 way Speakers 3500 to 8000 watt JBL or Equivalent make	Each/Day	3,193.00
E251202	VERTEK / RCF TT+ (55/56) 3 way Speakers above 8000 watt JBL or Equivalent make.	Each/Day	4,551.00
E251203	VERTEK / RCF TT+ (55/56) sub Woofers sound output 4000 to 8000 watt JBL or Equivalent make.	Each/Day	3,193.00
E251204	VERTEK / RCF TT+ (55/56) sub Woofers sound output above 8000 watt JBL or Equivalent make.	Each/Day	4,551.00
E251205	Core i5/i7 Laptop with HDMI cable & Stereo sound output make-HP/Dell/Lenovo or Equivalent.	Each/Day	639.00
E251206	Digital CD consoles with built in CD players & DJ mixer make : pioneer or equivalent.	Each/Day	3,193.00
E251207	D.I. Boxes of Make DBX or equivalent .	Each/Day	1,278.00
E251208	32 Channels Equilizers make-DBX or Equivalent.	Each/Day	5,109.00
E251209	Cross Overs for the speakers Distributions make- DBX or equivalent.	Each/Day	3,193.00
E251210	5000 watts Amplifiers for up to the 06 nos Vertek 3 way speakers make -crown or equivalent	Each/Day	3,193.00
E251211	6000 watts Amplifiers for up to the 04 nos Vertek sub woofers make-Crown or Equivalent.	Each/Day	3,193.00
E251212	Suspension kits with suitable stand for the High wattage speakers	Each/Day	1,278.00
E251213	Required necessary audio connection cables, speakers cables,electrical wiring, boards, connector etc for speakers/horns etc. as required	Job/Day	3,193.00

Code No	Description	Unit	Rate Rs.
E251214	Flying Speakers 1200 watts RMS JBL/Yamaha/RCF/ Eq	Each/Day	2,555.00
E251215	Top Speakers 1200 watts RMS JBL/Yamaha/RCF/Eq	Each/Day	2,555.00
E251216	Monitor Speakers JBL/Yamaha/RCF/ Eq (For Stage)	Each/Day	1,916.00
E251217	Cordless Mike Make:-Shure/AKG or equivalent .	Each/Day	384.00
E251218	CD Player Make:-Pioneer /Philips or Equivalent.	Each/Day	639.00
E251219	Digital Mixer 32 Channel, 12 output Make:-Yamaha/Sound Craft or equivalent.	Each/Day	3,193.00
E251220	Analog Mixer 24 Channel, 7 output Make:- Yamaha/Sound Craft or equivalent.	Each/Day	2,555.00
E251221	Effect Processors. Make:-LSS/Behringer or equivalent.	Each/Day	639.00
E251222	Compressors. Make:-LSS/Behringer or equivalent.	Each/Day	639.00
E251223	Amplifiers 700 Watt RMS at 100 Ohm. Make:-Ahuja/QSC or equivalent.	Each/Day	639.00
E251224	Podium Microphones. Make:-Shure/AKG or equivalent.	Each/Day	639.00
E251225	Mikes with Big stand. Make:-Shure/AKG or equivalent.	Each/Day	639.00
E251226	Head Phone. Make:-Shure/AKG or equivalent.	Each/Day	958.00
E251227	Digital Audio recorder. Make:-Cinex or equivalent.	Each/Day	2,555.00
E251228	31 Band Equalizer. Make:-LSS/Behringer or equivalent.	Each/Day	2,555.00
E251229	Snake Cable 2 x 100 mtr as required.	Job/Day	511.00
E251230	Crossover Make:-LSS/Behringer or equivalent.	Job/Day	1,278.00
E251300	Hire charges for 90-150 Watt LED flood light luminaire with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)		
E251301	With suitable pole	Each/Day	103.00
E251302	With out pole	Each/Day	77.00
E251400	Hire charges for LED post top lantern upto 25-45 watt on suitable pole with skilled operator to operate system as and when etc as required. as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	95.00
E251500	Hire charges for light point complete with lamp,holder,wiring in casing or in PVC conduit , controlling switch and circuit protection MCB's with skilled operator to operate system as and when etc as required. for shops/ stalls etc. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	69.00

Code No	Description	Unit	Rate Rs.
E251600	Hire charges for power/light plug on board incl. wiring in PVC casing or in PVC conduit , controlling switch and circuit protection MCB's with skilled operator to operate system as and when etc as required. for shops/ stalls etc. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	103.00
E251700	Hire charges for Jhalar bulb 15/25 watt coloured/clear with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	3.00
E251800	Hire charges for miniature bulb with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)		
E251801	for 60 nos. 6.2 v miniature bulb	Each/Day	12.00
E251802	for 50 nos. 0.25 v LED miniature bulb	Each/Day	13.00
E251900	Hire charges of niwar patti with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)		
E251901	niwar patti 60 no. 6.2 v miniature lamps.	Each/Day	15.00
E251902	niwar patti 50 no. 0.25 v LED miniature lamps.	Each/Day	21.00
E252000	Hire charges for LED tube light fixture with 18/20 watt with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	34.00
E252100	Hire charges for Light fixture with CFL 9 / 11/ 13 / 15 watt with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	17.00
E252200	Hire charges for LED bulb 6 watt to 13 watt of white/ warm white colour etc. mounted on wooden batten/niwar patti or in holder (with required CCT)as per choice of client or engineer in charge complete with wiring etc with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	10.00
E252300	Hire charges for 250/400 watt metal halide luminaire with lamp and pole of required height with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	129.00
E252400	Hire charges for 500/1000 watt appollo light for shops/ stalls with skilled operator to operate system as and when etc as required. (with lamp) (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each/Day	69.00

Code No	Description	Unit	Rate Rs.
E252500	Hire charges for Silent type D.G. Set, including change over switch. Control panel etc. and excluding POL with skilled operator to operate system as and when etc as required. of following capacity:		
E252501	15 to 25 KVA	Each/Day	2,574.00
E252502	40 KVA	Each/Day	3,603.00
E252503	62.5 KVA	Each/Day	4,288.00
E252504	82.5 KVA	Each/Day	5,319.00
E252505	125 KVA	Each/Day	7,206.00
E252506	180 KVA	Each/Day	9,436.00
E252507	250 KVA	Each/Day	11,152.00
E252508	500 KVA	Each/Day	17,158.00
E252600	Hire charges of Main service line for 3 phase connection upto 50 mtr. Length (without any joint) including meter board, panel/distribution Board and supports with skilled operator to operate system as and when etc as required. (If work continue for more then one week , rates for next subsequent weeks will be 50% of the original rates.)		
E252601	Upto 25.0 sq.mm size PVC insulated and Sheathed cable(Armoured or Un-armoured as required.)	Each / week	257.00
E252602	above 25.0 sq.mm & upto 95 Sq.mm PVC insulated and Sheathed cable(Armoured or Un-armoured as required.)	Each / week	386.00
E252603	above 95.0 sq.mm PVC insulated and Sheathed cable(Armoured or Un-armoured as required.)	Each / week	686.00
E252700	Hire charges of Sub service line for single/ three phase connection upto 30 mtr. Length including dist. Board and supports with skilled operator to operate system as and when etc as required. (If work continue for more then one week , rates for next subsequent weeks will be 50% of the original rates.)		
E252701	Single phase upto 6 Sqmm PVC insulated and Sheathed cable	Each / week	69.00
E252702	Three phase & neutral upto 10 SqmmPVC insulated and Sheathed cable	Each / week	137.00
E252800	Hire charges for Desert cooler of size 20" fan with stand, wiring including filling of water complete with skilled operator to operate system as and when etc as required.	Each / week	215.00
E252900	Hire charges for pedestal fan of size 18" / ceiling fan of size 48"/56" sweep including connections etc.with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	85.00
E253000	Supply and filling of POL for DG sets	KVA / Hour	13.00

Code No	Description	Unit	Rate Rs.
E253100	Hire charges for LPG Heater including commercial gas cylinder,regulator and operator with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	2,059.00
E253200	Hire charges for Mist Fan complete with required connections and operator with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	858.00
E253300	Hire charges for Jumbo polycarbonate/fiber body moveable desert cooler complete with water filling and operator with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	1,201.00
E253400	Hire charges for following type of Airconditioners including copper piping , drain piping and electrical connections with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)		
E253401	1.5 TR Split AC	Each / day	3,298.00
E253402	2.0 TR Split AC	Each / day	3,491.00
E253403	3.0 /4.0 TR Tower type split AC	Each / day	6,789.00
E253404	5.0/5.5 TR ductable type Split AC	Each / day	9,698.00
E253500	Hire charges of public address system for a important public function with 5/ 6 no. of microphones with following nos of stand Hi Fi box, speakers/ Horns, stand by amplifiers , battery backup complete including transportation etc. with skilled operator to operate system as and when etc as required. : (At district Head Quarters) (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)		
E253501	4 Nos 3 Way Big Box Speakers,(upto 5000 audiences)	Each / day	5,319.00
E253502	6 Nos 3 Way Big Box Speakers,(above 5000 to 10000 audiences)	Each / day	10,294.00
E253503	8 Nos 3 Way Big Box Speakers,(above 10000 to 25000 audiences)	Each / day	14,585.00
E253504	10 Nos 3 Way Big Box Speakers,(above 25000 audiences)	Each / day	18,874.00
E253505	With 5/6 Mikes, 15 to 20 nos. reflex horns (upto 25000 audiences)	Each / day	6,863.00
E253506	With 5/6 Mikes, 25-30 nos. reflex horns (above 25000 audiences)	Each / day	9,436.00
E253600	Hire charges for table microphone (Delegate type) (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	344.00
E253700	Hire charges for clip microphone with long lead lavilier. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	411.00

Code No	Description	Unit	Rate Rs.
E253800	Hire charges for collar cordless/ Handheld microphone with long lead lavilier. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	514.00
E253900	Hire charges for public address system consisting of 2 Microphone with stand, Battery Backup, Amplifier, 2 Loudspeakers with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	2,230.00
E254000	Hire charges for 2 nos. 3 way Bigbox speakers with 5/6 Microphones, mixer, echo chamber, Amplifier, Battery back up with skilled operator to operate system as and when etc as required. for Musical programme. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Job / day	8,579.00
E254100	Hire charges for extra battery of 12 V , 125 AH with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	257.00
E254200	Hire charges for cut glass chendilier of 20 lamps with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	686.00
E254300	Hire charges for cut glass chendilier of 15 lamps with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	514.00
E254400	Hire charges for cut glass chendilier of 7 lamps with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	241.00
E254500	Hire charges for spot /palican lights (1000 watt) for stage function with dimmer as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	344.00
E254600	Hire charges for colour effect scanners for stage functions with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	1,887.00
E254700	Hire charges for jumbo strove light for stage functions with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	1,201.00
E254800	Hire charges for Back or Front Projection Screen with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each / day	514.00

Code No	Description	Unit	Rate Rs.
E254900	Hire charges for High Lumens LCD Projectors with operator (3500 Lumens) and projector screen of size 8' X 6' with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each p. day	2,574.00
E255000	Hire charges for Medium Lumens LCD Projectors with operator (2500 Lumens) and projector screen of size 8' X 6' with skilled operator to operate system as and when etc as required. (If work continue for more then one day , rates for next subsequent days will be 50% of the original rates.)	Each p. day	2,059.00

E-26 Repairing of Fans, Coolers, Pumps, Motors, Fridges & Airconditioners

Code No	Description	Unit	Rate Rs.
E260100	Rewinding of ceiling fan motor (starting and running winding) including all necessary material. The motor is to be wound taking no. of coils, turns and pitch as it was originally wound with required size super enamelled wire with 'E' class insulation material and making connections etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor. (New model ceiling fan)		
E260101	900/1200 mm sweep (New model ceiling fan)	Each	372.00
E260102	1400 mm sweep (New model ceiling fan)	Each	423.00
E260103	All sizes (Old model ceiling fan)	Each	1,019.00
E260200	Labour charges for removing and refixing of Ceiling fan/ Exhaust fan from site	Each	68.00
E260300	Charges for oiling, overhauling of ceiling fan, table fan, pedestal fan irrespect to the size of fan including removing,refixing of fan from site and testing etc. as required.		
E260301	Fans w/o Removing & Refixing	Each	34.00
E260302	Fans with Removing & Refixing at Suitable Location	Each	102.00
E260400	Providing and Replacement of ball bearing of ceiling/ exhaust fan and refixing the same at suitable location as requiredand as per OEM recommendations. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	237.00
E260500	Providing & Replacement of M.S. Shaft of ceiling fan. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	141.00
E260600	P & Replacement of cover/ bearing seat of ceiling/ exhaust fan. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	128.00
E260700	P & F Aluminium Blades (a set of 3 blades) duly painted and well finished 900/ 1200 mm. The material of the fan blade shall be of designation 31500B with condition HX6 aluminium alloy sheet confirming to IS 737/2008	Each	215.00
E260800	P & F Aluminium Blades (a set of 3 blades) duly painted/ powder coated. (1400/ 1500 mm) The material of the fan blade shall be of designation 31500B with condition HX6 aluminium alloy sheet confirming to IS 737/2008	Each	248.00

Code No	Description	Unit	Rate Rs.
E260900	P & F of rubber gromet (fan insulator)	Each	34.00
E261000	Providing and Replacement of Gun metal bush of ceiling/exhaust/cooler fan/ as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	141.00
E261100	P & F 3 Speed rotary switch for Desert Cooler complete with testing etc as required.	Each	70.00
E261200	P & Replacement of M.S. Shaft of fan motor for Desert Cooler/ exhaust fan. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	142.00
E261300	P & replacement of supporting legs(4 no.) of vertical pump of desert cooler as required for Desert Cooler/ exhaust fan. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	88.00
E261400	P & F of stud with nuts and washer for Desert Cooler/ exhaust fan.All the scrap material should be retained by the contractor.	Each	47.00
E261500	Servicing and overhauling of 20" sweep desert cooler including oiling, greasing, painting of tank from inside with rubber paint after properly desmantling each assembly and refixing the same as required.	Each	183.00
E261600	Painting of desert cooler with two coats of rubber paint inside of water tank and two coat of synthetic enamelled paint on both side of cooler body, fan body, grills etc.after cleaning with sand paper, complete in all respect as required.	Each	365.00
E261700	Replacement of cooler pads (heavy) set of 3 no. of size 25" x 27"	Each	88.00
E261800	P & F Brass float valve of weighing approx. 250 gm, 8" long rod,PVC ball of 4" dia. For desert coler as required.	Each	210.00
E261900	P & F adjustable M.S.grill 20/22 gauge of size approx. 24" x 26" including painting etc. as required.	Each	291.00
E262000	P & F aluminium blade for 20" desert cooler fan as required.	Each	196.00
E262100	P & F outer/inner threaded PVC nipple 1/2" dia and 2" long	Each	13.00
E262200	P & Replacement of pvc pipe of 1/2" size for vertical pump of desert cooler as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	25.00
E262300	P & replacement of shaft for vertical pump of desert cooler as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	61.00
E262400	Spray painting of ceiling fan of size 900/1200/ 1400/ 1500 mm with two coats of white/ brown enamelled paint after cleaning with sand	Each	142.00

Code No	Description	Unit	Rate Rs.
	paper. Filling etc. as required.		
E262500	P & replacement of 4 nos. supporting legs of 20" fan motor with rubber pads of desert cooler as required.Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	129.00
E262600	P & replacement of high quality pvc distribution ' T 'and 3 no. elbow for cooler	Each	23.00
E262700	P & F ISI marked commercial plywood 4.0 mm thick including cutting, hardwares etc. as required.	SQ.Mtr.	250.00
E262800	Labour Charges for fixing of desert cooler in windows including handling of cooler upto desired location, making electrical/water connections, testing etc. as required.		
E262801	Ground floor	Each	74.00
E262802	First floor	Each	106.00
E262803	Second floor	Each	125.00
E262900	P & F of ISI marked vertical pump suitable for 20" desert cooler including making connection testing etc. as required.		
E262901	ISI marked vertical pump	Each	501.00
E262902	P & F of submercible pump set suitable for 18/24 "Desert coolers.	Each	278.00
E262903	P & F of submercible pump set suitable for 36 "Desert coolers.	Each	602.00
E263000	P & F fan motor suitable for 20" desert cooler including making connection testing etc. as required.		
E263001	with copper winding Motor ISI Marked	Each	3,141.00
E263002	with Aluminium winding Motor ISI Marked	Each	1,775.00
E263100	Rewinding of Heavy duty Exhaust fan motor including all necessary material,The motor is to be wound taking no. of coils,turns and pitch as it was originally wound with required size super enamelled wire with 'E' class insulation material and making connections etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.		
E263101	300/ 380 mm sweep	Each	549.00
E263102	450 mm sweep	Each	711.00
E263103	600 mm sweep	Each	999.00
E263200	Rewinding of 400 mm table fan/pedestal fan motor including all necessary material,The motor is to be wound taking no. of coils,turns and pitch as it was originally wound with required size super enamelled wire with 'E' class insulation material and making connections etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	335.00

Code No	Description	Unit	Rate Rs.
E263300	Rewinding of single phase motor of 1400 RPM including all necessary material and of the same characteristics as original with required size of super enamelled wire 'E' class insulation material and testing etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.		
E263301	0.25 H.P. To 0.50 H.P.	Each	577.00
E263302	0.75 H.P. To 1.0 H.P.	Each	791.00
E263303	2.0 H.P.	Each	1,287.00
E263400	Rewinding of three phase squirrel cage induction motor of 1400 to 2800 RPM including all necessary material and of the same characteristics as original with required size of super enamelled wire 'E' class insulation material and testing etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.		
E263401	3.0 H.P.	Each	2,327.00
E263402	5.0 H.P.	Each	2,950.00
E263403	7.5 H.P.	Each	3,466.00
E263404	10.0 H.P.	Each	4,505.00
E263405	12.5 H.P.	Each	5,525.00
E263406	15.0 H.P.	Each	7,375.00
E263500	Rewinding of motor of desert cooler pump with super enamelled copper wire, 'E ' class insulation material including removing,refixing,testing etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	181.00
E263600	Rewinding of motor of desert cooler fan with super enamelled copper wire, 'E ' class insulation material including removing,refixing,testing etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	536.00
E263700	Providing and replacement of heating element of blower type heat convector as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	114.00
E263800	Providing and replacement of heating element rod of radiation type heat convector as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	107.00
E263900	Providing and replacement of Superior quality Chrome plated reflector of radiation type heat convector as required.Replacement of material or components shall be use as per guidelines of OEM of		

Code No	Description	Unit	Rate Rs.
	original product. All the scrap material should be retained by the contractor.		
E263901	single rod	Each	134.00
E263902	double rod	Each	160.00
E264000	Supplying and charging of fresh refrigerant and testing of performance of air conditioner/ fridge/ water cooler of following capacity including capillary and strainer/ filter.		
E264001	1.0 TR Window/ Split A.C.	Each	1,404.00
E264002	1.5 TR Window/ Split A.C.	Each	1,905.00
E264003	2.0 TR Window/ Split A.C.	Each	2,406.00
E264004	25/50 / 40/80 Ltr. Water cooler	Each	1,755.00
E264005	60/120 Ltr. Water cooler	Each	1,972.00
E264006	150/150 Ltr. Water cooler	Each	2,384.00
E264007	165 Ltr Refrigerator	Each	1,187.00
E264008	200/210 Ltr Refrigerator	Each	1,765.00
E264009	280/310 Ltr Refrigerator	Each	2,189.00
E264100	Replacement of defective compressor by company repaired compressor as per OEM recommendations of following gadgets including testing etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.		
E264101	1.0 TR A.C.	Each	9,480.00
E264102	1.5 TR A.C.	Each	10,925.00
E264103	2.0 TR A.C.	Each	11,648.00
E264104	25/50 / 40/80 Ltr. Water cooler	Each	5,597.00
E264105	60/120 Ltr. Water cooler	Each	7,910.00
E264106	150/150 Ltr. Water cooler	Each	8,488.00
E264107	165 Ltr Refrigerator	Each	3,071.00
E264108	200/210 Ltr Refrigerator	Each	4,084.00
E264109	280/310 Ltr Refrigerator	Each	4,084.00
E264200	P & Replacement of condensing/ cooling coil of copper fins for following capacity A.C./ Water cooler/ Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.		
E264201	1.0 TR A.C.	Each	3,010.00
E264202	1.5 TR A.C.	Each	3,439.00
E264203	2.0 TR A.C.	Each	3,873.00

Code No	Description	Unit	Rate Rs.
E264204	25/50 / 40/80 Ltr. Water cooler	Each	2,137.00
E264205	60/120 Ltr. Water cooler	Each	2,716.00
E264206	150/150 Ltr. Water cooler	Each	3,005.00
E264207	165 Ltr Refrigerator	Each	1,269.00
E264208	200/210 Ltr Refrigerator	Each	1,559.00
E264209	286/310 Ltr Refrigerator	Each	1,848.00
E264300	Servicing of 1.0/1.5/2.0 TR capacity Split/ Window type air conditioner	Each	609.00
E264400	P & Replacement of overload protection of A.C./ Water cooler as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	429.00
E264500	P & Replacement of thermostat of A.C./ Water cooler/fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	402.00
E264600	P & Replacement of selector switch of 1.0/1.5/2.0 TR A.C Fan as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	127.00
E264700	P & Replacement of starting relay of A.C/water cooler/fridge compressor as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	429.00
E264800	P & Replacement of door liner of 165/200 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	1,213.00
E264900	P & Replacement of door liner of 286/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	1,503.00
E265000	P & Replacement of main liner of 165/200 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	2,081.00
E265100	P & Replacement of main liner of 286/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	2,370.00
E265200	P & Replacement of door gasket of 165/200 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	212.00

Code No	Description	Unit	Rate Rs.
E265300	P & Replacement of door gasket of 286/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	367.00
E265400	P & Replacement of PVC/ acrylic vegetable basket of 165/200 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	329.00
E265500	P & Replacement of PVC/acrylic vegetable basket of 280/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	365.00
E265600	P & Replacement of glass/acrylic cover for vegetable basket of 165/200 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	257.00
E265700	P & Replacement of glass/acrylic cover for vegetable basket of 286/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	300.00
E265800	P & Replacement of PVC /acrylic bottle supporter of 165/200/ 286/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	135.00
E265900	P & Replacement of aluminium bottle supporter of 165/200/ 286/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	157.00
E266000	P & Replacement of PVC./acrylic freezer door of 165/200 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	327.00
E266100	P & Replacement of PVC./acrylic freezer door of 286/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	392.00
E266200	P & Replacement of door handle of 165/200/286/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	284.00
E266300	P & Replacement of lamp of Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	30.00

Code No	Description	Unit	Rate Rs.
E266400	P & Replacement of PVC/acrylic chiller tray of 165/200 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	287.00
E266500	P & Replacement of PVC/acrylic chiller tray of 286/310 Ltr. Fridge as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	316.00
E266600	P & Replacement of fridge lock complete as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	208.00
E266700	Spray painting of complete fridge (inside and outside) of 165/ 200 Ltr. Capacity.	Each	1,310.00
E266800	Spray painting of complete fridge (inside and outside) of 286/310 Ltr. Capacity.	Each	1,377.00
E266900	P & Replacement of fan motor of evaporator/ condensor complete as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	2,079.00
E267000	S & F of capacitor of 230V/ 275V, 50Hz rating of plastic casing and terminals -Lugs or copper wire.		
E267010	Starting capacitor		
E267011	20-30 micro farad	Each	134.00
E267012	40-60 micro farad	Each	177.00
E267013	60-80 micro farad	Each	233.00
E267014	80-100 micro farad	Each	295.00
E267015	100-120 micro farad	Each	295.00
E267016	120-150 micro farad	Each	362.00
E267020	Running capacitor		
E267021	2.5/3.15 micro farad	Each	47.00
E267022	4.0 micro farad	Each	57.00
E267023	6.0 micro farad	Each	72.00
E267024	8.0 micro farad	Each	82.00
E267025	10.0 micro farad	Each	96.00
E267026	15.0 micro farad	Each	128.00
E267027	20.0 micro farad	Each	207.00
E267028	25.0 micro farad	Each	229.00

Code No	Description	Unit	Rate Rs.
E267100	P & Replacement of plastic/metallic sheet condensor holder suitable for ceiling fan/ exhaust fan /motor etc complete as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.	Each	21.00
E267200	Rewinding of single phase/3phase submersible motor including all necessary material and of the same characteristics as original with required size of super enamelled wire 'E' class insulation material and testing etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.		
E267201	0.5 H.P. To 1.0 H.P.	Each	2,816.00
E267202	2.0 H.P.to 3.0 HP	Each	4,961.00
E267203	Above 3.0 HP to 5.0 HP	Each	6,302.00
E267204	From7. 5 HP to 10.0 HP	Each	9,252.00
E267300	Repairing of submersible pump of with replacement of broken impellers ,diffuser,bush/bearing set , oil seal complete with testing etc. as required. Replacement of material or components shall be use as per guidelines of OEM of original product. All the scrap material should be retained by the contractor.		
E267301	0.5 H.P. To 1.0 H.P.	Each	2,279.00
E267302	2.0 H.P.to 3.0 HP	Each	3,486.00
E267303	Above 3.0 HP to 5.0 HP	Each	4,961.00
E267304	From7. 5 HP to 10.0 HP	Each	6,302.00

E-27 MISCELLANEOUS ITEMS

Code No	Description	Unit	Rate Rs.
E270100	Providing & Fixing of ISO Certified company made BEE Star rated copper wound double ball bearing capacitor start, aluminium body & Metallic blade ceiling fan as per PWD specification for electrical Works, Conform to all the performance requirements laid down in IS 374:2019 including all amendments, as applicable ; & Carry BIS licensing (i.e. ISI marking) or Quality Certification such as ISO – 9001 or above , with down rod up to 30 cm with secondary support safety cable (steel wire) , cotter pin with 3 x 1.5 sq.mm pvc insulated flexible copper conductor making connection testing etc. as required. Appropriate OEM test certificate shall be submitted by contractor. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E270101	1200 mm Sweep BEE 1 Star rated (service value ≥ 4.0 to < 4.5)	Each	1,362.00
E270102	1400 mm Sweep BEE 1 Star rated (service value ≥ 4.1 to < 5)	Each	1,467.00
E270200	Providing & Fixing of IP20 LED Recessed / Surface Mounted, Round / Square Non-Dimmable Back lit SMD Mid Power LED Downlight with die-cast aluminum housing & Heat Sink for heat dissipation with UV Stabilized non yellowish Diffuser with internal/ external BIS compliance 2.5 KV surge protected Isolated driver, with Short & Open circuit protection, having efficiency $> 85\%$ and in compliance to IEC standards. System Lumen efficacy min. 100 lm/watt, THD $< 10\%$,p.f. ≥ 0.95 , CRI > 80 , life time of minimum 50000 Burning Hours with , 70% of initial Lumen maintained till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin) , maximum power consumption should not more than the specified rating and Fixture shall be of BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. OEM must have its own in house NABL accredited lab setup for all testing facilities for LED fixtures. (LM79/LM80) certificate / Report from OEM shall be submitted. All as per pre approved by engineer in charge . for additional technical parameters of product/ work, refer Annexure "A" attached with this BSR.		
E270210	Recessed Mounting		
E270211	LED Downlight 2/3 Watt	Each	341.00
E270212	LED Downlight 6/7W	Each	379.00
E270213	LED Downlight 9/10W	Each	454.00
E270214	LED Downlight 14/15W	Each	555.00
E270215	LED Downlight 18/20W	Each	586.00
E270220	Surface Mounting		

Code No	Description	Unit	Rate Rs.
E270221	LED Downlight 6/7 W	Each	391.00
E270222	LED Downlight 12/14 W	Each	467.00
E270223	LED Downlight 18/20W	Each	612.00
E270300	Providing & Fixing of IP20 LED Surface/ Recessed / suspended mounting Mid power SMD type LED Light fixture made from CRCA sheet steel housing, high purity / transmissivity UV stabilized Non - yellowish diffuser for uniform light distribution. High efficiency with 2.5 KV internal/external surge protection BIS certified isolated driver having efficiency > 85% , with Short & Open circuit protection and in compliance to IEC standards (Integral with light fixture). System Lumen efficacy min. 100 lm/watt ,THD < 10 % , p.f.≥0.95,CRI >80 , life time of minimum 50000 Burning Hours with , 70% of initial Lumen maintained till life ends , CCT 3000°K / 4000°K / 5700°K /6000°K/6500°K (As per ANSI Bin) , maximum power consumption should not more than the specified rating and Fixture shall be of BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. OEM must have its own in house NABL accredited lab setup for all testing facilities for LED fixtures. (LM79/LM80) certificate / Report from OEM shall be submitted. All as per pre approved by engineer in charge . for additional technical parameters of product/ work, refer Annexure "A" attacheded with this BSR.		
E270310	Recessed Mounting		
E270311	36W LED light fixture 2'x2' with acrylic / prismatic front cover.	Each	1,893.00
E270312	48W LED light fixture 2'x2' with acrylic / prismatic front cover.	Each	2,183.00
E270320	Suspended Mounting/Surface Mounting		
E270321	36W LED light fixture 2'x2' with acrylic / prismatic front cover.	Each	2,032.00
E270322	48W LED light fixture 2'x2' with acrylic / prismatic front cover.	Each	2,673.00
E270400	SITC of IP 40 3 pole current limiting Moulded case circuit breaker (MCCB) made of flame retardent & heat resistant material having following current rating, short circuit breaking capacity at 415 V, 50 Hz; O/L & S/C settings as per PWD specification for electrical Works, conforming to IS/IEC 60947 P -2 :2003 with front face and centralised adjustable, trip free mechanism, true contact position indicator, line load interchangeability, designed for both horizontal & vertical mounting without any adverse effect on electrical performance, suitable for operation upto 55 degree and without derating upto 40 degree, pollution degree 3, having positive isolation capability, push (test) to trip, trip time less than 10 ms under s/c condition, Breaking capacity Ics = 100% Icu. U imp =8 KV, rated insulation voltage 690 V, provision for UVR , shunt trip , earth fault trip, door interlock, pad lock & rotary handle , including making connections with lugs & spreaders, etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		

Code No	Description	Unit	Rate Rs.
E270410	With Thermal Magnetic release		
E270411	Up to 100 Amp, 25 kA, adjustable O/L & fixed S/C setting, Ics = 100 % Icu	Each	3,352.00
E270412	125 Amp, 25 kA, adjustable O/L & fixed S/C setting, Ics = 100 % Icu	Each	4,962.00
E270413	160 Amp, 25 kA, adjustable O/L & fixed S/C setting, Ics = 100 % Icu	Each	5,867.00
E270414	200 Amp, 35 kA, adjustable O/L & fixed S/C setting, Ics = 100 % Icu	Each	8,819.00
E270415	250 Amp, 35 kA, adjustable O/L & fixed S/C setting, Ics = 100 % Icu	Each	14,554.00
E270416	400 Amp, 50 kA, adjustable O/L & adjustable S/C setting, Ics = 100 % Icu	Each	16,631.00
E270417	630 Amp, 50 kA, adjustable O/L & adjustable S/C setting, Ics = 100 % Icu	Each	22,029.00
E270500	SITC of IP 40 3 pole current limiting Moulded case circuit breaker (MCCB) made of flame retardent & heat resistant material having following current rating, short circuit breaking capacity at 415 V, 50 Hz; O/L & S/C and inst. protection setting, True RMS sensing. as per PWD specification for electrical Works, conforming to IS/IEC 60947 P -2 :2003 with front face and centralised adjustable, common fault LED indication, Thermal memory, release trip shall confirm to EMC/ EMI compatability, trip free mechanism, true contact position indicator, line load interchangeability, designed for both horizontal & vertical mounting without any adverse effect on electrical performance, suitable for operation upto 55 degree and without derating upto 40 degree, pollution degree 3, having positive isolation capability, push (test) to trip, trip time less than 10 ms under s/c condition, Breaking capacity Ics = 100% Icu. U imp =8 KV, rated insulation voltage 690 V, provision for UVR, shunt trip, earth fault trip, door interlock, pad lock & rotary handle, including making connections with lugs & spreaders, etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution & All as per pre approved by Engineer in charge. For additional technical parameters of products/ work, refer Annexure "A" attached with this BSR.		
E270510	With Microprocessor based release		
E270511	250 Amp, 35 kA, adjustable O/L & Adjustable S/C setting, Ics = 100 % Icu	Each	21,296.00
E270512	400 Amp, 50 kA, adjustable O/L & adjustable S/C setting, Ics = 100 % Icu	Each	27,131.00
E270513	630 Amp, 50 kA, adjustable O/L & adjustable S/C setting, Ics = 100 % Icu	Each	30,852.00
E270600	SITC of IP 40 quick make and quick break 4 pole current limiting Moulded case circuit breaker (MCCB) made of flame retardent & heat resistant material having following current rating, short circuit breaking capacity at 415 V, 50 Hz; O/L & S/C settings as per PWD specification for electrical Works, conforming to IS/IEC 60947 P -2		

Code No	Description	Unit	Rate Rs.
	:2003 with front face and centralised adjustable, trip free mechanism, true contact position indicator, line load interchangeability, designed for both horizontal & vertical mounting without any adverse effect on electrical performance, suitable for operation upto 55 degree and without derating upto 40 degree, pollution degree 3, having positive isolation capability, push (test) to trip, trip time less then 10 ms under s/c condition, Breaking capacity Ics = 100% Icu. U imp =8 KV, rated insulation voltage 690 V, provision for UVR , shunt trip , earth fault trip, door interlock, pad lock & rotary handle , including making connections with lugs & spreaders, etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution. All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		
E270610	With Thermal Magnetic release		
E270611	Up to 100 Amp , 25 kA, adjustable O/L & fixed S/C setting, Ics = 100 % Icu	Each	5,465.00
E270612	125 Amp, 25 kA, adjustable O/L & fixed S/C setting, Ics = 100 % Icu	Each	6,673.00
E270613	160 Amp, 25 kA, adjustable O/L & fixed S/C setting, Ics = 100 % Icu	Each	8,228.00
E270614	200 Amp, 35kA, adjustable O/L & fixed S/C setting, Ics = 100 % Icu	Each	12,978.00
E270615	250 Amp, 35 kA, adjustable O/L & fixed S/C setting, Ics = 100 % Icu	Each	16,634.00
E270616	400 Amp,50 kA, adjustable O/L & adjustable S/C setting, Ics = 100 % Icu	Each	26,292.00
E270617	630 Amp , 50 kA, adjustable O/L & adjustable S/C setting, Ics = 100 % Icu	Each	28,584.00
E270700	SITC of IP 40 4 pole current limiting Moulded case circuit breaker (MCCB) made of flame retardent & heat resistant material having following current rating, short circuit breaking capacity at 415 V, 50 Hz; O/L & S/C and inst. protection setting , True RMS sensing. as per PWD specification for electrical Works, conforming to IS/IEC 60947 P -2 :2003 with front face and centralised adjustable, common fault LED indication, Thermal memory, release trip shall confirm to EMC/ EMI compatability, trip free mechanism, true contact position indicator, line load interchangeability, designed for both horizontal & vertical mounting without any adverse effect on electrical performance, suitable for operation upto 55 degree and without derating upto 40 degree, pollution degree 3, having positive isolation capability, push (test) to trip, trip time less then 10 ms under s/c condition, Breaking capacity Ics = 100% Icu. U imp =8 KV, rated insulation voltage 690 V, provision for UVR , shunt trip , earth fault trip, door interlock, pad lock & rotary handle , including making connections with lugs & spreaders, etc. as required. OEM shall have submit NABL / CPRI / ERDA accredited lab type test certificate before execution & All as per pre approved by Engineer in charge. For additional technical parameters of products/ work , refer Annexure "A" attached with this BSR .		

Code No	Description	Unit	Rate Rs.
E270710	With Microprocessor based release		
E270711	250 Amp , 35 kA, adjustable O/L & Adjustable S/C setting, Ics = 100 % Icu	Each	27,804.00
E270712	400 Amp ,50 kA, adjustable O/L & adjustable S/C setting, Ics = 100 % Icu	Each	31,633.00
E270713	630 Amp , 50 kA, adjustable O/L & adjustable S/C setting, Ics = 100 % Icu	Each	34,005.00

Annexure-A

Additional Technical parameters of products/ work

- 1 PWD specifications for Electrical works -2012 (as amended upto date), relevant IS codes, National Building Code / National Lighting Code / National electric Code / Indian Electricity Rules (all as amended upto date) shall be treated as part of this Electric BSR-2021 for the purpose of detailed specifications & clarifications, if any. Henceforth this BSR-2021 shall be considered as part of all contracts/ agreements, controversy / dispute in interpretation of BSR -2021.
- 2 The mode of measurement of wiring and method of work execution shall be uniform & strictly as laid down in PWD specification for electrical works 2012 in general and for genuine work practice.
- 3 All Items including Makes & Models must be approved in writing before / at the time of layout by Engineer-in-Charge as per specifications with additional standard warranty proof of OEM beyond one year guarantee for complete item or its part of product [For eg. Standard warranty period of complete electric geyser is 2 years while inner tank & element have five year & four year in market] Engineer incharge should ensure to give preference to the product which have maximum warranty of OEM among available options in market, so department can avail benefit of standard warranty facility for betterment of work as and when required. This approval letter should be enclosed in every work agreement file .
- 4 Test of specified items below must be done in NABL accredited/CPRI/ERDA or other approved Labs by contractor & no extra payment shall be made to the contractor for below mentioned tests & procedures at all :-

Sr.No.	Item Name	Tests Must be done through NABL accredited/CPRI/ERDA or other approved Labs or as specified with individual item :-
1	F/T accessories (Non Modular all switch/ socket/ regulator etc.)	01 out of 300 Nos. (Total all switch/ socket/ regulator etc.)
2	Modular accessories (all switch/ socket/ regulator etc.)	01 out of 300 Nos. (Total all switch/ socket/ regulator etc.)
3	FR PVC Flexible Copper Conductor (Total of any Size)	01 out of 5000 Mtr (Any size as per EE required)
4	PVC Conduit (Total of all sizes)	01 out of 500 Mtr. (Total of all sizes)
5	Steel Conduit (Total of all sizes)	01 out of 500 Mtr. (Total of all sizes)
6	Sheet Steel Box/ M.S. Box/ GI Box/ PVC Box (Total of all sizes)	01 out of 200 Nos. (Total of all sizes)
7	MCB (1 Pole to 4 Pole) (Total of all amp rating)	01 out of 100 Nos. (Total of all amp rating)
8	DB (SPN to all TPN)	01 out of 20 Nos. (SPN to all TPN)
9	Panel accessories meters/ switches/relays)	OEM test certificate required.

10	ACB & MCCB	01 out of 05 Nos ACB (OEM type test certificate also required for each quantity.) & 01 out of 25 Nos MCCB (OEM type test certificate also required for each quantity.)
11	SFU (All Types)	01out of 10 Nos (OEM type test certificate also required.)
12	LT/ HT Cable (Total All sizes)	01 Sample for 500 Mtr.
13	Earthing (Gel)	01 out of 10 Nos. (factory visit)
14	Ceiling Fan/ Exhaust /fresh air/ wall mounting fan. (Total All sizes)	01 out of 100 Nos. (Total All sizes)
15	Storage water heater (Geyser)	01 out of 20 Nos.(OEM test certificate required.)
16	LED Lighting fixture & accessories (Indoor & Out door (Total all types)	01 out of 200 (Indoor)
		01 out of 50 (Outdoor)
17	LAN wiring	I.O.(LAN Point)- if Min. 80 Nos. (OEM 20 years performance warranty certificate With penta scanner report required With no extra cost.)
18	LAN Accessories	Switch – OEM / Auth. Dealer genuineness Certificate required.
19	Motor & Pumps , submersible etc.(Total all types)	01 out of 10 Nos. (OEM Certificate for every Piece)
20	Lattice tower	Factory Inspection compulsory
21	Air Conditioner	AC- 01 out of 25 Nos. (Factory visit)
22	Air cooling machine/ Chillers	Factory Inspection / III party certificate must
23	Transformer	01 out of 01 Nos. (Engineer visit compulsory at manufacturing site)
24	Fire Pump / Engine	III party inspection must.
25	Street light pole	If more then 25 , Factory Inspection / III party certificate must
26	High mast pole	Factory Inspection / III party certificate must
27	DG set	Factory Inspection / III party certificate must
28	RMU	Factory Inspection / III party certificate must
29	Bus Bar Trukning	Factory Inspection / III party certificate must

30	Solar water heater	Factory Inspection / III party certificate must

- 5 Any Items can be send for testing by Engineer-in-Charge in any NABL accredited/ CPRI/ERDA /Other approved Lab. Payment of testing charge shall be made by department for that. Contractor is liable to make all necessary arrangement to send the sample & get reports from lab, no extra payment shall be made to contractor for this arrangement.
- 6 Testing Lab for above must be selected after written consent of Engineer-in-Charge.
- 7 Contractor should submit minimum one year valid gaurentee certificate of OEM & Liable product genuineness certificate (purchase proof) from OEM/ Authorised Dealer for such products like :- modular & non modular, copper conductor, PVC and steel conduit, Sheet steel/MS/GI/PVC boxes, MCB, DBs, panel accessories (meters/switches/ relays), ACBS, MCCBS/ LT & HT cables, Gel Earthing, Ceiling fan, Exhaust fan, fresh air fan, wall mounting fan, Inner tank of storage water heater- geyser, LED lighting- Indoor & Outdoor, Air conditioners compressor & PCB, Transformer, Fire pump, Engine, Fire extinguishers, fire detectors, High mast pole & Other major item etc. which uses at site as per tender. Contractor should furnish a commitment letter for after sales service support of product to department till minimum next five years.
- 8 Appropriate/ Routine type Test Certificates/ reports related to IS code with liable standard warranty proof / certificate of product from OEM shall be submitted by contractor during/ at the time of execution & should be verified by Engineer-in-Charge about the fulfillment of all required test certificates/ reports as per IS code.
- 9 All hidden items during execution like – roof conduiting, cable laying, earthing etc must be in presence of engineer-in-charge or site engineer. GPS Photo be attach at the time of measurment of such items by officers for ensuring the genuine work practice.
- 10 Engineer-in-Charge must ensure the quality of product as per specifications to be used at site by means of testing / inspection / lab visit/ OEM Certificate. If engineer-in-charge finds the product used by contractor inferior in quality then they can immediately stop the work & bidder must change the item after getting approval from engineer-in- charge.
- 11 Engineer-in-Charge must ensure that all items used from any particular chapter of this BSR for any individual project, should be of same brand which is approved before execution as per availability. For example DB & accessories, pannel accessories, wiring accessories, fan and fixtures, LAN all passive copper & fiber components and other chapters etc.
- 12 Circulars & amendments issue time to time by Chief Engineer's office, PWD, Rajasthan, Jaipur with regards to Electric BSR-2021 & electric works shall form the part of RUIDP SOR-2022.
- 13 All ISI/ BIS/ ISO/ NABL/ ERDA/ CPRI/ ESTA or other certified products in this BSR are subject to condition of valid certification from these agencies, otherwise use of the specific product in this BSR will automatically be cancelled for corresponding project.

A - MACHINERY

Note-1: Hire charges include cost of services of operating staff, Cost of lubricating oil, diesel / Petrol/ Kerosene oil, other consumables for running the plant and machinery and excluding GST.

Note-2: The hire charges of plant & machinery on per day basis are for single shift of eight working hours.

Code No	Description	Unit	Rate Rs.
0001	Hydraulic Excavator of 1 cum bucket	hour	880.00
0003	Hire charges of Diesel Truck - 9 tonne	day	1,765.00
0004	Truck 5.5 cum per 10 tonnes	hour	235.00
0005	Truck 5.5 cum per 10 tonnes	tonne.km	5.00
0010	Tipper - 5 cum	hour	220.00
0011	Hire and running charges of DTH drilling system with driver and fuel.	day	8,300.00
0012	Hire and running charges of rotary drilling system with driver and fuel.	day	9,950.00
0013	Transit Mixer 4.0/4.5 cum	hour	760.00
0014	Transit Mixer 4/4.5 cum	tonne.km	13.00
0015	Hire and running charges of Hydraulic Excavator (3D) with driver and fuel.	day	8,300.00
0016	Truck Trailor 30 tonne capacity	hour	1,390.00
0017	Truck Trailor 30 tonne capacity	t.km	6.00
0018	Truck mounted sewer cleaning machine comprising of suction-cum-jetting unit having combined high pressure jetting-cum suction (vacuum) of Suction Pump capacity 400 cum/hour 27" Hg column and Jetting Pump flow capacity 200 ltrs/ minute, max working pressure 150 kg/ sqcm / 2100 PSi and sludge tank and water tank of individual capacity not less than 2000 litres each with operator and driver.	hour	1,000.00
0019	Sewer by passing machinery set comprising of self priming sewage suction-pump, flexible suction and delivery line, DG set, and other necessary equipments with operator diesel lubricants, barricading area etc and expense of to and fro carriage.	hour	1,500.00
0020	Road Milling Machine	hour	2,119.00
0021	Front End loader 1 cum bucket capacity	hour	880.00
0023	Tractor Trolly	hour	225.00
0024	Tractor with Rotevator	hour	310.00
0025	Tractor with Ripper	hour	200.00
0029	Smooth Wheeled Roller 8 tonne	hour	220.00
0031	Vibratory Roller 8 tonne	hour	720.00
0034	Tandem Road Roller (Two whealed)	hour	940.00
0037	10 HP Pumping set (Diesel Engine Operated)	Day	440.00

Code No	Description	Unit	Rate Rs.
0038	Verticality test by plumbing system and Draw down test of tube well by pumping system as per IS: 2800 (Part II) 1979 and yield test i/c hire charges of pump set and transportation	each	6,250.00
0039	Hire charges of Pumpset of capacity 4000 litres/hour.	Day	500.00
0040	High pressure jet machine	Day	1,059.00
0043	Water supply tanker of 5000 litre capacity	each	660.00
0044	Resistivity survey by VES method for locating proper spot for tube well drilling	point	1,355.00
0045	Crane with grab 0.75 cum capacity	hour	1,050.00
0046	Cranes 3 tonnes	hour	305.00
0047	Crane 5 tonne capacity	hour	625.00
0048	Crane 10 tonne capacity	hour	680.00
0049	Crane 15 tonne capacity	hour	755.00
0052	Cranes 35 tonnes	hour	955.00
0054	Crane 80 tonnes	hour	1,100.00
0055	Mobile crane.	per day	6,050.00
0057	Dozer D - 50 - A 15	hour	790.00
0058	Dozer D - 80 - A 12	hour	925.00
0059	Hire charges of Concrete Mixer 0.14 cubic metre	Day	500.00
0060	Concrete Mixer 0.4/0.28 cum	hour	140.00
0061	Concrete Mixer 1 cum	hour	175.00
0062	Batching and Mixing Plant (b) 15 - 20 cum capacity	hour	1,900.00
0063	Batching and Mixing Plant (a) 30 cum capacity	hour	2,150.00
0064	Cement concrete batch mix plant @ 75 cum per hour	hour	2,600.00
0065	Cement concrete batch mix plant @ 175 cum per hour (effective output)	hour	10,600.00
0068	Concrete Pump of 45 & 30 cum capacity	hour	630.00
0070	Vibrator(Needle type 40mm)	Day	260.00
0072	Surface Vibrator	Day	380.00
0073	Concrete Paver Finisher with 40 HP Motor	hour	2,700.00
0077	Wet Mix Plant 75 TPH	hour	2,600.00
0080	Hotmix Plant - 120 TPH capacity	hour	1,430.00
0081	Hotmix Plant - 100 TPH capacity	hour	1,430.00
0082	Sewer line CCTV survey and preparation of report	metre	1,500.00
0083	Preparation of special cloth pipe impregnated with special combination of regins	sqm	8,000.00
0084	Air pressuring with computerised controlled compressor	hour	900.00
0085	Curing with steam with computerised controlled steam supplying machine	hour	800.00
0090	Hire charges of Spraying machine including electric charges	Day	220.00
0091	Bitumen Pressure Distributor	hour	300.00

Code No	Description	Unit	Rate Rs.
0092	Bitumen Boiler oil fired	hour	135.00
0093	Epoxy Injection gun	hour	360.00
0095	Motor Grader 3.35 mtr blade	hour	1,540.00
0097	Paver Finisher Hydrostatic with sensor control 100 TPH	hour	1,570.00
0099	Paver Finisher Mechanical 100 TPH	hour	780.00
0100	Mastic Cooker	hour	88.00
0101	HDPE Jointing Machine alongwith 15 KVA DG set	hour	275.00
0105	Road marking machine	hour	120.00
0107	Texturing machine (for rigid pavement)	hour	100.00
0109	Mechanical Broom Hydraulic	hour	210.00
0112	Hydraulic Chip Spreader	hour	1,375.00
0113	Air Compressor 210 CFM	hour	210.00
0115	Air compressor with pneumatic chisel attachment for cutting hard clay.	hour	250.00
0116	Compressor with guniting equipment along with accessories	hour	600.00
0117	Pneumatic Sinking Plant	hour	2,970.00
0118	Induction, deinduction and erection of plant and equipment including all components and accessories for pneumatic method of well sinking.	hour	6,000.00
0119	Piling rig Including double acting pile driving hammer (Hydraulic rig)	hrs	6,775.00
0123	Piling Rig with Bantonite Pump	hour	4,690.00
0125	Pile testing for vertical load	MT	260.00
0126	Pile testing for lateral load	MT	5,210.00
0128	Water tanker 6 KL capacity	hour	140.00
0131	Hire charges of chain pully block with try pod i/c transportation	day	625.00
0132	Joint Cutting Machine with 2-3 blades (for rigid pavement)	hour	105.00
0133	Machine for rubbing of floors	Day	240.00
0134	Hand Grinder For mirror polish	Day	140.00
0136	Hire charges of Derrickmonkey rope	Day	605.00
0137	Welding by gas plant	cm	3.00
0138	Welding by electric plant	cm	3.00
0139	Grouting pump with agitator	hour	230.00
0141	Kerb Casting Machine	hour	365.00
0143	Boat to carry atleast 20 persons	hour	1,840.00
0144	Plate compactor	hour	55.00
0147	Sludge suction tanker 6000 letre capacity	trip	1,080.00
0149	Prestressing Jack with Pump & access	hour	470.00
0150	Electric Generator 33 KVA	hour	486.00
0151	Electric Generator 63 KVA	hour	600.00
0152	Electric Generator 100 KVA	hour	780.00

Code No	Description	Unit	Rate Rs.
0153	Electric Generator 125 KVA	hour	860.00
0154	Electric Generator 250 KVA	hour	1,510.00
0156	Drilling of 40mm dia bore hole in rock	metre	95.00
0157	Spray Pump for spraying Chemical for waterproofing	day	105.00
0158	Mechanical Grinder (Gharat) with POL and Driver per day	Day	520.00
0159	M.S. Structure fabrication charges l/c cutting, electric welding etc	kg	13.00
0160	Radio-graphy testing for butt welds	metre	405.00
0161	Ultrasonic testing for fillet welds	metre	210.00
0162	Augur boring 300mm dia	RM	210.00
0163	Monthly rental charges of built up space	per sqm/ month	65.00
0164	Monthly charges of tables	month	70.00
0165	Monthly charges of chairs	month	27.00
0166	Monthly charges of steel almirah	month	180.00
0167	Monthly charges of computer & printer	month	1,080.00
0168	Monthly payment of computer operator	month	6,775.00
0169	Monthly charges of laboratory equipments (set of approved equipments)	month	3,500.00
0170	Non destructive Integrated testing of pile	per test	1,500.00
0171	Dynamic load test for checking the load bearing capacity of pile as per ASTM D4945	per test	85,000.00
0172	Sonic logging test on RC bored piles and submission of report.	per test	8,000.00
0173	Testing of finished PSC girder with simulation system.	each	1,00,000.00
0174	Load testing of one or more spans of bridge as per approved load test procedure of IS/IRC/Railway codes upto 100 MT Load.	per test	2,00,000.00
0175	Load testing of one or more spans of bridge as per approved load test procedure of IS/IRC/Railway codes per 100 MT Load or part their of after initial 100 MT.	per 100 MT per test	25,000.00
0176	Plate load test for determining SBC at a specified depth and draw load settlement curve as per Indian standard	each	29,000.00
0180	Photography charges including printing of photo	each	28.00
0181	Charges for Topographic Survey team using Total Station	day	5,998.00
0182	Charges of Draftman for developing drawing in AUTO CAD format using the layering system and Geo referencing	day	600.00
0183	Charges for printng detailed drawings in A-2 size	sheet	50.00
0184	Charges for Water Quality Analysis Collecting sample and Physical & Chemical testing of Parameter from NABL approved laboratory: PH, TDS, Taste & Odour, turbidity, magnesium, Total hardness, total alkalinity, chloride, sulphate, nitrate, fluoride, Calcium, Iron, Pesticide, Manganese, Cooper, Aluminum, Residual Chlorine, Zinc, phenolic compound, Arsenic, Cadmium, Chromium, cyanides, lead, selenium, Mercury.	Each	5,600.00
0185	Charges for Raw Sewage Analysis Collecting sample and Physical	each	5,200.00

Code No	Description	Unit	Rate Rs.
	& Chemical testing of Parameter from NABL approved laboratory: PH, Temperature, TSS, TDS, Inorganic dissolved solids, Alkalinity as CaCO ₃ , total hardness as CaCO ₃ , chloride as Cl, sulphate as SO ₄ , Fluoride as F, Phosphate as PO ₄ , Ammonical Nitrogen as N, Sodium as Na, TKN, BOD at 200 C, COD, Silica as SiO ₂ , oil and grease, sulphide as S, phenolic compound.		
0186	Charges for Municipal Solid Waste Sample analysis - Collecting sample of Municipal Solid Waste (MSW) and analyze physical and chemical Characterization and composition of each component in %age in NABL approved laboratory: moisture content, total solids, volatile solids of total solids, fixed solids percent of total solids, organic carbon, COD and calorific value. Composition of each component in %age viz. Paper, Rubber, Leather & Synthetics, Metals, Inert, Plastics, Organics, Textiles, Wood & Others.	each	7,000.00
0187	Charges for Geotechnical Survey below ground by boring method from 0 to 2 metre and submission of detailed report	each	2,500.00
0188	Charges for Geotechnical Survey below ground by boring method from 0 to 4 metre and submission of detailed report	each	3,750.00
0189	Charges for Geotechnical Survey below ground by boring method from 0 to 6 metre and submission of detailed report	each	5,000.00
0190	Charges for Geotechnical Survey below ground by boring method from 0 to 8 metre and submission of detailed report	each	6,250.00
0191	Surveying, collecting sample and testing of stone metal samples from crushers/quarries from NABL approved	each	2,800.00
0192	Surveying, collecting sample and testing of fine Aggregates from crushers/quarries from NABL approved	each	1,400.00
0193	Surveying, collecting sample and testing of GSB from crushers/quarries from NABL approved	each	2,800.00
0194	Surveying, collecting sample and testing of soil of borrow pits sample testing from NABL approved	Each	4,900.00
0195	Collecting water sample and testing Bacteriological Parameter from NABL approved laboratory as per CPHEEO manual: Total coliforms, faecal coliforms	each	1,300.00
0196	Ambient Air Quality Monitoring- For parameters PM-2.5 & PM-10, SO ₂ , NO ₂ , CO from NABL approved laboratory and submission of report complete in all respect.	each	4,100.00
0197	Ambient Noise Quality Monitoring - To Identify sources of noise, Duration and variations in noise over time etc. (day and night in Leq dBA) from NABL approved laboratory	each	1,650.00
0198	Conducting BBD Tests as per IRC: 81-1997 (Guidelines for Strengthening of Flexible Road Pavements) and pavement evaluation	each	3,700.00
0199	Collecting sample and conducting California Bearing Ratio test	each	1,300.00

B - LABOUR

Code No	Description	Unit	Rate Rs.
0201	Fitter (Grade I)	Day	635.00
0202	Fitter (Grade II) or Assistant Fitter	Day	510.00
0203	Mason (1st class)	day	625.00
0204	Mason (for plaster of paris work) 1st class	Day	740.00
0205	Mason (for ornamental stone work) 1st class	Day	760.00
0206	Mason (brick layer) 2nd class	Day	510.00
0207	Mason (for plain stone work) 2nd class)	Day	620.00
0208	Mason (IInd class)	day	500.00
0209	Carpenter I Class	day	625.00
0210	Carpenter II Class	day	570.00
0211	Carpenter (average)	Day	600.00
0212	Blacksmith 1st class	Day	620.00
0213	Blacksmith (IInd class)	day	510.00
0214	Glazier	Day	630.00
0215	Painter	Day	570.00
0216	Mazdoor/ helper	day	435.00
0217	Coolie	Day	380.00
0218	Skilled Beldar	Day	510.00
0219	White Washer	Day	510.00
0221	Rock Breaker	Day	510.00
0222	Rock Hole Driller	Day	510.00
0225	Skilled torch operator for laying tack	Day	450.00
0229	Bandhani	Day	380.00
0230	Bhishti	Day	380.00
0231	Mate / Supervisor	day	510.00
0232	Mali	Day	430.00
0233	Mistry	Day	635.00
0234	Chokidar	Day	450.00
0236	Driver (for Road Roller, Concrete Mixer, Truck etc.)	Day	630.00
0239	Medical Officer	day	1,850.00
0240	Para medical personnel	day	990.00
0241	Applicator (A person who applies chemical for water proofing)	Day	500.00
0242	Helper for Glass and other decoration work	Day	430.00

Code No	Description	Unit	Rate Rs.
0244	Skilled Craftsman	Day	500.00
0245	Expert Artist (For conservation of Fresco paintings and other decorative work)	Day	870.00
0246	Expert Artist (Grade-II) (To assist expert artist)	Day	620.00
0247	Supervisor for Chemical works	Day	620.00
0248	Expert artist for Oil-painting/Glass work (Grade-I)	Day	870.00
0249	Expert for Glass work (Grade-II)	Day	500.00
0250	Hammal (Paldar) (For loading/ unloading heavy stone blocks including chain pully block and T&P for this purpose)	Day	435.00
0257	Skilled Man for khamira	Day	435.00
0258	Skilled craftsman for archaeological excavation	Day	435.00
0260	Wireman/ lineman	Day	620.00
0261	Plumber	Day	500.00
0276	Socio economic surveyer	day	740.00
0277	Engineer/ Surveyer	day	2,470.00

C – MATERIALS

Note: These basic prices/rates are inclusive of material price, freight, insurance, loading & unloading but exclusive of GST, contractor's profit and over heads etc.

Code No	Description	Unit	Rate Rs.
0300	80mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	715.00
0301	100mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	861.00
0302	150mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	1,218.00
0303	200mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	1,501.00
0304	250mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	1,975.00
0305	300mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	2,522.00
0306	350mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	3,098.00
0307	400mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	3,794.00
0308	450mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	4,473.00
0309	500mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	5,324.00
0310	600mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	6,977.00
0311	700mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	9,372.00
0312	800mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	11,776.00
0313	900mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	14,764.00
0314	1000mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	17,646.00
0315	1100mm dia DI K-7 grade S&S pipe conforming to I.S. 8329	metre	20,950.00
0321	100mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	991.00
0322	150mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	1,406.00
0323	200mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	1,803.00
0324	250mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	2,416.00
0325	300mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	3,062.00
0326	350mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	3,755.00
0327	400mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	4,584.00
0328	450mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	5,467.00
0329	500mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	6,393.00
0330	600mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	8,384.00
0331	700mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	10,621.00
0332	800mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	13,052.00
0333	900mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	15,904.00
0334	1000mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	19,201.00
0335	1100mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	23,221.00
0336	1200mm dia DI K-9 grade S&S pipe conforming to I.S. 8329	metre	26,899.00
0341	100mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	1,450.00
0342	150mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	1,909.00

Code No	Description	Unit	Rate Rs.
0343	200mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	2,589.00
0344	250mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	3,459.00
0345	300mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	4,319.00
0346	350mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	5,579.00
0347	400mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	6,789.00
0348	450mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	8,558.00
0349	500mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	10,150.00
0350	600mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	13,430.00
0351	700mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	17,680.00
0352	800mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	21,390.00
0353	900mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	26,560.00
0354	1000mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	31,100.00
0355	1100mm dia DI K-9 grade flanged pipe conforming to I.S. 8329	metre	38,856.00
0361	S&S Centrifugally (Spun) C.I. Pipe class LA 100mm dia	Metre	850.00
0362	S&S Centrifugally (Spun) C.I. Pipe class LA 125mm dia	metre	1,050.00
0363	S&S Centrifugally (Spun) C.I. Pipe class LA 150mm dia	metre	1,225.00
0364	S&S Centrifugally (Spun) C.I. Pipe class LA 200mm dia	Metre	2,160.00
0365	S&S Centrifugally (Spun) C.I. Pipe class LA 250mm dia	Metre	2,825.00
0366	S&S Centrifugally (Spun) C.I. Pipe class LA 300mm dia	Metre	3,800.00
0367	S&S Centrifugally (Spun) C.I. Pipe class LA 350mm dia	metre	4,550.00
0368	S&S Centrifugally (Spun) C.I. Pipe class LA 400mm dia	Metre	6,010.00
0369	S&S Centrifugally (Spun) C.I. Pipe class LA 450mm dia	Metre	7,275.00
0370	S&S Centrifugally (Spun) C.I. Pipe class LA 500mm dia	Metre	8,450.00
0371	S&S Centrifugally (Spun) C.I. Pipe class LA 600mm dia	Metre	11,830.00
0391	C.I. "B" class flanged pipe	kg	65.70
0392	C.I. double flanged standard specials	kg	67.50
0393	C.I. double flanged non-standard specials	kg	69.30
0401	Specials S&S DI K-12 upto 300mm dia	kg	84.00
0402	Specials S&S DI K-12 above 300mm dia and upto 600mm dia	kg	88.50
0403	Specials S&S DI K-12 above 600mm dia and upto 800mm dia	kg	108.00
0404	Specials S&S DI K-12 above 800mm dia	kg	116.00
0405	Specials Double Chambered Restrained joint DI K-12 upto 600mm dia	kg	225.00
0406	Specials Double Chambered Restrained joint DI K-12 above 600mm dia	kg	265.00
0411	Specials flanged DI K-12 upto 300mm dia	kg	85.80
0412	Specials flanged DI K-12 above 300mm dia and upto 600mm dia	kg	92.10
0413	Specials flanged DI K-12 above 600mm dia and upto 800mm dia	kg	113.00
0414	Specials flanged DI K-12 above 800mm dia	kg	126.00

Code No	Description	Unit	Rate Rs.
0421	S & S.C.I. standard specials upto 300 mm dia (heavy class)	quintal	3,284.00
0422	S & S.C.I. standard specials over 300 mm dia (heavy class)	quintal	3,375.00
0425	Flanged C.I. standard specials upto 300 mm dia (heavy class)	quintal	5,017.00
0426	Flanged C.I. standard specials over 300 mm dia (heavy class)	quintal	5,473.00
0431	80 mm dia CI butterfly valve PN 1.0	each	2,925.00
0432	100 mm dia CI butterfly valve PN 1.0	each	3,467.00
0433	125 mm dia CI butterfly valve PN 1.0	each	4,767.00
0434	150 mm dia CI butterfly valve PN 1.0	each	5,417.00
0435	200 mm dia CI butterfly valve PN 1.0	each	9,750.00
0436	250 mm dia CI butterfly valve PN 1.0	each	13,220.00
0437	300 mm dia CI butterfly valve PN 1.0	each	16,250.00
0438	350 mm dia CI butterfly valve PN 1.0	each	24,920.00
0439	400 mm dia CI butterfly valve PN 1.0	each	32,930.00
0440	450 mm dia CI butterfly valve PN 1.0	each	35,320.00
0441	500 mm dia CI butterfly valve PN 1.0	each	36,620.00
0442	600 mm dia CI butterfly valve PN 1.0	each	59,580.00
0443	700 mm dia CI butterfly valve PN 1.0	each	96,610.00
0444	750 mm dia CI butterfly valve PN 1.0	each	1,14,420.00
0445	800 mm dia CI butterfly valve PN 1.0	each	1,21,860.00
0446	900 mm dia CI butterfly valve PN 1.0	each	1,56,450.00
0447	1000 mm dia CI butterfly valve PN 1.0	each	2,01,690.00
0471	80 mm dia CI Sluice valve PN 1.0	each	2,828.00
0472	100 mm dia CI Sluice valve PN 1.0	each	3,831.00
0473	125 mm dia CI Sluice valve PN 1.0	each	5,350.00
0474	150 mm dia CI Sluice valve PN 1.0	each	6,402.00
0475	200 mm dia CI Sluice valve PN 1.0	each	10,950.00
0476	250 mm dia CI Sluice valve PN 1.0	each	17,070.00
0477	300 mm dia CI Sluice valve PN 1.0	each	21,670.00
0478	350 mm dia CI Sluice valve PN 1.0	each	33,010.00
0479	400 mm dia CI Sluice valve PN 1.0	each	41,960.00
0480	450 mm dia CI Sluice valve PN 1.0	each	51,740.00
0481	500 mm dia CI Sluice valve PN 1.0	each	65,020.00
0482	600 mm dia CI Sluice valve PN 1.0	each	96,330.00
0483	700 mm dia CI Sluice valve PN 1.0	each	1,81,900.00
0484	750 mm dia CI Sluice valve PN 1.0	each	2,02,850.00
0485	800 mm dia CI Sluice valve PN 1.0	each	2,47,450.00
0486	900 mm dia CI Sluice valve PN 1.0	each	3,24,470.00
0487	1000 mm dia CI Sluice valve PN 1.0	each	5,00,520.00

Code No	Description	Unit	Rate Rs.
0511	80 mm dia CI dual plate check valve PN 1.0	each	2,925.00
0512	100 mm dia CI dual plate check valve PN 1.0	each	3,467.00
0513	125 mm dia CI dual plate check valve PN 1.0	each	4,145.00
0514	150 mm dia CI dual plate check valve PN 1.0	each	5,405.00
0515	200 mm dia CI dual plate check valve PN 1.0	each	9,750.00
0516	250 mm dia CI dual plate check valve PN 1.0	each	13,220.00
0517	300 mm dia CI dual plate check valve PN 1.0	each	16,250.00
0518	350 mm dia CI dual plate check valve PN 1.0	each	24,920.00
0519	400 mm dia CI dual plate check valve PN 1.0	each	32,930.00
0520	450 mm dia CI dual plate check valve PN 1.0	each	35,320.00
0521	500 mm dia CI dual plate check valve PN 1.0	each	36,620.00
0522	600 mm dia CI dual plate check valve PN 1.0	each	59,580.00
0523	700 mm dia CI dual plate check valve PN 1.0	each	1,04,610.00
0524	750 mm dia CI dual plate check valve PN 1.0	each	1,20,490.00
0525	800 mm dia CI dual plate check valve PN 1.0	each	1,38,580.00
0526	900 mm dia CI dual plate check valve PN 1.0	each	1,93,810.00
0527	1000 mm dia CI dual plate check valve PN 1.0	each	2,52,070.00
0531	80 mm dia CI Duckfoot Bend	each	1,219.00
0532	100 mm dia CI Duckfoot Bend	each	1,509.00
0533	125 mm dia CI Duckfoot Bend	each	2,089.00
0534	150 mm dia CI Duckfoot Bend	each	2,729.00
0535	200 mm dia CI Duckfoot Bend	each	4,334.00
0536	250 mm dia CI Duckfoot Bend	each	6,502.00
0537	300 mm dia CI Duckfoot Bend	each	9,150.00
0538	350 mm dia CI Duckfoot Bend	each	13,240.00
0539	400 mm dia CI Duckfoot Bend	each	16,860.00
0541	80 mm dia CI Foot Valve	each	1,186.00
0542	100 mm dia CI Foot Valve	each	1,551.00
0543	125 mm dia CI Foot Valve	each	2,463.00
0544	150 mm dia CI Foot Valve	each	4,378.00
0545	200 mm dia CI Foot Valve	each	8,678.00
0546	250 mm dia CI Foot Valve	each	12,910.00
0547	300 mm dia CI Foot Valve	each	14,620.00
0548	350 mm dia CI Foot Valve	each	28,170.00
0549	400 mm dia CI Foot Valve	each	36,400.00
0550	450 mm dia CI Foot Valve	each	39,670.00
0551	500 mm dia CI Foot Valve	each	56,330.00
0555	80 mm dia C.I. dismantling joint PN 1.0	each	1,396.00

Code No	Description	Unit	Rate Rs.
0556	100 mm dia C.I. dismantling joint PN 1.0	each	1,564.00
0557	125 mm dia C.I. dismantling joint PN 1.0	each	1,691.00
0558	150 mm dia C.I. dismantling joint PN 1.0	each	2,621.00
0559	200 mm dia C.I. dismantling joint PN 1.0	each	4,016.00
0560	250 mm dia C.I. dismantling joint PN 1.0	each	5,707.00
0561	300 mm dia C.I. dismantling joint PN 1.0	each	7,335.00
0562	350 mm dia C.I. dismantling joint PN 1.0	each	8,879.00
0563	400 mm dia C.I. dismantling joint PN 1.0	each	11,420.00
0564	450 mm dia C.I. dismantling joint PN 1.0	each	12,680.00
0565	500 mm dia C.I. dismantling joint PN 1.0	each	15,640.00
0566	600 mm dia C.I. dismantling joint PN 1.0	each	23,670.00
0567	700 mm dia C.I. dismantling joint PN 1.0	each	35,260.00
0571	80 mm dia C.I. D joint class-10	each	204.00
0572	100 mm dia C.I. D joint class-10	each	258.00
0573	125 mm dia C.I. D joint class-10	each	319.00
0574	150 mm dia C.I. D joint class-10	each	443.00
0575	200 mm dia C.I. D joint class-10	each	614.00
0576	250 mm dia C.I. D joint class-10	each	773.00
0577	300 mm dia C.I. D joint class-10	each	1,012.00
0578	350 mm dia C.I. D joint class-10	each	1,593.00
0579	400 mm dia C.I. D joint class-10	each	2,009.00
0580	450 mm dia C.I. D joint class-10	each	2,950.00
0581	500 mm dia C.I. D joint class-10	each	3,742.00
0582	600 mm dia C.I. D joint class-10	each	4,990.00
0591	80 mm dia C.I. D joint class-15	each	225.00
0592	100 mm dia C.I. D joint class-15	each	284.00
0593	125 mm dia C.I. D joint class-15	each	319.00
0594	150 mm dia C.I. D joint class-15	each	488.00
0595	200 mm dia C.I. D joint class-15	each	676.00
0596	250 mm dia C.I. D joint class-15	each	851.00
0597	300 mm dia C.I. D joint class-15	each	1,114.00
0598	350 mm dia C.I. D joint class-15	each	1,752.00
0599	400 mm dia C.I. D joint class-15	each	2,211.00
0600	450 mm dia C.I. D joint class-15	each	3,245.00
0601	500 mm dia C.I. D joint class-15	each	4,116.00
0602	600 mm dia C.I. D joint class-15	each	5,489.00
0611	80 mm dia C.I. transition coupling joint	each	349.00
0612	100 mm dia C.I. transition coupling joint	each	503.00

Code No	Description	Unit	Rate Rs.
0613	125 mm dia C.I. transition coupling joint	each	696.00
0614	150 mm dia C.I. transition coupling joint	each	772.00
0615	200 mm dia C.I. transition coupling joint	each	989.00
0616	250 mm dia C.I. transition coupling joint	each	1,369.00
0617	300 mm dia C.I. transition coupling joint	each	1,709.00
0618	350 mm dia C.I. transition coupling joint	each	2,776.00
0619	400 mm dia C.I. transition coupling joint	each	3,302.00
0620	450 mm dia C.I. transition coupling joint	each	4,273.00
0621	500 mm dia C.I. transition coupling joint	each	5,022.00
0631	80 mm dia C.I. puddle collar	each	1,889.00
0632	100 mm dia C.I. puddle collar	each	2,309.00
0633	125 mm dia C.I. puddle collar	each	2,979.00
0634	150 mm dia C.I. puddle collar	each	3,789.00
0635	200 mm dia C.I. puddle collar	each	5,779.00
0636	250 mm dia C.I. puddle collar	each	7,749.00
0637	300 mm dia C.I. puddle collar	each	9,919.00
0638	350 mm dia C.I. puddle collar	each	13,190.00
0639	400 mm dia C.I. puddle collar	each	16,100.00
0640	450 mm dia C.I. puddle collar	each	19,510.00
0641	500 mm dia C.I. puddle collar	each	24,060.00
0651	150 mm dia SS Stainer cylindrical type	each	6,509.00
0652	200 mm dia SS Stainer cylindrical type	each	10,490.00
0653	250 mm dia SS Stainer cylindrical type	each	17,770.00
0654	300 mm dia SS Stainer cylindrical type	each	24,430.00
0655	350 mm dia SS Stainer cylindrical type	each	45,290.00
0656	400 mm dia SS Stainer cylindrical type	each	48,870.00
0657	450 mm dia SS Stainer cylindrical type	each	65,480.00
0658	500 mm dia SS Stainer cylindrical type	each	77,530.00
0676	50 mm dia CI Kinetic Air Valve	each	5,850.00
0677	80 mm dia CI Kinetic Air Valve	each	6,500.00
0678	100 mm dia CI Kinetic Air Valve	each	9,750.00
0679	150 mm dia CI Kinetic Air Valve	each	21,160.00
0680	200 mm dia CI Kinetic Air Valve	each	34,670.00
0681	80 mm dia CI flanged ends single ball air valve	each	3,284.00
0682	100 mm dia CI flanged ends single ball air valve	each	4,652.00
0683	25 mm dia C.I. Air Valve	each	1,084.00
0684	50 mm dia C.I. Air Valve	each	1,824.00
0685	150 mm dia CI flanged ends single ball air valve	each	7,297.00

Code No	Description	Unit	Rate Rs.
0689	Water METER BOX- with Weather resistant PE/ GRP box, press fitted Lid fixing & built-in or external lock.	each	365.00
0690	Orifice flow equalizer (Brass) for 15 mm domestic water meter with seal wire & seal (Weight 110 gm +/- 5%)	each	137.00
0691	Nut & Tail peice for orifice flow equalizer 15 mm dia	each	44.90
0692	Multijet magnetic class-B ISI marked domestic water meter for 15mm dia	each	935.00
0693	Multijet magnetic class-B ISI marked domestic water meter for 20mm dia	each	1,462.00
0694	Multijet magnetic class-B ISI marked domestic water meter for 25mm dia	each	2,275.00
0695	Orifice Flow Equalizer	each	145.00
0696	Zero velocity valves 600 mm dia	each	2,15,680.00
0697	Air Cussion valve 150 mm dia	each	90,080.00
0698	Multijet magnetic class-B ISI marked domestic water meter for 32mm dia	each	5,646.00
0699	Multijet magnetic class-B ISI marked domestic water meter for 50mm dia	each	7,312.00
0701	80 mm Electromagnetic Flow Meter for 80 mm dia line	each	78,320.00
0702	100 mm Electromagnetic Flow Meter for 100 mm dia line	each	83,550.00
0703	150 mm Electromagnetic Flow Meter for 150 mm dia line	each	97,860.00
0704	200 mm Electromagnetic Flow Meter for 200 mm dia line	each	1,08,180.00
0705	250 mm Electromagnetic Flow Meter for 250 mm dia line	each	1,58,870.00
0706	300 mm Electromagnetic Flow Meter for 300 mm dia line	each	1,78,600.00
0707	400 mm Electromagnetic Flow Meter for 400 mm dia line	each	3,96,380.00
0708	450 mm Electromagnetic Flow Meter for 450 mm dia line	each	4,13,910.00
0709	500 mm Electromagnetic Flow Meter for 500 mm dia line	each	4,96,350.00
0710	600 mm Electromagnetic Flow Meter for 600 mm dia line	each	5,23,780.00
0711	80 mm Bulk Flow Meter for 80 mm dia line	each	8,751.00
0712	100 mm Bulk Flow Meter for 100 mm dia line	each	11,950.00
0713	125 mm Bulk Flow Meter for 125 mm dia line	each	16,230.00
0714	150 mm Bulk Flow Meter for 150 mm dia line	each	17,010.00
0715	200 mm Bulk Flow Meter for 200 mm dia line	each	24,250.00
0716	250 mm Bulk Flow Meter for 250 mm dia line	each	40,160.00
0717	300 mm Bulk Flow Meter for 300 mm dia line	each	69,220.00
0718	400 mm Bulk Flow Meter for 400 mm dia line	each	98,400.00
0719	500 mm Bulk Flow Meter for 500 mm dia line	each	1,23,000.00
0720	600 mm Bulk Flow Meter for 600 mm dia line	each	1,47,600.00
0721	150 mm dia C.I. float valve system	each	8,939.00
0722	200 mm dia C.I. float valve system	each	12,040.00

Code No	Description	Unit	Rate Rs.
0723	250 mm dia C.I. float valve system	each	19,060.00
0724	300 mm dia C.I. float valve system	each	28,090.00
0725	350 mm dia C.I. float valve system	each	44,240.00
0726	400 mm dia C.I. float valve system	each	74,980.00
0727	Pressure gauge -1 to + 1.0 kg/sq.cm. with isolation vave	each	1,150.00
0728	Pressure gauge 0 to 4.0 kg/sq.cm. with isolation vave	each	1,080.00
0729	Pressure gauge 0 to 6.0 kg/sq.cm. with isolation vave	each	0.00
0730	Pressure gauge 0 to 10 kg/sq.cm. with isolation vave	each	0.00
0731	G.I. pipes 15 mm dia	metre	74.40
0732	G.I. pipes 20 mm dia	metre	98.50
0733	G.I. pipes 25 mm dia	metre	128.00
0734	GI pipe 32 mm dia "B" class	metre	170.00
0735	G.I. pipes 40 mm dia	metre	230.00
0736	G.I. pipe 50 mm dia as per IS:1239	metre	251.00
0737	G.I. pipes 65 mm dia	metre	317.00
0738	G.I. pipes 80 mm dia	metre	391.00
0740	GI pipe 150 mm dia "B" class	metre	905.00
0743	G.I. back (jam) nuts25 mm dia	each	9.12
0747	G.I. back (jam) nuts65 mm dia	each	18.20
0751	M.S. cap 100 mm dia for bore well	each	137.00
0752	M.S. cap 125 mm dia for bore well	each	151.00
0753	M.S. cap 150 mm dia for bore well	each	164.00
0754	M.S. cap 200 mm dia for bore well	each	175.00
0755	M.S. cap 250 mm dia for bore well	each	228.00
0756	M.S. clamp set made of 50 ×6mm flat iron with nuts and bolts etc. for holding the riser pipe assembly of submersible pump set.	set	182.00
0758	50mm dia G.I. flanged G.I. pipe B Class including rubber washer and bolts & nuts of 8 mm dia (3 metre pipe length)	each	1,095.00
0759	75mm dia G.I. flanged G.I. pipe B Class including rubber washer and bolts & nuts of 8 mm dia (3 metre pipe length)	each	1,505.00
0760	100mm dia G.I. flanged G.I. pipe B Class including rubber washer and bolts & nuts of 8 mm dia (3 metre pipe length)	each	2,052.00
0771	G.I. elbows 15 mm dia	each	17.30
0772	G.I. elbows 20 mm dia	each	27.40
0773	G.I. elbows 25 mm dia	each	32.80
0774	G.I. elbows 32 mm dia	each	52.90
0781	G.I. plugs 15 mm dia	each	8.84
0782	G.I. plugs 20 mm dia	each	12.20
0783	G.I. plugs 25 mm dia	each	18.80
0784	G.I. plugs 32 mm dia	each	31.50

Code No	Description	Unit	Rate Rs.
0803	G.I. tees (equal) 25 mm	each	38.30
0807	G.I. tees (equal) 65 mm	each	255.00
0811	G.I. Union 15 mm nominal bore	each	44.70
0812	G.I. Union 20 mm nominal bore	each	63.90
0813	G.I. Union 25 mm nominal bore	each	88.50
0814	G.I. Union 32 mm nominal bore	each	132.00
0815	G.I. Union 40 mm nominal bore	each	156.00
0816	G.I. Union 50 mm nominal bore	each	236.00
0817	G.I. Union 65 mm nominal bore	each	456.00
0818	G.I. Union 80mm nominal bore	each	637.00
0820	G.I. inlet connection	each	60.70
0822	Steel pipe 40 mm external dia as per IS:1239	metre	205.00
0823	100 mm dia ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270	metre	684.00
0824	125 mm dia ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270	Metre	821.00
0825	150 mm dia ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270	metre	950.00
0826	200 mm dia ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270	metre	1,140.00
0827	250 mm dia ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270	metre	1,323.00
0828	125 mm dia slotted ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270	metre	960.00
0829	150 mm dia slotted ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270	metre	960.00
0830	200 mm dia slotted ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270	metre	1,149.00
0831	250 mm dia slotted ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270	metre	1,350.00
0832	S.C.I. soil, waste and vent single socketed pipe 1.80 metres long: 75mm dia conforming to I.S. 1729	each	970.00
0833	S.C.I. soil, waste and vent single socketed pipe 1.80 metres long: 100mm dia conforming to I.S. 1729	each	1,155.00
0835	S.C.I. plain bend 75mm dia conforming to I.S. 1729	each	205.00
0836	S.C.I. plain bend 100mm dia conforming to I.S. 1729	each	285.00
0838	S.C.I. bend with access door 75mm dia conforming to I.S. 1729	each	240.00
0839	S.C.I. bend with access door 100mm dia conforming to I.S. 1729	each	315.00
0841	Sand cast iron heel rest bend 75mm dia conforming to I.S. 1729	each	215.00

Code No	Description	Unit	Rate Rs.
0842	Sand cast iron heel rest bend 100mm dia conforming to I.S. 1729	each	252.00
0846	S.C.I. plain single equal junctions 75x75x75 mm dia conforming to I.S. 1729	each	245.00
0847	S.C.I. plain single equal junctions 100x100x100 mm dia conforming to I.S. 1729	each	320.00
0848	S.C.I. single equal junctions with access door 75x75x75 mm dia conforming to I.S. 1729	each	270.00
0849	S.C.I. single equal junctions with access door 100x100x100 mm dia conforming to I.S. 1729	each	355.00
0850	S.C.I. plain double equal junctions 75x75x75x75 mm dia conforming to I.S. 1729	each	335.00
0851	S.C.I. plain double equal junctions 100x100x100x100 mm dia conforming to I.S. 1729	each	490.00
0852	S.C.I. double equal junctions with access door 75x75x75x75 mm dia conforming to I.S. 1729	each	410.00
0853	S.C.I. double equal junctions with access door 100x100x100x100 mm dia conforming to I.S. 1729	each	545.00
0854	Sand cast iron S&S plain single unequal junctions : 100x100x75 mm dia conforming to I.S. 1729	each	375.00
0855	Sand cast iron S&S single unequal junctions: 100x100x75 mm dia conforming to I.S. 1729 with access door.	each	400.00
0856	Sand cast iron S&S plain double unequal junctions : 100x100x75x75 mm dia conforming to I.S. 1729	each	520.00
0857	Sand cast iron S&S double unequal junctions: 100x100x75x75 mm dia conforming to I.S. 1729 with access door.	each	560.00
0858	S.C.I. single equal invert branch of required degree 75x75x75 mm dia conforming to I.S. 1729	each	300.00
0859	S.C.I. single equal invert branch of required degree 100x100x100 mm dia conforming to I.S. 1729	each	375.00
0860	S.C.I. double equal invert branch of required degree 75x75x75x75 mm dia conforming to I.S. 1729	each	375.00
0861	S.C.I. double equal invert branch of required degree 100x100x100x100 mm dia conforming to I.S. 1729	each	500.00
0862	S.C.I. single unequal invert branch of required degree 100x100x75 mm dia conforming to I.S. 1729	each	450.00
0863	S.C.I. double unequal invert branch of required degree 100x100x75x75 mm dia conforming to I.S. 1729	each	525.00
0864	S.C.I. S&S, 76 mm offset for 75 mm dia conforming to I.S. 1729 pipe	each	220.00
0865	S.C.I. S&S, 76 mm offset for 100 mm dia conforming to I.S. 1729 pipe	each	250.00
0866	S.C.I. S&S, 114 mm offset for 75 mm dia conforming to I.S. 1729 pipe	each	270.00
0867	S.C.I. S&S, 114 mm offset for 100 mm dia conforming to I.S. 1729 pipe	each	350.00
0868	S.C.I. S&S, 152 mm offset for 75 mm dia conforming to I.S. 1729 pipe	each	325.00

Code No	Description	Unit	Rate Rs.
0869	S.C.I. S&S, 152 mm offset for 100 mm dia conforming to I.S. 1729 pipe	each	420.00
0870	S.C.I. collar 75 mm dia conforming to I.S. 1729	each	115.00
0871	S.C.I. collar 100 mm dia conforming to I.S. 1729	each	165.00
0872	S.C.I. door pieces 75 mm dia conforming to I.S. 1729	each	265.00
0873	S.C.I. door pieces 100 mm dia conforming to I.S. 1729	each	360.00
0874	Slotted cowl (terminal guard)75 mm dia conforming to I.S. 1729	each	150.00
0875	Slotted cowl (terminal guard) 100 mm dia conforming to I.S. 1729	each	200.00
0876	C.I. grating 100x100 mm	each	25.00
0877	C.I. grating 125x125 mm	each	30.00
0878	C.I. grating 150x150 mm	each	45.00
0879	C.I. grating 180x180 mm	each	55.00
0880	C.I. grating 150 mm dia. (Weighing not less than 440 gm)	each	30.00
0881	S.C.I. gully or nahani grating 100 mm dia	each	25.00
0882	C.I. cover and frame 300x300 mm inside	each	330.00
0883	C.I.cover without frame 300x300mm inside i.e.cover of 4.50 kg	each	275.00
0884	Rectangular cover 455x610 mm with frame (low duty)	each	1,415.00
0885	Rectangular cover 455x610mm without frame (low duty)	each	910.00
0886	500 mm dia cover with frame (medium duty)	each	4,430.00
0887	500 mm dia cover without frame (medium duty) wt not less than 58 kg	each	2,220.00
0888	500 mm dia cover without frame heavy duty) wt not less than 108 kg	each	4,250.00
0891	C.C.I.(spun) socketed soil, waste and vent pipe 1.80 metres long:100mm dia conforming to I.S. 3989	each	1,110.00
0892	C.C.I.(spun) socketed soil, waste and vent pipe 1.80 metres long:75mm dia conforming to I.S. 3989	each	975.00
0893	S.C.I. S&S bend 100mm dia conforming to I.S. 3989	each	340.00
0894	S.C.I. S&S bend 75mm dia conforming to I.S. 3989	each	175.00
0895	S.C.I. S&S bends with access door 100mm dia conforming to I.S. 3989	each	275.00
0896	S.C.I. S&S bends with access door 75mm dia conforming to I.S. 3989	each	220.00
0897	S.C.I. S&S heel rest sanitary bend 100mm dia conforming to I.S. 3989	each	270.00
0898	S.C.I. S&S heel rest sanitary bend 75mm dia conforming to I.S. 3989	each	230.00
0899	S.C.I. S&S single equal junctions100x100x100 mm conforming to I.S. 3989	each	430.00
0900	S.C.I. S&S single equal junctions75x75x75 mm conforming to I.S. 3989	each	310.00
0901	S.C.I. S&S single equal junctions with access door 100x100x100 mm conforming to I.S. 3989	each	455.00

Code No	Description	Unit	Rate Rs.
0902	S.C.I. S&S single equal junctions with access door 75x75x75 mm conforming to I.S. 3989	each	345.00
0903	S.C.I. S&S double equal junctions 100x100x100x100 mm conforming to I.S. 3989	each	560.00
0904	S.C.I. S&S double equal junctions 75x75x75x75 mm conforming to I.S. 3989	each	425.00
0905	S.C.I. S&S double equal junctions with access door 100x100x100x100 mm conforming to I.S. 3989	each	570.00
0906	S.C.I. S&S double equal junctions with access door 75x75x75x75 mm conforming to I.S. 3989	each	450.00
0907	S.C.I. S&S single unequal junctions 100x100x75 mm conforming to I.S. 3989	each	525.00
0908	S.C.I. S&S single unequal junctions with access door 100x100x75 mm conforming to I.S. 3989	each	595.00
0909	S.C.I. S&S double unequal junctions 100x100x75x75 mm conforming to I.S. 3989	each	735.00
0910	S.C.I. S&S double unequal junctions with access door 100x100x75x75 mm conforming to I.S. 3989	each	785.00
0911	S.C.I. S&S single equal invert branch of required degree 100x100x100 mm dia conforming to I.S. 3989	each	385.00
0912	S.C.I. S&S single equal invert branch of required degree 75x75x75 mm dia conforming to I.S. 3989	each	300.00
0913	S.C.I. S&S double equal invert branch of required degree 100x100x100x100 mm dia conforming to I.S. 3989	each	485.00
0914	S.C.I. S&S double equal invert branch of required degree 75x75x75x75 mm dia conforming to I.S. 3989	each	390.00
0915	S.C.I. S&S single unequal invert branch of required degree 100x100x75 mm dia conforming to I.S. 3989	each	505.00
0916	S.C.I. S&S double unequal invert branch of required degree 100x100x75x75 mm dia conforming to I.S. 3989	each	665.00
0917	S.C.I. S&S, 75 mm offset for 75 mm dia conforming to I.S. 3989 pipe	each	210.00
0919	S.C.I. S&S, 150 mm offset for 75 mm dia conforming to I.S. 3989 pipe	each	260.00
0920	S.C.I. S&S, 150 mm offset for 100 mm dia conforming to I.S. 3989 pipe	each	360.00
0921	C.C.I.(spun)S&S, Slotted Cowl (Terminal Guard) 100 mm conforming to I.S. 3989	each	215.00
0922	C.C.I.(spun)S&S, Slotted Cowl (Terminal Guard) 75 mm conforming to I.S. 3989	each	185.00
0923	C.C.I.(spun)S&S, collars 100 mm conforming to I.S. 3989	each	220.00
0924	C.C.I.(spun)S&S, collars 75 mm conforming to I.S. 3989	each	145.00
0925	Centrifugally cast (spun) iron S&S door pieces 100 mm dia conforming to I.S. 3989	each	390.00
0926	Centrifugally cast (spun) iron S&S door pieces 75 mm dia conforming to I.S. 3989	each	355.00

Code No	Description	Unit	Rate Rs.
0927	Casing pipe 100 mm dia	metre	320.00
0928	Standard holdar bat clamps for sand cast iron or cast iron pipes 150 mm dia	each	30.00
0929	Sand Cast iron plain shoe 150 mm dia	each	410.00
0930	Centrifugally cast (spun) iron S&S 100 mm inlet and 100 mm outlet self cleaning trap	each	345.00
0931	Centrifugally cast (spun) iron S&S 100 mm inlet and 75 mm outlet self cleaning trap	each	355.00
0934	sealing nipples	each	50.00
0935	200 dia (ID) PVC Casing pipe threaded ends	metre	800.00
0936	560 mm dia cover with frame (Heavy duty)	each	8,450.00
0938	Water stops Serrated with central bulb (225 mm wide, 8-11 mm thick)	metre	245.00
0939	Water stops Dumb bell with central bulb	metre	210.00
0941	S.C.I. hand pump	each	600.00
0942	C.I. trap for standard urinal with vent arm with operating and other couplings in C.P.brass: 50 mm dia	each	155.00
0944	C.I. trap for standard urinal with vent arm with operating and other couplings in C.P.brass: 80 mm dia	each	200.00
0945	100 mm S.C.I. trap with vent heel	each	295.00
0946	100 mm S.C.I. trap with 100 mm inlet and 100 mm outlet	each	250.00
0947	100 mm S.C.I. trap with 100 mm inlet and 75 mm outlet	each	200.00
0951	80 mm dia Knife Gate Valve manual operated	each	5,436.00
0952	100 mm dia Knife Gate Valve manual operated	each	7,103.00
0953	125 mm dia Knife Gate Valve manual operated	each	8,837.00
0954	150 mm dia Knife Gate Valve manual operated	each	10,430.00
0955	200 mm dia Knife Gate Valve manual operated	each	17,700.00
0956	250 mm dia Knife Gate Valve manual operated	each	23,080.00
0957	300 mm dia Knife Gate Valve manual operated	each	28,130.00
0958	350 mm dia Knife Gate Valve manual operated	each	42,320.00
0959	400 mm dia Knife Gate Valve manual operated	each	57,650.00
0960	450 mm dia Knife Gate Valve manual operated	each	79,950.00
0961	500 mm dia Knife Gate Valve manual operated	each	1,01,130.00
0962	600 mm dia Knife Gate Valve manual operated	each	1,37,710.00
0963	700 mm dia Knife Gate Valve manual operated	each	2,13,980.00
0964	750 mm dia Knife Gate Valve manual operated	each	2,37,390.00
0965	800 mm dia Knife Gate Valve manual operated	each	2,54,230.00
0966	900 mm dia Knife Gate Valve manual operated	each	3,31,390.00
0967	1000 mm dia Knife Gate Valve manual operated	each	3,99,960.00
0968	1200 mm dia Knife Gate Valve manual operated	each	5,42,430.00

Code No	Description	Unit	Rate Rs.
1001	M.S. Butt hinges 125x90x4 mm	Nos	95.00
1003	M.S. heavy weight butt hinges 125x90x4.0mm IS : 1341 marked.	Nos	215.00
1004	M.S. heavy weight butt hinges 100x75x3.5 mm IS: 1341 marked	Nos.	140.00
1005	M.S. heavy weight butt hinges 75x60x3.1 mm IS: 1341 marked	Nos	80.00
1006	M.S. heavy weight butt hinges 50x40x2.5 mm IS : 1341 marked	Nos	70.00
1011	Bright finished or black enamelled mild steel butt hinges 125x65x2.12 mm	Nos	120.00
1012	Bright finished or black enamelled mild steel butt hinges 100x58x1.90 mm	Nos	85.00
1013	Bright finished or black enamelled mild steel butt hinges 75x47x1.70 mm	Nos	60.00
1014	Bright finished or black enamelled mild steel butt hinges 50x37x1.50 mm	Nos	50.00
1047	Bright finished or black enamelled mild steel screws 50 mm	Nos	65.00
1049	Bright finished or black enamelled mild steel screws 40 mm	Nos	50.00
1050	Bright finished or black enamelled mild steel screws 30 mm	Nos	40.00
1051	Bright finished or black enamelled mild steel screws 25 mm	Nos	30.00
1052	Bright finished or black enamelled mild steel screws 20 mm	Nos	25.00
1053	Bright finished or black enamelled mild steel bolts and nuts 50x6 mm	each	5.00
1061	Oxidised mild steel butt hinges 125x65x2.12 mm	Nos	115.00
1062	Oxidised mild steel butt hinges 100x58x1.90 mm	Nos	85.00
1063	Oxidised mild steel butt hinges 75x47x1.70 mm	Nos	60.00
1064	Oxidised mild steel butt hinges 50x37x1.50 mm	Nos	45.00
1065	Oxidised mild steel parliamentary hinges 150x125x27x2.8 mm	Nos	320.00
1066	Oxidised mild steel parliamentary hinges 125x125x27x2.8 mm	Nos	270.00
1067	Oxidised mild steel parliamentary hinges 100x125x27x2.8 mm	Nos	205.00
1068	Oxidised mild steel parliamentary hinges 75x100x20x2.24 mm	Nos	165.00
1069	Oxidised mild steel single acting spring hinges 150 mm	each	95.00
1070	Oxidised mild steel single acting spring hinges 125 mm	each	85.00
1071	Oxidised mild steel single acting spring hinges 100 mm	each	70.00
1072	Oxidised mild steel double acting spring hinges 150 mm	each	100.00
1073	Oxidised mild steel double acting spring hinges 125 mm	each	90.00
1074	Oxidised mild steel double acting spring hinges 100 mm	each	80.00
1075	Oxidised mild steel sliding door bolt 300x16 mm	each	70.00
1076	Oxidised mild steel sliding door bolt 250x16 mm	each	55.00
1077	Oxidised mild steel door latch 300x20x6 mm	each	37.00
1078	Oxidised mild steel door latch 250x20x6 mm	each	30.00
1079	Oxidised mild steel tower bolt (barrel type) 250x10 mm	each	32.00
1080	Oxidised mild steel tower bolt (barrel type) 200x10 mm	each	26.00
1081	Oxidised mild steel tower bolt (barrel type) 150x10 mm	each	23.00

Code No	Description	Unit	Rate Rs.
1082	Oxidised mild steel tower bolt (barrel type) 100x10 mm	each	18.00
1083	Oxidised mild steel handles 125 mm	each	12.00
1084	Oxidised mild steel handles 100 mm	each	9.00
1085	Oxidised mild steel handles 75 mm	each	8.00
1094	Oxidised mild steel hasps and staples(safety type) 150 mm	Nos	100.00
1095	Oxidised mild steel hasps and staples(safety type) 115 mm	Nos	82.00
1096	Oxidised mild steel hasps and staples(safety type) 90 mm	Nos	61.00
1097	Oxidised mild steel pull bolt lock (locking bolt) of size 85 mm x 42 mm with screws, bolts, nuts and washers complete	each	43.00
1098	Oxidised M.S. safety chain (weighing not less than 450 gms) for door	each	55.00
1099	Oxidised M.S. casement stay (straight peg type) 300 mm not less than 0.33 kg	each	23.00
1100	Oxidised M.S. casement stay (straight peg type) 250 mm not less than 0.28 kg	each	19.00
1101	Oxidised M.S. casement stay (straight peg type) 200 mm not less than 0.24 kg	each	17.00
1102	Oxidised mild steel screws 50 mm	Nos	52.00
1103	Oxidised mild steel screws 40 mm	Nos	41.00
1104	Oxidised mild steel screws 30 mm	Nos	33.00
1105	Oxidised mild steel screws 25 mm	Nos	23.00
1106	Oxidised mild steel screws 20 mm	Nos	20.00
1107	Counter sunk ribbed head screw 25mm.	Nos	65.00
1109	Powder coated M.S. butt hinges 100mm X58mmX1.9mm	Nos	90.00
1110	Nickel plated mild steel piano hinges 1 mm thick 35 mm wide	metre	33.00
1111	Nickel plated mild steel piano hinges 1 mm thick 35 mm wide	metre	33.00
1114	Chromium plated brackets (curtain rods)	each	6.00
1115	Nickel plated M. S. piano hinges 50 mm (Over all width)	metre	32.00
1116	Nickel plated M. S. piano hinges 65 mm (Over all width)	metre	37.00
1117	Nickle plated M.S. pipe 20 mm dia.	metre	60.00
1118	Nickle plated M.S. Brackets for curtain rod 20 mm	each	6.00
1119	Nickle plated M.S. Brackets for curtain rod 25 mm	each	6.00
1131	Stainless steel butt hinges 125x64x1.9 mm IS : 12817 marked	Nos	242.00
1132	Stainless steel butt hinges 100x58x1.9 mm IS : 12817 marked	Nos	180.00
1133	Stainless steel butt hinges 75x47x1.8 mm IS : 12817 marked	Nos	145.00
1134	Stainless steel butt hinges 50x37x1.5 mm IS : 12817 marked	Nos	125.00
1135	Stainless steel butt hinges (heavy weight) 125x64x2.5 mm IS : 12817 marked	Nos	335.00
1136	Stainless steel butt hinges (heavy weight) 100x60x2.5 mm IS : 12817 marked	Nos	260.00

Code No	Description	Unit	Rate Rs.
1137	Stainless steel butt hinges (heavy weight) 75x50x2.5 mm IS : 12817 marked	Nos	215.00
1138	Stainless steel piano hinges 1mm thick 35mm wide	metre	55.00
1139	Stainless steel (SS 304 grade) adjustable friction window stay. 205 x 19mm	each	152.00
1140	Stainless steel (SS 304 grade) adjustable friction window stay 255 x 19mm	each	177.00
1141	Stainless steel (SS 304 grade) adjustable friction window stay. 355 x 19mm	each	205.00
1142	Stainless steel (SS 304 grade) adjustable friction window stay. 510 x 19mm	each	425.00
1143	Stainless steel (SS 304 grade) adjustable friction window stay. 710 x 19mm	each	760.00
1144	Stainless steel screws 50 mm	Nos	240.00
1145	Stainless steel screws 40 mm	Nos	190.00
1146	Stainless steel screws 30mm	Nos	136.00
1147	Stainless steel screws 25mm	Nos	72.00
1148	Stainless steel screws 20 mm	Nos	94.00
1155	Flush pipe and spreaders G.I.for single set of one squatting plate urinal	each	160.00
1156	Flush pipe and spreaders G.I.for range of two squatting plates urinal	each	230.00
1157	Flush pipe and spreaders G.I.for range of three squatting plates urinal	each	280.00
1158	Flush pipe and spreaders G.I.for range of four squatting plates urinal	each	360.00
1160	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Single lipped urinal	each	425.00
1161	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Range of two lipped urinals	each	810.00
1162	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Range of three lipped urinals	each	1,065.00
1163	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Range of four lipped urinals	each	1,475.00
1164	P.T.M.T. Waste Coupling 31/32MM	Each	45.00
1165	P.T.M.T. Waste Coupling 38/40MM	Each	65.00
1166	P.T.M.T. Bottle Trap 31/32MM	Each	270.00
1167	P.T.M.T. Bottle Trap 38/40MM	Each	275.00
1169	Double action hydraulic floor spring with brass cover plate	each	1,370.00
1170	Double action hydraulic floor spring with stainless steel cover plate	each	1,115.00
1171	6 mm dia. G.I. adjustable hangers including clips (upto 1.2 m length)	each	22.00
1172	Hanger rod 0.5 mm thick	each	10.00
1173	Intermediate cross channel (1.2 mtrs)	each	57.00
1174	Telescopic drawer channels 300mm long .	set	170.00

Code No	Description	Unit	Rate Rs.
1175	Stainless steel roller for sliding arrangement in racks/ cupboards/ cabinets shutter .	each	10.00
1176	Magenatic catcher triple strip verticle type.	each	25.00
1177	Magenatic catcher double strip horizontal type.	each	23.00
1178	100 mm mostice lock with 6 levers for aluminium door.	each	325.00
1179	Kickers	metre	230.00
1180	2mm thick UV stabilised fibreglass reinforced plastic sheet for roofing	sqm	600.00
1182	Galvanised steel	tonne	45,050.00
1183	Galvanised steel corrugated sheets	kg	50.00
1184	Corrugated sheet, 3 mm thick, "Thrie" beam section railing	kg	60.00
1186	Galvanised steel plain sheets	quintal	5,995.00
1187	Galvanised M.S. sheet 0.5 mm thick pressed channel section of size 50x32 mm	metre	58.00
1189	Galvanised M.S. sheet 0.50 mm thick pressed stud. 48x34x36 mm	metre	70.00
1191	Precoated galvanised iron profile sheet 0.50 mm TCT	sqm	335.00
1192	Precoated galvanised steel plain ridges.	metre	280.00
1193	Precoated galvanised steel flashings/aprons.	metre	280.00
1194	Precoated galvanised steel gutter	metre	390.00
1195	Precoated galvanised steel north light curves.	metre	300.00
1196	Precoated galvanised steel barge board.	metre	280.00
1197	Precoated galvanised steel crimp curve	sqm	335.00
1198	Lightening Conductor of G.I. bar of 25mm dia& 2m long	each	750.00
1199	G.I. plate 600x600x6mm with Jointing material	each	1,220.00
1200	G.I. strip 25mm wide & 5mm thick	metre	145.00
1201	Stainless steel kitchen sink - with drain board bowl depth 250 mm.	each	2,375.00
1202	Stainlees steel kitchen sink - with drain board 510 x 1040mm bowl depth 225 mm.	each	2,420.00
1203	Stainlees steel kitchen sink - with drain board 510 x 1040mm bowl depth 200 mm.	each	2,310.00
1204	Stainless steel kitchen sink - with drain board 510x1040mm bowl depth 178 mm	each	2,160.00
1205	Stainless steel kitchen sink - without drain board 610x510mm bowl depth 200 mm	each	1,980.00
1206	Stainless steel kitchen sink - without drain board 610x460mm bowl depth 200 mm.	each	1,655.00
1207	Stainless steel kitchen sink - without drain board 470x420mm bowl depth 178 mm	each	1,235.00
1208	Salem Stainless steel AISI - 304 (18/8) Round basin 405mm X 355mm	each	1,610.00
1209	Salem Stainless steel AISI - 304 (18/8) Wash basin 530mm X 345mm	each	1,430.00

Code No	Description	Unit	Rate Rs.
1210	Salem Stainless steel AISI - 304 (18/8) Orrisa pattern W.C. pan 724mm X 578mm	each	3,050.00
1211	Rolling shutters of 80x0.90 mm laths	sqm	850.00
1212	Rolling shutters of 80x1.2 mm laths	sqm	950.00
1213	Rolling shutter made of 80x1.25 mm machine rolled laths	sqm	1,270.00
1214	Top cover of Rolling shutters 0.90 mm thick	metre	345.00
1215	Top cover of Rolling shutters 1.20 mm thick	metre	400.00
1216	Top cover for rolling shutters 1.25 mm thick	metre	600.00
1217	27.5 cm long wire spring grade no 2 for rolling shutters	each	210.00
1218	Ball bearing for rolling shutters	each	280.00
1219	Extra for mechanical devices chain and cranked operation for operating rolling shutters : exceeding 10.00 sq.m and upto 16.80 sq.m area of door	sqm	645.00
1220	Extra for mechanical devices chain and cranked operation for operating rolling shutters : exceeding 16.80 sq.m area of door	sqm	660.00
1221	Extra for providing grilled rolling shutters with 8 mm dia M.S. rod	sqm	320.00
1222	Mild steel conduit pipe (heavy type) ISI marked-20 mm dia.	metre	43.00
1223	Mild steel conduit pipe (heavy type) ISI marked-25 mm dia.	metre	55.00
1224	M.S. tube 40 mm dia	metre	185.00
1225	Column clamp 450x1070 m	each	940.00
1226	Prop 2 m (2-3.5m)	each	635.00
1228	Adjustable span ESO+SI (2.35-3.40)	each	1,460.00
1229	Adjustable span- ESOSI (2.35-3.40m)	each	1,400.00
1230	Adjustable telescopic prop 3 m (2.02-3.75 m)	each	915.00
1231	Adjustable telescopi prop 3m(2.02-3.75m)	each	900.00
1232	Double clip (bridge clip)	each	70.00
1233	Beam clamp 300-380 mm (450-1070 mm)	each set	345.00
1235	Tie bolt 12 mm dia 100 mm length	each	37.00
1236	Tie bolt 12 mm dia 150 mm length	each	47.00
1237	Tie bolt 20 mm dia 150 mm length	each	58.00
1238	Tie bolt 20 mm dia 225 mm length	each	70.00
1239	Stainless steel cramps with nuts, bolts and washer for dry stone cladding .	each	130.00
1240	Stainless steel cramp	kilogram	320.00
1241	Stainless steel pin .	kg	155.00
1242	Galvanised wire mesh of average width of aperture 1.4 mm and nominal dia. of wire 0.63 mm	sqm	180.00
1243	Galvanised wire mesh of average width of aperture 1.18 mm nominal dia. wire 0.556 mm	sqm	255.00
1244	Stainless steel wire mesh of average width of aperture 1.56 mm and nominal dia. of wire 0.45 mm	sqm	300.00

Code No	Description	Unit	Rate Rs.
1245	Mild steel tubes hot finished welded type	kilogram	45.00
1246	Mild steel tubes hot finished seamless type	kilogram	50.00
1247	Mild steel tubes electric resistant or inductionbutt welded	kilogram	55.00
1248	Pressed steel door frames (mild steel sheet 1.25mm) Profile "A"	metre	235.00
1249	Pressed steel door frames (mild steel sheet 1.25mm) Profile "B"	metre	265.00
1250	Pressed steel door frames (mild steel sheet 1.25mm) Profile "C"	metre	295.00
1251	Ready made steel door with necessary hinges, lugs and glazing clips excluding other fittings & their fixing	sqm	1,730.00
1252	Factory made Steel glazed door,window/ ventilator, all members like as F7D, F4B, K11 and K12B etc.	kg	50.00
1253	Prefabricated steel garden bench/ jhula/ slides and other children play items of approved design and specifications made of MS pipe, Flates, rectangular hollow section or other steel sections duly welded and or nut bolted	kg	55.00
1261	Bolts and nuts	kg	90.00
1262	GI bolt 10 mm Dia	each	17.00
1272	Galvanised steel bolts & nuts 6 mm dia and 25 mmlong round head with slots	Nos	25.00
1273	Galvanised steel J or L hooks 8 mm dia	Nos	102.00
1274	Galvanised steel bolts & nuts 10 mm dia and 125 mm long round head with slots	each	10.00
1275	Galvanised steel bolts 10 mm dia and 7 cm long with nuts	each	15.00
1277	Bolts and nuts upto 300 mm in length	quintal	6,570.00
1278	Bolts and nuts above 300 mm in length	quintal	7,040.00
1279	Mild stel bolts 6 mm dia and 25 mm long with hexagonal head	Nos	25.00
1280	20 mm dia holding down bolts	quintal	4,945.00
1281	Galvanised steel bolts & nuts 10 mm dia and 27 cm long both sides threaded with 4 galvanised steel nuts	each	22.00
1282	Mild steel hooks	each	28.00
1283	Mild steel rivets	kg	43.00
1284	Steel nails	kg	55.00
1285	Wire mesh (rabbit)	sqm	83.00
1286	Dash fastener 6 mm dia 50 mm long	each	9.00
1287	Dash hold fastener 12.5 mm dia, 40 mm long with 6 mm dia bolt	each	20.00
1288	Rawl plug 50 mm (designation 10 no.)	each	9.00
1289	Wedge expansion hold fastner 1/4" or 6 mm	each	12.00
1290	Wedge expansion hold fastner 3/8" or 10 mm	each	12.00
1291	Wedge expansion hold fastner 1/2" or 12 mm	each	28.00
1292	Expandable fastner with plastic sleeve and M.S. screws. 25 mm long	each	9.00
1293	Expandable fastner with plastic sleeve and M.S. screws. 32 mm long	each	10.00
1294	Expandable fastner with plastic sleeve and M.S. screws. 40 mm long	each	12.00

Code No	Description	Unit	Rate Rs.
1295	Expandable fastner with plastic sleeve and M.S. screws. 50 mm long	each	13.00
1296	All drive screws (for gypsum board)	Nos	50.00
1297	Mild Steel bars	tonne	36,400.00
1298	Mild steel round bars for reinforcements	quintal	3,610.00
1299	Mild steel round bar 12 mm dia and below	quintal	3,700.00
1300	Mild steel round bar above 12 mm dia	quintal	3,640.00
1302	Cold twisted bars (TMT Bars)	tonne	38,500.00
1303	Twisted steel / deformed bars	quintal	3,865.00
1304	Corrosion resistant Structural steel	tonne	35,800.00
1307	Structural Steel	tonne	30,100.00
1308	Structurals such as tees,angles channels and R.S. joists	quintal	3,790.00
1309	Credit for Scrap Structural Steel	tonne	16,050.00
1310	MS Flats upto 10 mm in thickness	quintal	3,700.00
1311	Flats exceeding 10 mm in thickness	quintal	3,800.00
1312	Mild steel plates	quintal	3,955.00
1313	Mild steel sheets for tanks	quintal	3,790.00
1315	Galvanised MS flat clamp	each	46.00
1316	Helical pipes 600mm diameter 0.7mm thickness	metre	6,100.00
1317	Helical pipes 800mm diameter 0.8mm thickness	metre	8,110.00
1318	M.S. Clamps	each	34.00
1319	M.S. Clamps	kg	44.00
1322	Steel drum 300 mm dia 1.2 m high/empty bitumen drum	each	460.00
1323	Steel helmet and cushion block on top of pile head during driving.	kg	55.00
1326	Strip seal expansion join	metre	6,460.00
1327	Tie rods 20mm diameter	each	100.00
1328	Tube anchorage set complete with bearing plate, permanent wedges etc	each	2,350.00
1329	Welded steel wire fabric	kg	55.00
1330	Wire mesh 50mm x 50mm size of 3mm wire	kg	60.00
1331	Mild steel expanded metal 20x60 mm strands	sqm	255.00
1332	Hard drawn steel wire fabric 75mm x 25mm	sqm	385.00
1333	Galvanised steel wire crates of mesh size 100 mm x 100 mm woven with 4mm dia. GI wire in rolls of required size.	sqm	180.00
1334	Nipples 12mm	each	25.00
1335	Seam bolts and nuts 6 mm dia and 25 mm long	Nos	35.00
1337	SS wire gauge with average width of aperture 1.4 mm on both directions with wire of dia 0.63 mm	sqm	305.00
1338	GI wire gauge with average width of aperture 1.4 mm on both directions with wire of dia 0.63 mm	sqm	142.00
1339	Spring coil 12 mm dia for tie bolt	each	13.00

Code No	Description	Unit	Rate Rs.
1340	Hard drawn GI wire chain link fabric Aperture 50x50mm and made of 3.15mm wire	sqm	180.00
1341	Hard drawn GI wire chain link fabric Aperture 75x75mm and made of 3.15 mm wire	sqm	160.00
1342	Hard drawn GI wire chain link fabric Aperture 100x100mm and made of 3.15mm wire	sqm	115.00
1343	Hard drawn GI wire chain link fabric Aperture 150x150mm and made of 3.15mm wire	sqm	110.00
1344	Iron pintels including welded pin	each	34.00
1345	GI U clips/ G.I. Staples	kg	43.00
1346	Steel beading	metre	20.00
1347	G.I. Limpet washer	Nos	25.00
1348	G.I. plain washer thick	Nos	32.00
1349	G.I. plain washer thin	Nos	25.00
1350	G.I. plain washer for seam bolts	Nos	26.00
1351	Mild steel sheets with bolts and nuts to rest on pintels	each	92.00
1352	Hard drawn steel wire	quintal	4,435.00
1353	Surface box for stop cock	each	91.00
1354	Surface box for sluice valve	each	170.00
1355	Surface box for water meter	each	245.00
1357	C.I. bracket for wash basin and sinks	pair	72.00
1360	Clamps and M.S. stays including bolts and nuts for 100 mm pipe	each	56.00
1361	M.S.Holder bat clamp of approved design for 100 mm S.C.I. pipe	each	27.00
1362	M.S.Holder bat clamp of approved design for 75 mm S.C.I. pipe	each	20.00
1364	Clamps and M.S. stays including bolts and nuts for 50 mm pipe	each	28.00
1365	Clamps and M.S. stays including bolts and nuts for 75 mm pipe	each	32.00
1368	Mosquito proof coupling of approved design	each	28.00
1369	Connecting clips	each	6.00
1370	Hydraulic door closer bottle type M.S. body with necessary accessories and screws complete	each	435.00
1373	C.I.mouth, brass ferrule 15 mm dia	each	108.00
1374	C.I.mouth, brass ferrule 20 mm dia	each	140.00
1375	C.I.mouth, brass ferrule 25 mm dia	each	187.00
1377	C.I. shoes for the pile	kg	60.00
1380	Circular C.I. Box for ceiling fan	each	47.00
1381	Circular shape 560 mm dia Ductile Iron manhole frame & cover, Hinged Type, Heavy Duty with test load of 400 KN D-400 as per BS EN 124	set	4,270.00
1382	MS Strip for making pipe	kg	43.00
1383	Cadmium plated full threaded steel screws (30x4 mm dia.)	Nos	28.00

Code No	Description	Unit	Rate Rs.
1384	12 mm M.S. 'U' beading	metre	12.00
1386	Hermetically sealed double glazed unit made with 6mm thick clear float glass both side having 12 mm air gap.	sqm	1,940.00
1387	Binding wire	kg	50.00
1388	Binding wire	kilogram	50.00
1389	Barbed wire	kg	50.00
1397	Pully 25 mm dia	each	22.00
1398	Pully 40 mm dia	each	26.00
1399	Wheel 75 mm dia. 40 mm wide	each	58.00
1401	Brass butt hinges (light/ordinary type) : 125x70x4 mm	Nos	580.00
1402	Brass butt hinges (light/ordinary type) : 100x70x4 mm	Nos	420.00
1403	Brass butt hinges (light/ordinary type) : 75x40x2.5 mm	Nos	240.00
1404	Brass butt hinges (light/ordinary type) : 50x40x2.5 mm	Nos	120.00
1405	Brass butt hinges (heavy type) : 125x85x5.5 mm(.70)kg	Nos	1,420.00
1406	Brass butt hinges (heavy type) : 100x85x5.5 mm(.56)kg	Nos	1,175.00
1407	Brass butt hinges (heavy type) :75x65x4.0 mm(.20)kg	Nos	615.00
1408	Brass parliamentary hinges 150x125x27x5 mm	Nos	2,025.00
1409	Brass parliamentary hinges 125x125x27x5 mm	Nos	1,800.00
1410	Brass parliamentary hinges 100x125x27x5 mm	Nos	1,530.00
1411	Brass parliamentary hinges75x100x20x3.2 mm	Nos	1,280.00
1412	Brass single acting spring hinges 150 mm	each	275.00
1413	Brass single acting spring hinges 125 mm	each	206.00
1414	Brass single acting spring hinges 100 mm	each	160.00
1415	Brass double acting spring hinges 150 mm	each	400.00
1416	Brass double acting spring hinges 125 mm	each	305.00
1417	Brass double acting spring hinges 100 mm	each	260.00
1418	Brass tower bolt (barrel type) 250x10 mm	each	175.00
1419	Brass tower bolt (barrel type) 200x10 mm	each	140.00
1420	Brass tower bolt (barrel type) 150x10 mm	each	110.00
1421	Brass tower bolt (barrel type) 100x10 mm	each	75.00
1422	Brass flush bolt 250 mm	each	115.00
1423	Brass flush bolt 150 mm	each	95.00
1424	Brass flush bolt 100 mm	each	64.00
1426	Brass handles 125 mm with plate 175x32 mm	each	120.00
1427	Brass handles 100 mm with plate 150x32 mm	each	110.00
1428	Brass handles75 mm with plate 125x32 mm	each	80.00
1429	Brass door latch 300x16x5 mm (0.380 kg)	each	125.00
1430	Brass door latch 250x16x5 mm (0.350 kg)	each	115.00
1431	Brass mortice latch and lock 100x65 mm with6 levers and a pair of	each	405.00

Code No	Description	Unit	Rate Rs.
	brass lever handles		
1432	Brass mortice latch 100x65mm with a pair of brass lever handles	each	380.00
1435	Brass 150 mm floor door stopper (0.357kg)	each	135.00
1436	Brass hard drawn hooks and eyes 300 mm	Nos	540.00
1437	Brass hard drawn hooks and eyes 250 mm	Nos	505.00
1438	Brass hard drawn hooks and eyes 200 mm	Nos	765.00
1439	Brass hard drawn hooks and eyes 150 mm	Nos	410.00
1440	Brass hard drawn hooks and eyes 100 mm	Nos	360.00
1441	Brass casement window fastener	Each	36.00
1442	Brass casement stays (straight peg type) 300 mm weighing not less than 0.33 kg	each	91.00
1443	Brass casement stays (straight peg type) 250 mm weighing not less than 0.28 kg	Each	73.00
1444	Brass casement stays (straight peg type) 200 mmweighing not less than 0.24 kg	each	65.00
1445	Brass quadrant stays 300 mm	each	95.00
1446	Brass fanlight catch	Nos	145.00
1447	Brass fanlight pivot	Nos	175.00
1448	Brass chain with hook for fan light catch	each	22.00
1449	Brass hasps and staples (safety type) 300 mm	Nos	595.00
1450	Brass hasps and staples (safety type) 115 mm	Nos	510.00
1451	Brass hasps and staples (safety type)90 mm	Nos	415.00
1454	Brass Night latch	each	450.00
1457	Brass helical spring 150 mm	each	235.00
1459	Brass curtain rod 20 mm dia 1.25 mm thick	metre	90.00
1460	Brass curtain rod 25 mm dia 1.25 mm thick	metre	115.00
1461	Brass brackets (curtain rods) 20 mm	each	36.00
1462	Brass cupboard knob or ward robe knob 50 mm	each	30.00
1465	Chromium plated Brass butt hinges (heavy) type 75x65x4.0 mm	Nos	645.00
1466	Chromium plated Brass butt hinges (light/ordinary) type 125x70x4 mm	Nos	610.00
1467	Chromium plated Brass butt hinges (light/ordinary) type 100x70x4 mm	Nos	535.00
1468	Chromium plated Brass butt hinges (light/ordinary) type 75x40x2.5 mm	Nos	240.00
1469	Chromium plated Brass butt hinges (light/ordinary) type 50x40x2.5 mm	Nos	140.00
1470	Chromium plated Brass handles 125 mm with plate 175 x32 mm	Each	125.00
1471	Chromium plated Brass handles 100 mm with plate 150 x 32 mm	Each	103.00
1472	Chromium plated Brass handles 75mm with plate 125x32 mm	Each	95.00
1473	Chromium plated Brass mortice latch and lock 100x65 mm with6	each	420.00

Code No	Description	Unit	Rate Rs.
	levers and a pair of brass lever handles		
1474	Chromium plated brass casement window fastner	each	75.00
1475	Chromium plated Brass casement stays (straight peg type) 300 mmweighing not less than 0.33 kg	each	100.00
1476	Chromium plated Brass casement stays (straight peg type) 250 mmweighing not less than 0.28 kg	each	92.00
1477	Chromium plated Brass casement stays (straight peg type) 200 mmweighing not less than 0.24 kg	each	77.00
1486	Chromium plated Brass Night latch	each	500.00
1487	Chromium plated Brass Wardrobe Knobe 50 mm	each	80.00
1488	Chromium plated Brass curtain rod 12 mm dia 1.25mm thick	metre	160.00
1489	Chromium plated Brass curtain rod 20 mm dia 1.25mm thick	metre	210.00
1490	Chromium plated Brass curtain rod 25 mm dia 1.25mm thick	metre	330.00
1492	Brass 100mm mortice latch and lock with6 levers without pair of handles	each	250.00
1493	Brass cupboard lock 6 levers (best make of approved quality) 40 mm size	each	55.00
1494	Brass cupboard lock 6 levers (best make of approved quality) 50 mm size	each	75.00
1495	Brass cupboard lock 6 levers (best make of approved quality) 65 mm size	each	90.00
1496	Brass cupboard lock 6 levers (best make of approved quality) 75 mm size	each	105.00
1497	Nickled Chromium Brass cupboard lock 40 mm size	each	52.00
1498	Nickled Chromium Brass cupboard lock 50 mm size	each	65.00
1499	Nickled Chromium Brass cupboard lock 65 mm size	each	85.00
1500	Nickled Chromium Brass cupboard lock 75 mm size	each	105.00
1501	Brass hanging type door stopper 150 mm	each	65.00
1503	Chromium plated Brass pull bolt lock (locking bolt) of size 85 mmx42 mm with screws,bolts,nuts and washers complete	each	150.00
1505	Strainer brass 40 mm dia 1.5 metre long	each	490.00
1506	Cramp Gun metal 25x6x300 mm	each	65.00
1509	Pig lead	kilogram	95.00
1510	Copper pins 6 mm dia 7.5 cm long	each	10.00
1511	Copper plate	kilogram	310.00
1512	C.P.brass chain with 32 mm dia rubber plug	each	40.00
1513	C.P.brass chain with 40 mm dia rubber plug	each	40.00
1516	Brass screws 50 mm	Nos	240.00
1517	Brass screws 40 mm	Nos	180.00
1519	Brass screws 30 mm	Nos	145.00
1520	Brass screws 25 mm	Nos	110.00

Code No	Description	Unit	Rate Rs.
1521	Brass screws 20 mm	Nos	85.00
1523	Chromium plated Brass screws 50 mm	Nos	315.00
1524	Chromium plated Brass screws 40 mm	Nos	265.00
1525	Chromium plated Brass screws 30 mm	Nos	210.00
1526	Chromium plated Brass screws 25 mm	Nos	170.00
1527	Chromium plated Brass screws 20 mm	Nos	115.00
1531	Anodised Aluminium butt hinges 125x75x4 mm	Nos	530.00
1532	Anodised Aluminium butt hinges 125x63x4 mm	Nos	410.00
1533	Anodised Aluminium butt hinges 100x75x4 mm	Nos	405.00
1534	Anodised Aluminium butt hinges 100x63x3.2 mm	Nos	350.00
1535	Anodised Aluminium butt hinges 100x63x4 mm	Nos	345.00
1536	Anodised Aluminium butt hinges 75x63x4 mm	Nos	275.00
1537	Anodised Aluminium butt hinges 75x63x3.2 mm	Nos	230.00
1538	Anodised Aluminium butt hinges 75x45x3.2 mm	Nos	160.00
1540	Anodised Aluminium sliding door bolt 300x16 mm	each	145.00
1541	Anodised Aluminium sliding door bolt 250x16 mm	each	120.00
1542	Anodised Aluminium tower bolt (barrel type)300x10 mm	Nos	465.00
1543	Anodised Aluminium tower bolt (barrel type)250x10 mm	Nos	470.00
1544	Anodised Aluminium tower bolt (barrel type)200x10 mm	Nos	380.00
1545	Anodised Aluminium tower bolt (barrel type)150x10 mm	Nos	300.00
1546	Anodised Aluminium tower bolt (barrel type)100x10 mm	Nos	220.00
1547	Anodised Aluminium handles 125 mm with plate 175 x 32 mm	Nos	335.00
1548	Anodised Aluminium handles 100 mm with plate 150 x 32 mm	Nos	280.00
1549	Anodised Aluminium handles 75mm with plate 125 x 32 mm	Nos	220.00
1550	Aluminium round shape handle (anodised AC 15)	each	55.00
1551	Aluminium round shape handle (powder coated)	each	58.00
1552	Aluminium round shape handle (polyester powder coated).	each	60.00
1553	Anodised Aluminium kicking plate 50 cm long100x3.15 mm	each	110.00
1556	Anodised Aluminium hanging type door stopper	each	18.00
1557	Anodised Aluminium pull bolt lock (locking bolt) of size 85 mmx42 mm with screws,bolts,nuts and washers complete	each	40.00
1558	Anodised Aluminium Casement stay 250 mm	each	35.00
1561	600x120 mm glass shelf with anodised aluminium angle frame, C.P. brass brackets and guard rail of standard size	each	145.00
1562	Pair of Anodised Aluminium lever handles for 100mm mortice latch and lock	each	205.00
1563	Aluminium hanging floor door stopper with twin rubber & stopper	each	37.00
1564	Hydraulic door closer tubular type Aluminium section body	each	800.00
1565	Aluminium T or L sections	kilogram	205.00

Code No	Description	Unit	Rate Rs.
1566	Aluminium tee channel (heavy duty) with rollers and stop end	metre	55.00
1567	Anodising 15 microns on aluminium sections	kilogram	40.00
1568	Anodising 25 microns on aluminium sections	kilogram	45.00
1573	Aluminium Strip 40 mm wide and 2 mm thick	kilogram	220.00
1575	Strips-Aluminium fluted 3.15mm thick and 150mm wide	metre	235.00
1576	Strips Aluminium fluted 3.15mm thick and 200mm wide metre	Metre	328.00
1577	Aluminium single cleat of size 30x32x3	each	13.00
1578	Aluminium grip strip of size 50x12x2	each	11.00
1579	Aluminium U beading	kilogram	205.00
1581	Aluminium washer 2 mm thick 15 mm dia	Nos	10.00
1583	Aluminium casement window fastner (Anodised AC 15)	each	40.00
1584	Aluminium casement window fastner (powder coated).	each	40.00
1585	Aluminium casement window fastner (polyester powder coated).	each	45.00
1587	Polyester powder coating 50 microns on aluminium sections	kilogram	62.00
1588	Epoxy powder coating 50 microns on aluminium sections.	kilogram	55.00
1589	Aluminium sheeting fixed with encapsulated lens type reflective sheeting in various size including lettering and signs as applicable	sqm	5,230.00
1590	High Intensity retro reflective Type IV sign plate made out of 2.00 mm thick aluminium sheet face to be fully covered with blue/green high intensity grade retro reflective sheet and logo/matters, boarder made of with similar type of white sheeting after etching treatment of aluminium sheet, the black side is to be painted with epoxy grey paint. the plate is to be fixed on 40X40X5 mm angle iron frame with help of aluminium rivets.	sqm	7,980.00
1601	Brass bib-cock 15 mm dia	each	210.00
1602	Brass bib-cock 20 mm dia	each	255.00
1603	Brass stop-cock 15 mm dia	each	225.00
1604	Brass stop-cock 20 mm dia	each	280.00
1605	C.P.brass tap 15 mm	each	135.00
1607	C.P. Brass bibcock 15 mm	each	320.00
1608	C.P. Brass long nose bibcock 15 mm	each	450.00
1609	C.P. Brass long body bibcock 15 mm	each	395.00
1610	C.P. Brass stop cock (concealed) 15 mm	each	485.00
1611	C.P. Brass angle valve 15 mm	each	345.00
1613	C.P. brass tap 15 mm with elbow operation lever	each	495.00
1614	Brass full way valve with C.I. wheel (screwed end) 25 mm dia	each	375.00
1615	Brass full way valve with C.I. wheel (screwed end) 32 mm dia	each	615.00
1616	Brass full way valve with C.I. wheel (screwed end) 40 mm dia	each	800.00
1617	Brass full way valve with C.I. wheel (screwed end) 50 mm dia	each	1,470.00
1618	Brass full way valve with C.I. wheel (screwed end) 65 mm dia	each	2,780.00

Code No	Description	Unit	Rate Rs.
1619	Brass full way valve with C.I. wheel (screwed end) 80 mm dia	each	5,870.00
1620	Gunmetal non-return valve-horizontal (screwed end) 25 mm dia	each	600.00
1621	Gunmetal non-return valve-horizontal (screwed end) 32 mm dia	each	1,090.00
1622	Gunmetal non-return valve-horizontal (screwed end) 40 mm dia	each	1,240.00
1623	Gunmetal non-return valve-horizontal (screwed end) 50 mm dia	each	1,890.00
1624	Gunmetal non-return valve-horizontal (screwed end) 65 mm dia	each	4,555.00
1625	Gunmetal non-return valve-horizontal (screwed end) 80 mm dia	each	6,400.00
1627	Gunmetal non-return valve-vertical (screwed end) 25 mm dia	each	480.00
1628	Gunmetal non-return valve-vertical (screwed end) 32 mm dia	each	760.00
1629	Gunmetal non-return valve-vertical (screwed end) 40 mm dia	each	935.00
1630	Gunmetal non-return valve-vertical (screwed end) 50 mm dia	each	1,580.00
1631	Gunmetal non-return valve-vertical (screwed end) 65 mm dia	each	2,515.00
1632	Gunmetal non-return valve-vertical (screwed end) 80 mm dia	each	3,500.00
1634	Shower rose C.P.brass for 15 to 20 mm inlet 100 mm dia	each	50.00
1635	Shower rose C.P.brass for 15 to 20 mm inlet 150 mm dia	each	65.00
1638	Flush pipe with union spreaders and clamps all in C.P. brass for single stall	each	235.00
1639	Flush pipe with union spreaders and clamps all in C.P. brass for double stall	each	375.00
1640	Flush pipe with union spreaders and clamps all in C.P. brass for range of three stall	each	470.00
1641	Flush pipe with union spreaders and clamps all in C.P. brass for range of four stall	each	530.00
1644	C.P.brass toilet paper holder of standard size	each	115.00
1646	C.P.brass trap 40 mm dia	each	160.00
1647	C.P. brass waste 32 mm	each	68.00
1648	C.P. brass waste 40 mm	each	90.00
1649	Gun metal cramp	kilogram	310.00
1650	15mm dia brass ferrul	each	88.50
1651	20mm dia brass ferrul	each	126.00
1652	25mm dia brass ferrul	each	172.00
1653	Pig lead	kilogram	95.00
1700	Rubber insertions for 50 mm dia pipe joints	each	11.00
1701	Rubber insertions for 80 mm dia pipe joints	each	15.10
1702	Rubber insertions for 100 mm dia pipe joints	each	16.00
1703	Rubber insertions for 125 mm dia pipe joints	each	17.10
1704	Rubber insertions for 150 mm dia pipe joints	each	19.30
1705	Rubber insertions for 200 mm dia pipe joints	each	23.20
1706	Rubber insertions for 250 mm dia pipe joints	each	31.00
1707	Rubber insertions for 300 mm dia pipe joints	each	39.00

Code No	Description	Unit	Rate Rs.
1708	Rubber insertions for 350 mm dia pipe joints	each	48.10
1709	Rubber insertions for 400 mm dia pipe joints	each	63.00
1710	Rubber insertions for 450 mm dia pipe joints	each	80.20
1711	Rubber insertions for 500 mm dia pipe joints	each	93.00
1712	Rubber insertions for 600 mm dia pipe joints	each	121.00
1713	Rubber insertions for 700 mm dia pipe joints	each	153.00
1714	Rubber insertions for 750 mm dia pipe joints	each	156.00
1715	Rubber insertions for 800 mm dia pipe joints	each	160.00
1716	Rubber insertions for 900 mm dia pipe joints	each	164.00
1717	Rubber insertions for 1000 mm dia pipe joints	each	175.00
1718	Rubber insertions for 1100 mm dia pipe joints	each	184.00
1741	Ruber Gaskets for SW Pipe 100mm dia	Each	16.40
1742	Ruber Gaskets for SW Pipe 150mm dia	Each	18.20
1743	Ruber Gaskets for SW Pipe 200mm dia	Each	22.80
1744	Ruber Gaskets for SW Pipe 250mm dia	Each	36.50
1745	Ruber Gaskets for SW Pipe 300mm dia	Each	41.10
1751	150mm Nominal dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	348.00
1752	200 mm Nominal dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	551.00
1753	250 mm Nominal dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	718.00
1754	300 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	918.00
1755	350 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	1,180.00
1756	400 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	1,438.00
1757	450 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	1,670.00
1758	500 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	2,140.00
1759	600 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	2,586.00
1760	700 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	4,726.00
1761	800 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	6,240.00
1762	900 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	6,768.00
1763	1000 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	9,520.00
1766	150mm Nominal dia AC pipe (Mazza process) Class-2, ISI marked	metre	431.00

Code No	Description	Unit	Rate Rs.
	(IS 6908) with rubber gasket (IS 5382)		
1767	200 mm Nominal dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	725.00
1768	250 mm Nominal dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	902.00
1769	300 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	1,252.00
1770	350 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	1,592.00
1771	400 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	2,020.00
1772	450 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	2,385.00
1773	500 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	2,992.00
1774	600 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	4,253.00
1775	700 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	5,227.00
1776	800 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	7,436.00
1777	900 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	9,298.00
1778	1000 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	11,460.00
1781	150mm Nominal dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	541.00
1782	200 mm Nominal dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	907.00
1783	250 mm Nominal dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	1,125.00
1784	300 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	1,607.00
1785	350 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	2,010.00
1786	400 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	2,636.00
1787	450 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	3,175.00
1788	500 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	3,870.00
1789	600 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	5,503.00
1790	700 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	7,251.00
1791	800 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked	metre	9,733.00

Code No	Description	Unit	Rate Rs.
	(IS 6908) with rubber gasket (IS 5382)		
1792	900 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	12,070.00
1793	1000 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)	metre	15,120.00
1800	225 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996	metre	1,350.00
1801	200 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996	metre	1,183.00
1802	250 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996	metre	1,840.00
1803	315 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996	metre	2,978.00
1804	355 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996	metre	3,500.00
1805	400 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996	metre	4,810.00
1806	450 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996	metre	6,054.00
1807	500 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996	metre	8,002.00
1808	560 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996	metre	10,000.00
1809	630 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996	metre	12,670.00
1810	800 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996	metre	20,390.00
1811	900 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996	metre	25,830.00
1812	1000 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996	metre	31,910.00
1821	150 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2	metre	275.00
1822	200 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2	metre	395.00
1823	250 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2	metre	610.00
1824	300 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2	metre	830.00
1825	400 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2	metre	1,439.00
1826	500 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2	metre	2,172.00
1827	600 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2	metre	3,782.00
1828	800 mm DN/ID HDPE DWC (External Annular Corrugated and	metre	6,425.00

Code No	Description	Unit	Rate Rs.
	smooth internal walls) SN-8 as per IS 16098 part 2		
1829	1000 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2	metre	10,460.00
1840	110 mm ID/ND U-PVC pipes as per IS 13592 with socket and spigot joint and rubber ring	metre	156.00
1851	110 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328	metre	169.00
1852	160 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328	metre	360.00
1853	200 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328	metre	562.00
1854	250 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328	metre	863.00
1855	315 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328	metre	1,377.00
1856	350 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328	metre	1,500.00
1857	400 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328	metre	1,600.00
1858	500 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328	metre	1,700.00
1859	700 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328	metre	1,800.00
1861	90 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	130.00
1862	110 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	192.00
1863	125 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	251.00
1864	140 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	311.00
1865	160 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	401.00
1866	180 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	510.00
1867	200 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	632.00
1868	225 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	795.00
1869	250 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	987.00
1870	280 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	1,246.00
1871	315 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985	metre	1,596.00
1881	90 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	309.00
1882	110 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	510.00
1883	125 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	597.00
1884	140 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	900.00

Code No	Description	Unit	Rate Rs.
1885	160 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1,337.00
1886	180 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1,744.00
1887	200 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,195.00
1888	225 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	3,496.00
1889	250 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	4,422.00
1890	280 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	4,850.00
1891	315 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	5,442.00
1892	350 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	6,000.00
1893	400 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	6,500.00
1894	500 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	7,000.00
1895	700 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	7,500.00
1901	125 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	726.00
1902	140 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	803.00
1903	140 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	812.00
1904	160 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	993.00
1905	160 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1,121.00
1906	160 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1,385.00
1907	180 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1,250.00
1908	180 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1,894.00
1909	180 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1,948.00
1910	180 X 160 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,081.00
1911	200 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	1,979.00
1912	200 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,049.00

Code No	Description	Unit	Rate Rs.
1913	200 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,066.00
1914	200 X 160 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,081.00
1915	200 X 180 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,125.00
1916	225 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,091.00
1917	225 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,216.00
1918	225 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,321.00
1919	225 X 160 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,583.00
1920	225 X 180 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,657.00
1921	225 X 200 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,696.00
1922	250 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,120.00
1923	250 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,195.00
1924	250 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,615.00
1925	250 X 160 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,730.00
1926	250 X 180 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,831.00
1927	250 X 200 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,994.00
1928	250 X 225 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	3,137.00
1929	280 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,120.00
1930	280 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,640.00
1931	280 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,869.00
1932	280 X 160 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,888.00
1933	280 X 180 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,895.00
1934	280 X 200 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	2,992.00
1935	280 X 225 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	3,153.00

Code No	Description	Unit	Rate Rs.
1936	280 X 250 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	3,360.00
1937	315 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	3,718.00
1938	315 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	3,726.00
1939	315 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	3,805.00
1940	315 X 160 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	3,865.00
1941	315 X 180 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	4,306.00
1942	315 X 200 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	4,340.00
1943	315 X 225 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	4,506.00
1944	315 X 250 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	4,580.00
1945	315 X 280 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834	each	4,817.00
1951	125 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	275.00
1952	140 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	355.00
1953	140 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	355.00
1954	160 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	523.00
1955	160 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	552.00
1956	160 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	582.00
1957	180 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	545.00
1958	180 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	559.00
1959	180 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	624.00
1960	180 X 160 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	633.00
1961	200 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	826.00
1962	200 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	894.00
1963	200 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	990.00

Code No	Description	Unit	Rate Rs.
1964	200 X 160 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	998.00
1965	200 X 180 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,089.00
1966	225 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	929.00
1967	225 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,015.00
1968	225 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,025.00
1969	225 X 160 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,031.00
1970	225 X 180 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,076.00
1971	225 X 200 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,102.00
1972	250 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	993.00
1973	250 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,082.00
1974	250 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,171.00
1975	250 X 160 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,201.00
1976	250 X 180 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,282.00
1977	250 X 200 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,375.00
1978	250 X 225 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,429.00
1979	280 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,182.00
1980	280 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,273.00
1981	280 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,362.00
1982	280 X 160 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,407.00
1983	280 X 180 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,427.00
1984	280 X 200 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,530.00
1985	280 X 225 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,580.00
1986	280 X 250 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,583.00

Code No	Description	Unit	Rate Rs.
1987	315 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,718.00
1988	315 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,810.00
1989	315 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,889.00
1990	315 X 160 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,935.00
1991	315 X 180 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	1,965.00
1992	315 X 200 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	2,054.00
1993	315 X 225 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	2,063.00
1994	315 X 250 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	2,146.00
1995	315 X 280 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834	each	2,245.00
2001	90 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	200.00
2002	110 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	345.00
2003	125 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	483.00
2004	140 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	661.00
2005	160 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	950.00
2006	180 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	1,300.00
2007	200 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	1,887.00
2008	225 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	2,683.00
2009	250 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	3,550.00
2010	280 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	5,371.00
2011	315 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	7,867.00
2012	350 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	8,000.00
2013	400 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	8,500.00
2014	500 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	9,000.00

Code No	Description	Unit	Rate Rs.
2015	700 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834	each	9,500.00
2021	90 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	157.00
2022	110 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	263.00
2023	125 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	362.00
2024	140 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	490.00
2025	160 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	695.00
2026	180 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	967.00
2027	200 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	1,351.00
2028	225 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	1,871.00
2029	250 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	2,548.00
2030	280 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	3,572.00
2031	315 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834	each	5,444.00
2041	90 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	25.50
2042	110 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	36.10
2043	125 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	100.00
2044	140 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	128.00
2045	160 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	143.00
2046	180 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	162.00
2047	200 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	178.00
2048	225 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	462.00
2049	250 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	472.00
2050	280 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	977.00
2051	315 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	1,043.00
2052	350 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	1,200.00
2053	400 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	1,300.00
2054	500 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	1,400.00
2055	700 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834	each	1,500.00
2061	90 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	428.00
2062	110 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	535.00

Code No	Description	Unit	Rate Rs.
2063	125 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	852.00
2064	140 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	1,048.00
2065	160 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	1,559.00
2066	180 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	1,940.00
2067	200 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	2,695.00
2068	225 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	3,513.00
2069	250 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	4,935.00
2070	280 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	6,220.00
2071	315 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	9,554.00
2101	125 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	1,062.00
2102	140 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	1,340.00
2103	140 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	1,478.00
2104	160 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	1,832.00
2105	160 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	1,851.00
2106	160 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	1,870.00
2107	180 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	2,171.00
2108	180 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	2,386.00
2109	180 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	2,451.00
2110	180 X 160 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	2,671.00
2111	200 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	2,510.00
2112	200 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	2,667.00
2113	200 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	2,689.00
2114	200 X 160 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	2,703.00

Code No	Description	Unit	Rate Rs.
2115	200 X 180 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	3,679.00
2116	225 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	3,991.00
2117	225 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	4,188.00
2118	225 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	4,242.00
2119	225 X 160 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	4,769.00
2120	225 X 180 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,307.00
2121	225 X 200 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	6,491.00
2122	250 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	4,680.00
2123	250 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	4,777.00
2124	250 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	4,956.00
2125	250 X 160 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	4,780.00
2126	250 X 180 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,052.00
2127	250 X 200 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,304.00
2128	250 X 225 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,507.00
2129	280 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,562.00
2130	280 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,618.00
2131	280 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,674.00
2132	280 X 160 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,731.00
2133	280 X 180 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,788.00
2134	280 X 200 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,846.00
2135	280 X 225 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	6,054.00
2136	280 X 250 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	6,569.00
2137	315 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,535.00

Code No	Description	Unit	Rate Rs.
2138	315 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,562.00
2139	315 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	5,600.00
2140	315 X 160 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	6,046.00
2141	315 X 180 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	6,102.00
2142	315 X 200 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	6,397.00
2143	315 X 225 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	6,580.00
2144	315 X 250 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	6,781.00
2145	315 X 280 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834	each	7,607.00
2151	125 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	283.00
2152	140 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	466.00
2153	140 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	483.00
2154	160 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	641.00
2155	160 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	680.00
2156	160 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	697.00
2157	180 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	804.00
2158	180 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	819.00
2159	180 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	884.00
2160	180 X 160 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	894.00
2161	200 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	935.00
2162	200 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	955.00
2163	200 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,074.00
2164	200 X 160 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,130.00
2165	200 X 180 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,213.00

Code No	Description	Unit	Rate Rs.
2166	225 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,314.00
2167	225 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,454.00
2168	225 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,471.00
2169	225 X 160 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,555.00
2170	225 X 180 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,653.00
2171	225 X 200 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,744.00
2172	250 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,899.00
2173	250 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,960.00
2174	250 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,044.00
2175	250 X 160 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,144.00
2176	250 X 180 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,164.00
2177	250 X 200 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,252.00
2178	250 X 225 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,289.00
2179	280 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,908.00
2180	280 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	1,929.00
2181	280 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,042.00
2182	280 X 160 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,172.00
2183	280 X 180 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,290.00
2184	280 X 200 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,364.00
2185	280 X 225 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,385.00
2186	280 X 250 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,527.00
2187	315 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,883.00
2188	315 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	2,968.00

Code No	Description	Unit	Rate Rs.
2189	315 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	3,055.00
2190	315 X 160 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	3,089.00
2191	315 X 180 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	3,157.00
2192	315 X 200 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	3,224.00
2193	315 X 225 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	3,326.00
2194	315 X 250 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	3,426.00
2195	315 X 280 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834	each	3,442.00
2201	90 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	317.00
2202	110 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	541.00
2203	125 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	796.00
2204	140 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	1,092.00
2205	160 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	1,602.00
2206	180 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	2,579.00
2207	200 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	3,188.00
2208	225 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	4,587.00
2209	250 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	6,189.00
2210	280 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	8,472.00
2211	315 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834	each	13,350.00
2221	90 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	243.00
2222	110 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	423.00
2223	125 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	582.00
2224	140 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	794.00
2225	160 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	1,150.00

Code No	Description	Unit	Rate Rs.
2226	180 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	1,600.00
2227	200 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	2,250.00
2228	225 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	3,156.00
2229	250 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	4,290.00
2230	280 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	6,478.00
2231	315 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834	each	9,143.00
2241	90 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	62.70
2242	110 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	125.00
2243	125 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	161.00
2244	140 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	213.00
2245	160 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	371.00
2246	180 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	419.00
2247	200 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	812.00
2248	225 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	872.00
2249	250 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	930.00
2250	280 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	1,153.00
2251	315 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834	each	1,814.00
2261	U-PVC Single socketed rain water pipe confirming to IS : 13592 Class "A" 75 mm dia.	metre	75.00
2262	U-PVC Single socketed rain water pipe confirming to IS : 13592 Class "A" 110 mm dia.	metre	140.00
2263	Rubber (Seal) Ring for 75 mm dia UPVC pipe conforming to IS : 5382	each	17.00
2264	Rubber (Seal) Ring for 110 mm dia UPVC pipe conforming to IS : 5382	each	22.00
2265	UPVC coupler for UPVC drainage pipes 75 mm	each	35.00
2266	UPVC coupler for UPVC drainage pipes 110 mm	each	65.00
2267	UPVC pushfit coupler (single) 75 mm thick	each	40.00
2268	UPVC pushfit coupler (single) 110 mm thick	each	65.00
2269	UPVC single equal Tee (without door) 75x75x75 mm	each	75.00
2270	UPVC single equal Tee (without door) 110x110x110 mm	each	150.00
2271	UPVC single equal Tee (with door) 75x75x75 mm	each	85.00
2272	UPVC single equal Tee (with door) 110x110x110 mm	each	175.00
2281	UPVC bend 87.5o 75 mm	each	50.00
2282	UPVC bend 87.5o 110 mm	each	75.00

Code No	Description	Unit	Rate Rs.
2285	UPVC plain shoe 75 mm	each	110.00
2286	UPVC plain shoe 110 mm	each	215.00
2287	UPVC pipe clip 75 mm	each	15.00
2288	UPVC pipe clip 110 mm	each	20.00
2341	20 mm dia HDPE pipe PN 6 (class PE-80)	metre	25.00
2342	25 mm dia HDPE pipe PN 6 (class PE-80)	metre	35.00
2343	32 mm dia HDPE pipe PN 6 (class PE-80)	metre	57.00
2347	20 mm dia MDPE pipe PN 6	metre	21.90
2348	25 mm dia MDPE pipe PN 6	metre	31.00
2349	32 mm dia MDPE pipe PN 6	metre	49.30
2351	Electro Fusion Tapping saddle with Moulded female threaded metal insert of SS304 material and integrated in the body(single piece) as per with Pressure rating of PN 12.5 and for drinking water applications	each	488.00
2352	Polypropylene Compression connector with Metal Insert Female Thread Adaptor with SS304 material, Polypropylene Nut / Cap, Packing bush, NBR "O" ring, pressure rating PN 12.5 and for drinking water applications	each	107.00
2353	Double Compression Elbow with Polypropylene Nut / Cap, packing bush, Clip Ring-POM (Acetylic resin), "O" ring – NBR, Pressure rating PN 12.5 for drinking water applications for user connection	each	50.20
2361	Poly propylene- Random - Co - Polymer (PPR) pipes SDR 7.4 - 16 Outer dia	metre	45.00
2362	Poly propylene - Random - Co - Polymer (PPR) pipes SDR 7.4 - 20mm Outer dia.	metre	50.00
2363	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 25 mm outer dia.	metre	80.00
2364	Poly propylene - Random - Co - poymer (PPR) pipes SDR 7.4 - 32 mm Outer dia.	metre	125.00
2365	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 40mm Outer dia.	metre	190.00
2366	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 50mm Outer dia.	metre	290.00
2367	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 63mm Outer dia.	metre	455.00
2368	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 75mm Outer dia.	metre	660.00
2369	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 90mm Outer dia.	metre	940.00
2370	Poly propylene - Random - Co - polymer (PPR) pipes SDR - 11 - 110mm Outer dia.	metre	1,395.00
2371	Poly propylene - Random - Co - polymer (PPR) pipes SDR - 11- 160mm Outer dia.	metre	3,990.00
2372	Chlorinated Polyvinyl - chloride (CPVC) pipe 15 mm outer dia.	metre	50.00

Code No	Description	Unit	Rate Rs.
2373	Chlorinated Polyvinyl - chloride (CPVC) pipe 20 mm outer dia.	metre	75.00
2374	Chlorinated Polyvinyl - chloride (CPVC) pipe 25 mm outer dia.	metre	110.00
2375	Chlorinated Polyvinyl - chloride (CPVC) pipe 32 mm outer dia.	metre	180.00
2376	Chlorinated Polyvinyl - chloride (CPVC) pipe 40 mm outer dia.	metre	230.00
2377	Chlorinated Polyvinyl - chloride (CPVC) pipe 50 mm outer dia.	metre	405.00
2378	Chlorinated Polyvinyl - chloride (CPVC) pipe 62.5mm inner dia.	metre	930.00
2379	Chlorinated Polyvinyl - chloride (CPVC) pipe 75 mm inner dia.	metre	1,210.00
2380	Chlorinated Polyvinyl - chloride (CPVC) pipe 100 mm inner dia.	metre	1,750.00
2381	Chlorinated Polyvinyl - chloride (CPVC) pipe 150 mm inner dia.	metre	2,740.00
2382	1216 mm PE-AL-PE Composit pressure pipe	Metre	63.00
2383	1620 mm PE-AL-PE Composit pressure pipe	Metre	75.00
2384	2025 mm PE-AL-PE Composit pressure pipe	Metre	105.00
2385	2532 mm PE-AL-PE Composit pressure pipe	Metre	145.00
2386	3240 mm PE-AL-PE Composit pressure pipe	Metre	210.00
2387	4050 mm PE-AL-PE Composit pressure pipe	Metre	300.00
2388	15 mm PTMT bib cock	each	95.00
2389	15 mm PTMT bib cockwith flange (fancy)	each	135.00
2390	15 mm PTMT bib cock long body with flange	each	155.00
2391	P.T.M.T. Bib cock with nozzle 15mm	each	125.00
2392	PTMT pillar cock	each	160.00
2394	P.T.M.T. Urinal cock 15mm dia	each	110.00
2395	PTMT push cock 15 mm dia.	each	80.00
2396	PTMT push cock 12 mm dia. 20 mm BSP	each	75.00
2397	15 mm dia PTMT stop cock(male thread)	each	95.00
2399	20 mm dia. PTMT stop cock	each	115.00
2400	P.T.M.T. Ball Cock 15mm Complete with Epoxy Coated Aluminium Rod & H.D. Ball	Each	135.00
2401	P.T.M.T. Ball Cock 20mm Complete with Epoxy Coated Aluminium Rod & H.D. Ball	Each	190.00
2402	P.T.M.T. Ball Cock 25mm Complete with Epoxy Coated Aluminium Rod & H.D. Ball	Each	385.00
2403	P.T.M.T. Ball Cock 40mm Complete with Epoxy Coated Aluminium Rod & H.D. Ball	Each	640.00
2404	P.T.M.T. Ball Cock 50mm Complete with Epoxy Coated Aluminium Rod & H.D. Ball	Each	1,050.00
2405	P.T.M.T. Angle Stop cock with Flenge 15mm	Each	120.00
2406	P.T.M.T. Swiveling shower 15mm	Each	95.00
2408	P.T.M.T. Liquid Soap Container of 400ml capacity	Each	135.00
2409	P.T.M.T. Towel Ring 215xd200x37mm	Each	130.00
2410	P.T.M.T. Towel Rail (450MM)	Each	180.00

Code No	Description	Unit	Rate Rs.
2411	P.T.M.T. Towel Rail (600MM)	Each	215.00
2412	P.T.M.T. Shelf 450x124x36mm	Each	255.00
2413	P.T.M.T. Urinal Spreader 15MM	Each	105.00
2414	P.T.M.T. Soap Dish/Holder 138x102x75mm	Each	100.00
2415	P.T.M.T. Stop cock (concealed) 15mm	each	150.00
2416	Flushing Cistern P.V.C. 10 lts capacity (low level) (White) (with fittings, accessories and flush pipe)	each	595.00
2417	Flushing Cistern P.V.C. 10 lts capacity (low level) (Coloured) (with fittings, accessories and flush pipe)	each	635.00
2418	P.V.C. automatic flushing cistern 5 lts capacity	each	460.00
2419	P.V.C. automatic flushing cistern 10 lts capacity	each	495.00
2421	Semi Rigid PVC waste pipe for sink and wash basin 32 mm dia with length not less than 700 mm i/c PVC waste fittings	each	25.00
2422	Semi Rigid PVC waste pipe for sink and wash basin 40 mm dia with length not less than 700 mm i/c PVC waste fittings	each	35.00
2423	Flexible (coil shaped) PVC waste pipe for sink and wash basin 32 mm dia with length not less than 700 mm i/c PVC waste fittings	each	30.00
2424	Flexible (coil shaped) PVC waste pipe for sink and wash basin 40 mm dia with length not less than 700 mm i/c PVC waste fittings	each	30.00
2425	Unplasticised P.V.C.connection pipe with brass union 30 cm long 15 mm bore	each	23.00
2426	Unplasticised P.V.C.connection pipe with brass union 30 cm long 20 mm bore	each	30.00
2427	Unplasticised P.V.C.connection pipe with brass union 45 cm long 15 mm bore	each	30.00
2428	Unplasticised P.V.C.connection pipe with brass union 45 cm long 20 mm bore	each	40.00
2429	H.P. or L.P. ball valve with polythene floats: 15 mm dia	each	200.00
2430	H.P. or L.P. ball valve with polythene floats: 20 mm dia	each	239.00
2431	H.P. or L.P. ball valve with polythene floats: 25 mm dia	each	340.00
2432	White plastic seat (solid)with lid C.P.brass hinges and rubber buffers	each	325.00
2433	Black plastic seat (solid) with lid C.P.brass hinges and rubber buffers	each	285.00
2434	15 mm nominal bore and 30 cm length PVC connection pipe with P.T.M.T. Nuts	each	40.00
2435	15 mm nominal bore and 45 cm length PVC connection pipe with P.T.M.T. Nuts	each	50.00
2436	P.T.M.T. extension nipple 15mm	each	20.00
2437	P.T.M.T. extension nipple 20mm	each	35.00
2438	P.T.M.T. extension nipple 25mm	each	55.00
2440	P.T.M.T. Grating square slit 150mm	each	70.00
2441	Plastic HDPE Circular Manhole Chamber internal diameter of 1000mm, structured wall corrugated DWC having a base and riser	each	38,600.00

Code No	Description	Unit	Rate Rs.
	shaft of 1000mm internal diameter and top cone with cover opening of internal diameter of 600mm, total depth 2000mm and having provision for depth extension with provision with arrangement for 4 nos. connections at the base and of various diameter pipes.		
2442	Plastic HDPE Circular Manhole Chamber internal diameter of 1200mm, structured wall corrugated DWC having a base and riser shaft of 1200mm internal diameter and top cone with cover opening of internal diameter of 600mm, total depth 2000mm and having provision for depth extension with provision with arrangement for 4 nos. connections at the base and of various diameter pipes.	each	44,600.00
2443	Plastic HDPE Circular Manhole middle column piece of internal diameter of 1000mm, height 250mm/ 500mm/ 750mm/ 1000mm, structured wall corrugated DWC.	metre	18,500.00
2444	Plastic HDPE Circular Manhole middle column piece of internal diameter of 1200mm, height 250mm/ 500mm/ 750mm/ 1000mm, structured wall corrugated DWC.	metre	21,500.00
2445	Plastic HDPE Circular Inspection Chamber having internal diameter of 600mm and depth 500 mm with arrangement for 4 nos. connections at the base to receive / connect various diameter pipes OD of 315mm having integrated base benching reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 40mm	each	4,200.00
2446	Plastic HDPE Circular Inspection Chamber having internal diameter of 600mm and depth 750 mm with arrangement for 4 nos. connections at the base to receive / connect various diameter pipes OD of 315mm having integrated base benching reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 40mm	each	6,600.00
2447	Plastic HDPE Circular Inspection Chamber having internal diameter of 600mm and depth 1000 mm with arrangement for 4 nos. connections at the base to receive / connect various diameter pipes OD of 315mm having integrated base benching reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 40mm	each	9,200.00
2448	Plastic HDPE Circular Inspection Chamber having internal diameter of 600mm and depth 1200 mm with arrangement for 4 nos. connections at the base to receive / connect various diameter pipes OD of 315mm having integrated base benching reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 40mm	each	11,650.00
2449	Plastic HDPE Circular Inspection Chamber having internal diameter of 600mm and depth 1500 mm with arrangement for 4 nos. connections at the base to receive / connect various diameter pipes OD of 315mm having integrated base benching reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 40mm	each	14,100.00
2451	PTMT grating 100 mm dia.	each	25.00
2452	PTMT grating 125 mm dia.	each	30.00
2501	3 mm thick translucent white acrylic plastic sheet	sqm	535.00
2502	Neoprin/EPDM rubber gasket	metre	22.00

Code No	Description	Unit	Rate Rs.
2503	Plastic cone 12 mm dia	each	15.00
2504	UV stabilised 2 mm thick plain FRP sheet .	sqm	468.00
2505	UV stabilised 2 mm thick corrugated FRP sheet .	sqm	465.00
2509	Factory made PVC rigid foam sheet 1mm thick	sqm	145.00
2525	Polyvinyle chloride sheet 400 micron thick	sqm	33.00
2541	A.P.P. modified polymeric felt (two layers) 1.5 mm thick	sqm	65.00
2542	A.P.P. modified polymeric felt (two layers) 2 mm thick	sqm	98.00
2543	A.P.P. modified 2 mm thick membrane reinforced with glass fibre matt	sqm	130.00
2544	A.P.P. modified 3 mm thick membrane reinforced with glass fibre matt	sqm	200.00
2545	A.P.P. modified 3 mm thick membrane reinforced with polyster matt	sqm	220.00
2551	50mmX42mmX2mm thick Factory made door frame of PVC extruded sections in white, grey or wooden finish	metre	150.00
2552	25mm thick factory made PVC flash floor shutter i/c carriage.	sqm	1,755.00
2553	Factory made glass reinforced plastic door frame 90x45 mm i/c carriage.	metre	358.00
2554	30 mm thick factory made glass fiber reinforced plastic panel door shutter i/c carriage.	sqm	2,057.00
2556	Factory made solid PVC door frame 60 x 30mm i/c carriage.	metre	276.00
2557	28mm factory made solid PVC panel door shutter i/c carriage.	sqm	2,650.00
2558	30 mm thick factory made glass fiber reinforced plastic flush door shutter i/c carriage.	sqm	1,966.00
2559	Factory made PVC rigid foam panelled shutter i/c carriage	sqm	2,070.00
2560	Factory made PVC rigid foam panelled shutter as per IS : 4020 i/c carriage	sqm	2,270.00
2561	24 mm thick Factory made shutters with frame, rails and panels of PVC extruded sections in white, grey or wooden finish	sqm	1,310.00
2562	30 mm thick Factory made shutters with frame, rails and panels of PVC extruded sections in white, grey or wooden finish	sqm	1,430.00
2563	48mmX40mmX1.5mm thick Factory made door frame of PVC extruded sections in white, grey or wooden finish	metre	130.00
2564	Factory made door frame PVC extruded sheet i/c carriage	metre	330.00
2587	Polyethylene water storage tank with cover and suitable locking arrangement	per litre	6.00
2588	PTMT handle 125x34x24mm	Each	26.00
2589	PTMT handle 150x34x24mm	Each	27.00
2590	PTMT butt hinges 75x60x10mm	Each	35.00
2591	PTMT butt hinges 100x75x10mm	Each	45.00
2592	PTMT Tower bolt 152x42x18mm	Each	53.00
2593	PTMT Tower bolt 202x42x18mm	Each	70.00
2594	PTMT door catcher 72x42mm	Each	25.00

Code No	Description	Unit	Rate Rs.
2595	Expanded polystyrene type N- Normal	sqm	130.00
2596	Expanded polystyrene type - SE	sqm	155.00
2597	PVC tap written "DANDER"	metre	15.00
2598	Second class kail/ local wood in scantling	cum	15,500.00
2599	Second class kail wood in planks	cum	16,700.00
2601	Superior class teak wood such as Dandeli, Balarshah or Malabar in planks	cudm	1,020.00
2602	First class teak wood in scantling	cudm	810.00
2603	First class teak wood in planks	cudm	790.00
2604	Second class teak wood in scantling	cudm	620.00
2605	Second class teak wood in planks	cudm	650.00
2607	Extra for selected planks of first class teakwood	cudm	140.00
2608	Extra for selected planks of second class teakwood	cudm	107.00
2612	Second class deodar wood in planks	cudm	600.00
2614	Extra for selected planks of second class deodarwood	cudm	95.00
2615	First class kail/ local wood in planks	cudm	310.00
2616	Second class kail/ local wood in scantling	cudm	245.00
2617	Second class kail wood in planks	cudm	250.00
2622	Hollock wood in scantling	cudm	335.00
2623	Hollock wood in planks	cudm	375.00
2624	Sal wood in scantling	cudm	440.00
2625	Kiln seasoning of timber	cum	730.00
2626	Teak wood lipping of size 25x3 mm in pelmets	metre	16.00
2627	Lipping of 2nd class teak wood batten 25mm thick on Block board flush door	sqm of door area	270.00
2628	Fuel wood	quintal	400.00
2629	Ply wood 5 ply with commercial ply on both faces 6 mm thick	sqm	360.00
2631	2nd class teak wood lipping/ moulded beadibg or Taj beading of size 18X5mm	metre	25.00
2632	IInd class teak wood lipping 25 mm wide x 12 mm thick	metre	30.00
2636	Hollock ballies 125 mm diameter	metre	37.00
2640	Wooden ballies 2" Dia for bracing	each	46.00
2641	Wooden ballies 4" Dia	metre	48.00
2642	Safeda ballies 125 mm diameter	metre	38.00
2644	Wooden ballies 8" Dia and 9 m long	each	565.00
2645	Bamboo 25 mm dia 2.5 metre long	score	330.00
2648	Seesam wood in plank	cudm	610.00
2649	Babool wood	cudm	285.00
2651	Block board construction flush door with teak wood ply on both faces 35 mm thick	sqm	1,700.00

Code No	Description	Unit	Rate Rs.
2652	Block board construction flush door with teak wood ply on both faces 30 mm thick	sqm	1,600.00
2653	Block board construction flush door with teak wood ply on both faces 25 mm thick	sqm	1,350.00
2654	Block board construction flush door with commercial ply on both faces 35 mm thick	sqm	930.00
2655	Block board construction flush door with commercial ply on both faces 30 mm thick	sqm	885.00
2656	Block board construction flush door with commercial ply on both faces 25 mm thick	sqm	845.00
2657	35 mm thick Block board construction flush door with teak ply on one side and commercial ply on other side	sqm	1,295.00
2658	30 mm thick Block board construction flush door with teak ply on one side and commercial ply on other side	sqm	1,110.00
2659	For flush door shutters Extra for providing teak veneering on one side instead of commercial veneering	sqm	330.00
2660	25 mm thick Block board construction flush door with teak ply on one side and commercial ply on other side	sqm	1,005.00
2661	25 mm thick particle board	sqm	440.00
2662	25 mm thick melamine faced prelaminated three layer particle board	sqm	775.00
2665	25 mm prelaminated flush door both side decorative	sqm	710.00
2671	Veneered particle board with commercial veneering on both sides 12 mm thick	sqm	465.00
2677	Prelaminated particle board with one side decorative and other side balancing lamination, flat pressed 3 layer & graded (medium density) Grade I, Type II conforming to IS : 12823 (exterior grade)12 mm thick	sqm	555.00
2678	Prelaminated particle board with one side decorative and other side balancing lamination, flat pressed 3 layer & graded (medium density) Grade I, Type II conforming to IS : 12823 (exterior grade)18 mm thick	sqm	675.00
2679	Prelaminated particle board with one side decorative and other side balancing lamination, flat pressed 3 layer & graded (medium density) Grade I, Type II conforming to IS : 12823 (exterior grade)25 mm thick	sqm	875.00
2680	Prelaminated particle board with both sides decorative lamination, flat pressed 3 layer & graded (medium density) Grade I, Type II conforming to IS : 12823 (exterior grade)12 mm thick	sqm	590.00
2681	6 mm teak ply BWR one side	sqm	458.00
2682	12 mm thick Acoustical Board	sqm	475.00
2683	12 mm thick one side laminated board Practical board (Phenol bonded)	sqm	645.00
2684	Flat pressed 3 layer particle board (medium density) Grade I :12 mm thick	sqm	254.00
2687	Extra for veneered particle board with : Teak veneering on one side	sqm	210.00

Code No	Description	Unit	Rate Rs.
	and commercial veneered on other side		
2688	Extra for veneered particle board with : Commercial veneering on both sides	sqm	125.00
2689	Extra for veneered particle board with : Teak veneering on both sides	sqm	420.00
2690	Flat pressed 3 layer and graded particle board (medium density) Grade 1 conforming to IS : 3087 - 18 mm thick	sqm	370.00
2691	Decorative plywood 4 mm	sqm	315.00
2692	Ply wood 5 ply with teak ply on one face and commercial ply on another face 9 mm thick	sqm	575.00
2693	Ply wood 5 ply with teak ply on both faces 9 mm thick	sqm	785.00
2694	Ply wood 5 ply with teak ply on one face and commercial ply on another face 9 mm thick	sqm	645.00
2695	Ply wood 7 ply with teak ply on one face and commercial ply on another face 9 mm thick	sqm	860.00
2696	12mm thick marine plywood conforming to IS:710	sqm	806.00
2697	12mm thick fire retardant plywood conforming to IS: 5509.	sqm	830.00
2698	Water proof ply 12mm thick.	sqm	655.00
2699	1.5mm thick decorative laminated sheet	sqm	445.00
2700	1.0mm thick decorative laminated sheet	sqm	295.00
2701	Factory made 35 mm thick shutters with laminated veneer lumber styles rails as per TADS IS:1995 and panels of 12 mm thick plain type-I, medium density flat pressed three layer, graded particle board (FPT-I) as per IS:3087-1985 bonded with BWP type synthet	sqm	1,520.00
2702	Factory made 35 mm thick shutters with laminated veneer lumber styles rails as per TADS IS:1995 and panels of 12 mm thick both sides prelaminated type-I, medium density flat pressed three layer, graded particle board (FPT-I) as per IS:3087-1985 bonded with BWP type synthetic resin adhesive as per IS : 848 and pre-lamination conforming to IS : 12823 Grade 1, Type - II marked:	sqm	1,630.00
2703	Factory made 35 mm thick shutters with laminated veneer lumber styles rails as per TADS IS:1995 and panels of 12 mm thick one side prelaminated type-I, and other side balancing lamination, medium density flat pressed three layer, graded particle board (F	sqm	1,655.00
2704	Factory made 30 mm thick shutters with laminated veneer lumber styles rails as per TADS IS:1995 and panels of sheet glass using 10 kg/ sqm glass panes	sqm	1,370.00
2705	Factory made 35 mm thick shutters with laminated veneer lumber styles rails as per TADS IS:1995 and panels of galvanised wire gauge with average width of aperture 1.4 mm on both directions with wire of dia 0.63 mm	sqm	1,400.00
2706	Factory made 30 mm thick shutters with laminated veneer lumber styles rails as per TADS IS:1995 and panels of galvanised wire gauge with average width of aperture 1.4 mm on both directions with wire of dia 0.63 mm	sqm	1,215.00
2707	Laminated veneer lumber confirming to TADSS IS:1995	cudm	595.00

Code No	Description	Unit	Rate Rs.
	manufactured in factory in frames of doors, windows		
2708	White face insulating board:12 mm thick	sqm	255.00
2711	Natural colour insulating board:12 mm thick	sqm	215.00
2714	Flame retardent face insulating board: 12 mm thick	sqm	325.00
2717	Flame retardent face insulating, Impregnated fibre board 12 mm thick	sqm	375.00
2719	Standard quality hard board sheet 3 mm thick	sqm	160.00
2721	Standard quality hard board sheet 4.5 mm thick	sqm	285.00
2723	Coir veneered board 4mm thick	sqm	280.00
2724	Coir veneered board 6mm thick	sqm	370.00
2726	Coir veneered board 12mm thick	sqm	650.00
2727	Coir veneered board 18mm thick	sqm	370.00
2731	Labour for making Square vision panel in Block board construction flush door	sqm of door area	135.00
2732	Labour for making Circular vision panel in Block board construction flush door	Sqm of door area	140.00
2733	Labour for making Louvers in Decorative type Block board construction flush door	sqm of door area	300.00
2734	Labour for Rebate cutting in Block board construction flush door	sqm of door area	105.00
2735	Gypsum panel 666 X 500 X 100 mm size.	sqm	510.00
2736	Nylon sleeves & wooden screws (40mm)	each	3.00
2741	Shesham wood	cudm	635.00
2742	Nigeria wood	cudm	715.00
2743	Ghana wood	cudm	725.00
2744	Ivory coast	cudm	880.00
2745	Chir wood	cudm	305.00
2751	12mm thick Ply wood with commercial ply on both face	sqm	420.00
2752	12mm thick Ply wood with teak ply on one face and commercial ply on another face	sqm	775.00
2753	12mm thick Ply wood with teak ply on both face	sqm	940.00
2800	Stone grit 6 mm and down size or pea sized gravel	cum	635.00
2801	Stone Aggregate (Single size) : 06 mm nominal size	cum	650.00
2802	Stone Aggregate (Single size) : 10 mm nominal size	cum	740.00
2803	Stone Aggregate (Single size) : 12.5 mm nominal size	cum	735.00
2804	Stone Aggregate (Single size) : 20 mm nominal size	cum	850.00
2805	Stone Aggregate (Single size) : 25 mm nominal size	cum	830.00
2806	Stone Aggregate (Single size) : 40 mm nominal size	cum	755.00
2821	Aggregates 10 mm to 5 mm	cum	690.00
2824	Aggregates 13.2 mm to 5.6 mm	cum	660.00

Code No	Description	Unit	Rate Rs.
2825	Aggregates 13.2 mm to 10 mm	cum	675.00
2828	Aggregates 22.4 mm to 2.36 mm	cum	705.00
2830	Aggregates 25 mm to 10 mm	cum	650.00
2833	Aggregates 45 mm to 2.8 mm	cum	605.00
2834	Aggregates 45 mm to 22.4 mm	cum	660.00
2835	Aggregates 53 mm to 2.8 mm	cum	605.00
2836	Aggregates 53 mm to 22.4 mm	cum	570.00
2837	Aggregates 63 mm to 2.8 mm	cum	585.00
2838	Aggregates 63 mm to 45 mm	cum	630.00
2840	Aggregates 90 mm to 45 mm (hand broken)	cum	540.00
2841	Close graded Granular sub-base Material 2.36 mm	cum	540.00
2843	Close graded Granular sub-base Material 4.75mm to 2.36 mm	cum	540.00
2844	Close graded Granular sub-base Material 9.5 mm to 2.36 mm	cum	550.00
2845	Close graded Granular sub-base Material 9.5 mm to 4.75 mm	cum	555.00
2846	Close graded Granular sub-base Material 26.5 mm to 9.5 mm	cum	570.00
2848	Close graded Granular sub-base Material 53 mm to 9.5 mm	cum	565.00
2849	Aggregates 63 mm to 45 mm (hand broken)	cum	555.00
2851	Stone crusher dust finer than 3mm with not more than 10% passing 0.075 sieve.	cum	500.00
2852	Coarse graded Granular sub-base Material 2.36 mm & below	cum	580.00
2854	Coarse graded Granular sub-base Material 4.75 mm to 2.36 mm	cum	495.00
2855	Coarse graded Granular sub-base Material 9.5 mm to 4.75 mm	cum	505.00
2856	Coarse graded Granular sub-base Material 26.5 mm to 4.75 mm	cum	550.00
2859	Coarse graded Granular sub-base Material 53 mm to 26.5mm	cum	510.00
2860	Pre-coated stone chips of 13.2 mm nominal size	cum	850.00
2861	Stone for masonry work	cum	570.00
2863	Random Rubble Stone	cum	470.00
2865	Boundary stone of size 15cmx10cmx120cm	each	64.00
2866	Through and bond stone	Nos	15.00
2869	Locally available sand	cum	576.00
2870	Cost of Earth for RE wall fill as per MoRT&H clause 3100	cum	135.00
2871	Boulder with minimum size of 300 mm for Pitching at Site	cum	765.00
2872	Credit for excavated rock found suitable for use	cum	145.00
2873	Coarse sand	cum	1,005.00
2874	Fine sand	cum	895.00
2875	Moorum	cum	435.00
2876	Gravel/Quarry spall at Site	Cum	390.00
2877	Granular Material or hard Moorum for GSB works at Site	Cum	410.00
2878	Filter media/Filter Material as per Table 300-3 (MoRT&H	Cum	600.00

Code No	Description	Unit	Rate Rs.
	Specification)		
2879	Earth	cum	50.00
2880	Selected earth	cum	60.00
2881	Bentonite	kg	4.00
2882	Whiting	quintal	540.00
2883	Dehradun white lime	quintal	510.00
2884	Unslaked lime	tonne	2,820.00
2886	Plaster of Paris	kilogram	6.00
2887	Coal (steam)	quintal	410.00
2888	Empty gunny bag (empty cement bag)	each	6.00
2889	Geotextile filter	sqm	114.00
2902	8mm thick (mirror polished tiles machine cut edge) Raj Nagar white	sqm	475.00
2903	8 mm thick marble tiles (polished) Raj Nagar	sqm	345.00
2904	8 mm thick granite stone tiles (mirror polished of all shades)	sqm	625.00
2905	Marble Makrana 'Aganga' Upto to 1500 Cm2 Tiles	sqm	515.00
2906	Marble Makrana 'Aganga' 1501 Cm2 to 3600 Cm2 Tiles	sqm	615.00
2907	Marble Makrana 'Aganga' Above 3601 Cm2 Slabs	sqm	795.00
2908	Marble Rajnagar 1st quality/ Ageria with light spots Upto to 1500 Cm2 Tiles	sqm	400.00
2909	Marble Rajnagar 1st quality/ Ageria with light spots 1501 Cm2 to 3600 Cm2 Tiles	sqm	490.00
2910	Marble Rajnagar 1st quality/ Ageria with light spots Above 3601 Cm2 Slabs	sqm	585.00
2911	Marble Keseriaji/ Abu Ambaji (Green Marble) Upto to 1500 Cm2 Tiles	sqm	515.00
2912	Marble Keseriaji/ Abu Ambaji (Green Marble) 1501 Cm2 to 3600 Cm2 Tiles	sqm	610.00
2913	Marble Keseriaji/ Abu Ambaji (Green Marble) Above 3601 Cm2 Slabs	sqm	795.00
2914	Marble Bhaislana, Abu, Kishangarh Zebra (Black Marble) Upto to 1500 Cm2 Tiles	sqm	400.00
2915	Marble Bhaislana, Abu, Kishangarh Zebra (Black Marble) 1501 Cm2 to 3600 Cm2 Tiles	sqm	465.00
2916	Marble Bhaislana, Abu, Kishangarh Zebra (Black Marble) Above 3601 Cm2 Slabs	sqm	620.00
2917	Granite Jhunjhunu / Jalore (Red / Chocolate Colour) Upto to 1500 Cm2 Tiles	sqm	830.00
2918	Granite Jhunjhunu / Jalore (Red / Chocolate Colour) 1501 Cm2 to 3600 Cm2 Tiles	sqm	1,245.00
2919	Granite Jhunjhunu / Jalore (Red / Chocolate Colour) Above 3601 Cm2 Slabs	sqm	1,520.00
2920	Granite South (Red) Upto to 1500 Cm2 Tiles	sqm	825.00

Code No	Description	Unit	Rate Rs.
2921	Granite South (Red) 1501 Cm2 to 3600 Cm2 Tiles	sqm	1,310.00
2922	Granite South (Red) Above 3601 Cm2 Slabs	sqm	2,550.00
2923	Granite Green / Black Upto to 1500 Cm2 Tiles	sqm	750.00
2924	Granite Green / Black 1501 Cm2 to 3600 Cm2 Tiles	sqm	1,500.00
2925	Granite Green / Black Above 3601 Cm2 Slabs	sqm	3,000.00
2927	Udaypur green marble slab plain 18mm thick	sqm	490.00
2935	Granite Black marble, 18 mm thick slab, above 0.2 sqm upto 0.5 sqm (areawise)	sqm	800.00
2937	Granite Black marble, 18 mm thick slab, above 1.0 sqm upto 2.0 sqm (areawise)	sqm	895.00
2945	Agaria White marble slab plain 18mm thick	sqm	935.00
2946	Black Zebra marble slab plain 18mm thick	sqm	545.00
2947	Pink marble slab plain 18mm thick	sqm	525.00
2948	Fine grained stone slab of 90mm average thickness for roofing from approved quarry for span upto 2m	sqm	470.00
2949	Fine grained stone slab of 90mm average thickness for roofing from approved quarry for span above 2m and upto 2.5m	sqm	500.00
2950	Fine grained stone slab of 90mm average thickness for roofing from approved quarry for span above 2.5m and upto 3.0m	sqm	565.00
2951	Fine grained stone slab of 90mm average thickness for roofing from approved quarry for span above 3m and upto 3.5m	sqm	610.00
2952	Table rubbed polished stone 18mm thick (75x50cm) Granite stone - 18mm thick	sqm	1,130.00
2953	White sand stone block	cudm	95.00
2954	White sand stone slab 75 mm thick (un-dressed)	sqm	475.00
2955	White sand stone slab 40 mm thick (un-dressed)	sqm	350.00
2956	White sand stone slab 45 mm and 50 mm thick (un-dressed)	sqm	370.00
2957	Red sand stone block	cudm	60.00
2958	Red sand stone slab 40 mmthick (un-dressed)	sqm	315.00
2959	Red sand stone slab 30 mmthick (un-dressed)	sqm	220.00
2960	Red sand stone slab 45 mm and 50 mm thick (un-dressed)	sqm	340.00
2961	White sand stone gang saw cut 30mm thick.	sqm	505.00
2962	Red sand stone gang saw cut 30mm thick.	sqm	350.00
2963	Kota stone slab 20 mm to 25 mm thick (semi-polished) area 900-2000 sqcm	sqm	250.00
2964	Kota stone slab 25mm thick (rough cheseled)	sqm	225.00
2965	Kota stone slab 20 mm to 25 mm thick (semi-polished) area 2001-5000 sqcm	sqm	300.00
2967	Marble dust/ powder	cum	110.00
2968	Marble chips upto 4mm and downsize White & black	quintal	155.00
2971	Marble chips large size above 4 mm White & black	quintal	170.00

Code No	Description	Unit	Rate Rs.
2973	White marble makrana second quality plain veined stone pieces for crazy flooring	quintal	132.00
2978	Cutting marble or sand stone slab upto 50 mm thick by mechanical device	metre	10.00
2981	75mm x 75mm Single paitam (rebated) stone doors windows and ventilator frames of approved quarry	metre	75.00
2982	100mm x 60mm Single paitam (rebated) stone doors windows and ventilator frames of approved quarry	metre	85.00
2983	100mm x 75mm Single paitam (rebated) stone doors windows and ventilator frames of approved quarry	metre	100.00
2984	125mm x 100mm Single paitam (rebated) stone doors windows and ventilator frames of approved quarry	metre	105.00
2985	100mm x 75mm Double paitam (rebated) stone doors windows and ventilator frames of approved quarry	metre	96.00
2986	125mm x 100mm Double paitam (rebated) stone doors windows and ventilator frames of approved quarry	metre	115.00
2991	Sand stone slab 25 mm thick machine cut and polished for shelves	sqm	236.00
2992	Sand stone slab 50 mm thick machine cut and polished for shelves	sqm	336.00
2993	Kota stone slab 30 mm thick machine cut and polished for shelves	sqm	275.00
3001	R.C.C. pipes NP4 class 150 mm dia	metre	301.00
3002	R.C.C. pipes NP4 class 200 mm dia	metre	393.00
3003	R.C.C. pipes NP4 class 250 mm dia	metre	569.00
3004	R.C.C. pipes NP4 class 300 mm dia	metre	760.00
3005	R.C.C. pipes NP4 class 350 mm dia	metre	1,250.00
3006	R.C.C. pipes NP4 class 400 mm dia	metre	1,470.00
3007	R.C.C. pipes NP4 class 450 mm dia	metre	1,820.00
3008	R.C.C. pipes NP4 class 500 mm dia	metre	2,040.00
3009	R.C.C. pipes NP4 class 600 mm dia	metre	2,560.00
3010	R.C.C. pipes NP4 class 700 mm dia	metre	3,200.00
3011	R.C.C. pipes NP4 class 800 mm dia	metre	4,140.00
3012	R.C.C. pipes NP4 class 900 mm dia	metre	5,015.00
3013	R.C.C. pipes NP4 class 1000 mm dia	metre	5,670.00
3014	R.C.C. pipes NP4 class 1100 mm dia	metre	5,820.00
3015	R.C.C. pipes NP4 class 1200 mm dia	metre	7,802.00
3016	R.C.C. pipes NP4 class 1400 mm dia	metre	11,390.00
3017	R.C.C. pipes NP4 class 1600 mm dia	metre	14,280.00
3018	R.C.C. pipes NP4 class 1800 mm dia	metre	18,700.00
3019	R.C.C. pipes NP4 class 2000 mm dia	metre	24,820.00
3021	R.C.C. pipes NP3 class 150 mm dia	metre	285.00
3022	R.C.C. pipes NP3 class 200 mm dia	metre	362.00
3023	R.C.C. pipes NP3 class 250 mm dia	metre	514.00

Code No	Description	Unit	Rate Rs.
3024	R.C.C. pipes NP3 class 300 mm dia	metre	720.00
3025	R.C.C. pipes NP3 class 350 mm dia	metre	1,160.00
3026	R.C.C. pipes NP3 class 400 mm dia	metre	1,350.00
3027	R.C.C. pipes NP3 class 450 mm dia	metre	1,560.00
3028	R.C.C. pipes NP3 class 500 mm dia	metre	1,780.00
3029	R.C.C. pipes NP3 class 600 mm dia	metre	2,280.00
3030	R.C.C. pipes NP3 class 700 mm dia	metre	2,830.00
3031	R.C.C. pipes NP3 class 800 mm dia	metre	3,865.00
3032	R.C.C. pipes NP3 class 900 mm dia	metre	4,565.00
3033	R.C.C. pipes NP3 class 1000 mm dia	metre	4,579.00
3034	R.C.C. pipes NP3 class 1100 mm dia	metre	6,265.00
3035	R.C.C. pipes NP3 class 1200 mm dia	metre	7,785.00
3036	R.C.C. pipes NP3 class 1400 mm dia	metre	9,690.00
3037	R.C.C. pipes NP3 class 1600 mm dia	metre	10,460.00
3038	R.C.C. pipes NP3 class 1800 mm dia	metre	13,860.00
3039	R.C.C. pipes NP3 class 2000 mm dia	metre	18,100.00
3041	R.C.C. pipes NP2 class 150 mm dia	metre	267.00
3042	R.C.C. pipes NP2 class 200 mm dia	metre	405.00
3043	R.C.C. pipes NP2 class 250 mm dia	metre	403.00
3044	R.C.C. pipes NP2 class 300 mm dia	metre	497.00
3045	R.C.C. pipes NP2 class 350 mm dia	metre	599.00
3046	R.C.C. pipes NP2 class 400 mm dia	metre	707.00
3047	R.C.C. pipes NP2 class 450 mm dia	metre	804.00
3048	R.C.C. pipes NP2 class 500 mm dia	metre	1,049.00
3049	R.C.C. pipes NP2 class 600 mm dia	metre	1,327.00
3050	R.C.C. pipes NP2 class 700 mm dia	metre	1,597.00
3051	R.C.C. pipes NP2 class 800 mm dia	metre	1,918.00
3052	R.C.C. pipes NP2 class 900 mm dia	metre	2,512.00
3053	R.C.C. pipes NP2 class 1000 mm dia	metre	2,889.00
3054	R.C.C. pipes NP2 class 1100 mm dia	metre	3,643.00
3055	R.C.C. pipes NP2 class 1200 mm dia	metre	4,206.00
3056	R.C.C. pipes NP2 class 1400 mm dia	metre	5,200.00
3057	R.C.C. pipes NP2 class 1600 mm dia	metre	6,800.00
3058	R.C.C. pipes NP2 class 1800 mm dia	metre	7,244.00
3059	R.C.C. pipes NP2 class 2000 mm dia	metre	8,085.00
3064	R.C.C. collars NP2 class 300 mm dia	each	94.90
3065	AC pipe 100 mm dia	metre	27.10
3066	AC pipe 150 mm dia	metre	40.70

Code No	Description	Unit	Rate Rs.
3071	Composite fiberglass reinforced polymer manhole cover with frame 560mm Dia confirming to BSEN – 124 : 1994 - HD-20 Tonne	each	5,160.00
3072	Composite fiberglass reinforced polymer manhole cover with frame 560mm Dia confirming to BSEN – 124 : 1994 - HD-35 Tonne	each	6,317.00
3075	Circular 300 mm dia precast R.C.C. manhole cover with frame - M.D. - 10	each	700.00
3076	Circular 450 mm dia precast R.C.C. manhole cover - M.D. - 10	each	800.00
3077	Circular shape 450 mm dia precast R.C.C. manhole cover with frame - L.D. - 25	each	892.00
3078	Circular shape 450 mm dia precast R.C.C. manhole cover with frame - H.D. - 20	each	1,227.00
3079	Circular shape 500 mm dia precast R.C.C. manhole cover with frame - M.D. - 10	each	1,114.00
3080	Circular shape 560 mm dia SFRC manhole cover with frame - H.D. - 20	each	1,449.00
3081	Circular shape 560 mm dia SFRC manhole cover with frame - E.H.D. - 35	each	1,673.00
3082	Circular shape 560 mm dia SFRC manhole cover - H.D. - 20	each	892.00
3083	Circular shape 560 mm dia SFRC manhole cover - E.H.D. - 35	each	1,114.00
3084	Rectangular shape 600x450 mm precast R.C.C. manhole cover with frame - L.D. - 25	each	732.00
3085	Square shape 350x350 mm precast R.C.C. manhole cover with frame - L.D. - 25	each	583.00
3086	Rectangular shape 500x500 mm precast R.C.C. manhole cover with frame - M.D. - 10	each	701.00
3087	Precast R.C.C. grating with frame 500x450 mm horizontal grating	each	755.00
3088	Precast R.C.C. grating with frame 450x100 mm vertical grating	each	350.00
3089	Plastic encapsulated CI/MS Foot Rest	each	160.00
3090	Precast terrazo tiles 22 mm thick (light shade)	sqm	190.00
3091	Precast terrazo tiles 22 mm thick (medium shade)	sqm	175.00
3092	Precast terrazo tiles 22 mm thick (dark shade)	sqm	165.00
3093	Chequered terrazo tiles 22 mm thick (light shade)	sqm	150.00
3094	Chequered terrazo tiles 22 mm thick (medium shade)	sqm	160.00
3095	Chequered terrazo tiles 22 mm thick (dark shade)	sqm	150.00
3099	Chequered precast cement concrete tiles 22mm thick using marble chips of size 6mm - Light shade using white	sqm	245.00
3100	Acid and alkali resistant tiles 300x300 mm size, 10 mm thick	Nos	460.00
3101	Precast chequered cement tiles 22 mm thick Dark shade using ordinary cement	sqm	220.00
3102	Cobble stones in sizes 125x125x75mm	sqm	780.00
3103	Factory made Interlocking C.C. paver block M-30 Grade, 100 mm thick	sqm	320.00

Code No	Description	Unit	Rate Rs.
3104	Factory made Interlocking C.C. paver block M-30 Grade, 80 mm thick	sqm	390.00
3105	Factory made Interlocking C.C. paver block M-30 Grade, 60 mm thick	sqm	260.00
3106	RCC vent shaft 9.10 m long of standard design complete	each	14,670.00
3107	Reinforced Ferro-Cement drain covers designed for 'A' class loading of size 600 x 800 mm	sqm	1,030.00
3108	Reinforced Ferro-Cement drain covers designed for 'A' class loading of size 1000 x 800 mm	sqm	1,716.00
3109	Reinforced Ferro-Cement drain covers designed for 'A' class loading of size 1500 x 600 mm	sqm	1,955.00
3110	Reinforced Ferro-Cement drain covers designed for 'A' class loading of size 2100 x 500 mm	sqm	2,288.00
3111	Reinforced Ferro-Cement drain covers designed for 'AA' class loading of size 600 x 800 mm	sqm	1,144.00
3112	Reinforced Ferro-Cement drain covers designed for 'AA' class loading of size 1000 x 800 mm	sqm	1,906.00
3113	Reinforced Ferro-Cement drain covers designed for 'AA' class loading of size 1500 x 600 mm	sqm	2,172.00
3114	Reinforced Ferro-Cement drain covers designed for 'AA' class loading of size 2100 x 500 mm	sqm	2,574.00
3115	Pre-cast RCC M30 esentric conical manhole piece ID 0.56m, OD 1.0m, vertical height 0.605m and wall thickness 125mm	each	4,014.00
3116	Pre-cast RCC M30 esentric conical manhole piece ID 0.56m, OD 1.2m, vertical height 0.805m and wall thickness 125mm	each	5,575.00
3117	Pre-cast RCC M30 esentric conical manhole piece ID 0.56m, OD 1.5m, vertical height 1.105m and wall thickness 125mm	each	8,050.00
3118	Pre-cast RCC M-30 grade circular manhole extension piece ID 1.0m ID, height 0.3m wall thickness 125mm	each	1,166.00
3119	Pre-cast RCC M-30 grade circular manhole extension piece ID 1.2m ID, height 0.3m wall thickness 125mm	each	1,325.00
3120	Pre-cast RCC M-30 grade circular manhole extension piece ID 1.5m ID, height 0.3m wall thickness 125mm	each	1,589.00
3121	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 600mm x 600mm	metre	3,602.00
3122	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 750mm x 750mm	metre	4,449.00
3123	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 1000mm x 1000mm	metre	6,886.00
3124	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 1000mm x 1250mm	metre	8,686.00
3125	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 1250mm x 1250mm	metre	9,745.00
3126	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 1250mm x 1500mm	metre	12,710.00

Code No	Description	Unit	Rate Rs.
3127	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 1500mm x 1500mm	metre	13,770.00
3128	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 1750mm x 1750mm	metre	17,580.00
3129	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 2000mm x 2000mm	metre	21,190.00
3130	Precast SFRC circular manhole spacer 560mm ID 100mm thick for raising manhole.	each	703.00
3131	Pre-cast RCC M-30 grade tree guard consisting of four panels of size 1800mm (Height) X 600mm (Width) X 35mm	set	1,277.00
3132	Pre-cast RCC M-30 grade Cylindrical property chamber size 0.30m ID, 0.45m depth, 100mm wall and base thickness	each	1,500.00
3133	Pre-cast RCC M-30 grade Cylindrical property chamber size 0.450m ID, 0.60m depth, 100mm wall and base thickness	each	2,281.00
3134	Pre-cast RCC M-30 grade Cylindrical property chamber size 0.450m ID, 0.90m depth, 100mm wall and base thickness	each	2,919.00
3135	Pre-cast RCC M-30 grade circular manhole cover frame (ID 0.56m, OD 0.86m, height 0.20m)	each	425.00
3136	Precast RCC M-30 bench consisting of 2 Nos. "L" shaped base support of thickness 100 mm back height 1000mm, front height 450 mm, base width 420mm and 5 Nos. RCC planks of size of 1500x100 x 50 mm and 1 Nos of 150x200x50mm	each	5,700.00
3137	Factory made Interlocking C.C. paver block, 60 mm thick casted with rubber mould having min. strength 300 kg/ sq cm	sqm	310.00
3138	60 to 75 mm thick stone slab covering of required size	sqm	540.00
3139	40 to 50 mm thick stone slab covering of required size	sqm	200.00
3140	Pre-cast RCC M40 esentric conical manhole piece ID 0.56m, OD 0.66m, vertical height 0.605m and wall thickness 100mm	each	2,500.00
3195	40mm thick Pre-cast CC M-20 Grade (Vibro-pressed) drain section block as per approved size and design of 'L' shape 'U' shape	metre	235.00
3196	60mm thick Pre-cast CC M-20 Grade (Vibro-pressed) drain section block as per approved size and design of 'L' shape 'U' shape	metre	285.00
3197	80mm thick Pre-cast CC M-20 Grade (Vibro-pressed) drain section block as per approved size and design of 'L' shape 'U' shape	metre	375.00
3198	Precast RCC M-15 grade pillar of size 300mm x 300mm x 900mm height	each	940.00
3199	Precast RCC M-15 grade pillar of size 150mm x 150mm x 450mm height	each	170.00
3201	Cement Concrete Jali 50 mm thick	sqm	235.00
3202	Cement Concrete Jali 40 mm thick	sqm	170.00
3203	Cement Concrete Jali 25 mm thick	sqm	140.00
3205	Non - Asbestos multi purpose fibre cement board 6mm thick.	sqm	215.00
3206	Non - Asbestos multi purpose fibre cement board 8mm thick.	sqm	255.00
3208	Non - Asbestos fibre cement corrugated sheet 6mm thick.	sqm	210.00

Code No	Description	Unit	Rate Rs.
3209	Non - Asbestos fibre cement close fitting adjustable ridge.	metre	240.00
3210	Non - Asbestos fibre cement corrugate serrated adjustable ridge.	metre	215.00
3211	Non - Asbestos fibre cement plain wing adjustable ridge.	metre	220.00
3212	Non - Asbestos fibre cement unserrated adjustable ridge for hips.	metre	230.00
3213	Non - Asbestos fibre cement corrugated apron piece.	metre	185.00
3214	Non - Asbestos fibre cement eaves filler piece.	each	120.00
3215	Non - Asbestos fibre cement north light curves.	metre	245.00
3216	Non - Asbestos fibre cement ventilator curves.	each	300.00
3217	Non - Asbestos fibre cement barge boards 6 mm thick.	metre	265.00
3218	Non - Asbestos fibre cement ridge finial .	pair	120.00
3219	Non - Asbestos fibre cement special north light curves.	each	325.00
3220	Non - Asbestos fibre cement S type louvers.	each	195.00
3234	pre-mixed, ready to use, geo polymer based mortar confirming to ASTM C: 1600 (Technofill)	kg	140.00
3235	pre-mixed, ready to use, geo polymer based mortar confirming to ASTM C: 1600 (Geocrete CR)	kg	297.00
3236	High performance Cement (Instacem HD)	kg	17.00
3237	Portland Cement	tonne	4,675.00
3238	Pre-packed cement based polymer concrete of strength 45 Mpa at 28 days	kg	13.00
3239	Cement OPC	tonne	4,820.00
3240	Cement PPC	tonne	4,695.00
3241	White Cement	tonne	12,800.00
3242	Water proofing cement paint	kilogram	53.00
3243	Acid Proof cement	tonne	7,560.00
3244	Cement primer	litre	52.00
3247	sulphur resistant/sulphate resistant cement	tonne	5,500.00
3248	300mm x 300mm x 16mm cement tactile directional and warning tiles	sqm	721.00
3249	300mm x 300mm x 9.8mm vitrified tactile warning and directional tiles	sqm	1,176.00
3250	300mm x 300mm x 3mm polyurethane stick	sqm	2,119.00
3251	Ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 600mm x 600mm	sqm	830.00
3252	Ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 800mm x 800mm	sqm	850.00
3253	Ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 600mm x 1200mm	sqm	1,045.00

Code No	Description	Unit	Rate Rs.
3254	Ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 800mm x 1200mm	sqm	1,355.00
3255	Ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 896mm x 1215mm	sqm	1,355.00
3256	Ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 1000mm x 2000mm	sqm	3,035.00
3261	Mat & Glossy Ceramic tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 250mm x 375mm	sqm	350.00
3262	Mat & Glossy Ceramic tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 300mm x 450mm	sqm	420.00
3263	Mat & Glossy Ceramic tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 200mm x 600mm	sqm	465.00
3264	Mat & Glossy Ceramic tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 300mm x 600mm	sqm	490.00
3265	Mat & Glossy Ceramic tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 250mm x 1000mm	sqm	650.00
3271	Heavy duty vitrified digital polished tiles 1st quality Size 298mm x 298mm	sqm	333.00
3272	Heavy duty vitrified digital polished tiles 1st quality Size 300mm x 450mm	sqm	334.00
3273	Heavy duty vitrified digital polished tiles 1st quality Size 600mm x 600mm	sqm	631.00
3274	Heavy duty vitrified digital polished tiles 1st quality Size 600mm x 1200mm	sqm	940.00
3275	Heavy duty vitrified glazed MAT tiles 1st quality Size 600mm x 600mm	sqm	752.00
3276	Heavy duty vitrified glazed MAT tiles 1st quality Size 600mm x 1200mm	sqm	1,124.00
3277	Heavy duty vitrified double charged tiles 1st quality Size 600mm x 600mm	sqm	565.00
3278	Heavy duty vitrified double charged tiles 1st quality Size 800mm x 800mm	sqm	752.00
3279	Heavy duty vitrified double charged tiles 1st quality Size 1000mm x 1000mm	sqm	875.00
3301	100 mm DN/ID SW pipes as per IS: 651:1980 (60 cm long)	each	100.00
3302	150 mm DN/ID SW pipes as per IS: 651:1980 (60 cm long)	each	195.00
3303	200 mm DN/ID SW pipes as per IS: 651:1980 (60 cm long)	each	330.00
3304	230 mm DN/ID SW pipes as per IS: 651:1980 (60 cm long)	each	380.00

Code No	Description	Unit	Rate Rs.
3305	250 mm DN/ID SW pipes as per IS: 651:1980 (60 cm long)	each	565.00
3306	300 mm DN/ID SW pipes as per IS: 651:1980 (60 cm long)	each	705.00
3310	S.W. gully trap P type 100x100 mm	each	70.00
3312	S.W. gully trap P type 150x100 mm	each	105.00
3314	S.W. gully trap P type 180x150 mm	each	190.00
3317	Stone ware spouts 100 mm dia 60 cm long	each	35.00
3318	S.W. intercepting trap 100 mm dia	each	175.00
3319	S.W. intercepting trap 150 mm dia	each	240.00
3322	White vitreous china laboratry sink 450x300x150 mm	each	1,070.00
3323	White vitreous china laboratry sink 600x450x200 mm	each	1,765.00
3324	Vitreous china Surgeon type wash basin of size 660x460 mm	each	945.00
3325	Vitreous china flat back wash basin 450x300 mm	each	360.00
3326	Vitreous china flat back wash basin 550x400 mm	each	590.00
3327	Vitreous china flat back wash basin 630x450 mm	each	660.00
3328	Vitreous china angle back wash basin 600x480 mm	each	625.00
3329	Vitreous china angle back wash basin 400x400 mm	each	390.00
3330	Vitrous china pedestal for wash basin	each	810.00
3331	Vitreous china toilet paper holder of standard size	each	95.00
3332	Vitreous china 10 litres low level cistern without fittings	each	730.00
3333	Vitreous china 10 litres low level cistern with fittings	each	1,255.00
3334	Vitreous china indian type w.c. pan size 580 mm	each	370.00
3335	Vitreous china orrisa type w.c. pan size 580 mm	each	885.00
3336	Coloured Orissa pattern W.C. pan 580x440 mm	each	1,635.00
3337	Coloured Pedestal type W.C. pan 580x440 mm (European type)	each	1,255.00
3338	Coloured (other than black) solid P.V.C. seat in European W.C. pan	each	392.00
3339	Coloured Vitreous china 10 lit. low level cistern	each	1,100.00
3340	White Vitreous china 10 lit. (full flush) capacity controlled low level flushing cistern with all fittings	each	785.00
3341	Coloured Vitreous china 10 lit. (full flush) capacity controlled low level flushing cistern with all fittings	each	1,200.00
3342	Vitros china lipped front urinal	each	430.00
3343	Vitros china squatting plate urinal	each	770.00
3344	White vitreous china clay half stall urinal flat back 580x380x350 mm or angle back 450x375x350 mm with waste fittings as per IS : 2556	each	985.00
3345	Vitreous china pedestal type water closet	each	730.00
3346	White vitreous china dual purpose closet (Anglo Indian W.C.) suitable for use as sequatting pan or European type water closet as per manufacturer's specifications	each	1,710.00
3347	Vitreous china foot rests 250x125x25 mm	pair	85.00
3348	Vitreous china foot rests 250x130x30 mm	pair	105.00

Code No	Description	Unit	Rate Rs.
3349	Ceramic Glazed Tiles 1st quality minimum thickness 5mm in all colours shades and designs except burgundy, bottle green, black	sqm	220.00
3350	Ceramic Glazed Tiles 1st quality 300 x 300mm in all shades and designs of White, Ivory, grey, Fuem Red brown etc.	sqm	250.00
3351	Ceramic Glazed Tiles 1st quality 300 x 300 in all shades designs except White, Ivory, Grey, Fuem Red Brown etc.	sqm	300.00
3352	Ceramic Glazed Tiles 1st quality 400 x 400 in all shades designs White, Ivory, Grey, Fuem Red Brown etc.	sqm	375.00
3353	Ceramic Glazed Tiles 1st quality 400 x 400 in all shades designs except White, Ivory, Grey, Fuem Red Brown etc.	sqm	410.00
3354	Polished porcelain floor tile 450x450mm	sqm	690.00
3355	Polished porcelain floor tile 600x600mm	sqm	710.00
3356	Polished porcelain floor tile 800x800mm	sqm	860.00
3357	Polished porcelain floor tile 100x100 cm	sqm	1,160.00
3359	Fire clay kitchen sink: 600x450x250 mm	each	1,675.00
3360	Decorative glazed border tile 75 mm wide	metre	170.00
3361	Decorative glazed Motive tile size 200x200 mm	each	90.00
3362	Decorative glazed Motive tile size 200x300 mm	each	110.00
3363	White glazed fire clay draining board 600x450x25 mm	each	445.00
3367	Glass sheet (Pin headed) 4 mm thick	sqm	225.00
3368	Float glass sheet of nominal thickness 4 mm (weight not less than 10kg/sqm).	sqm	285.00
3369	Float glass sheet of nominal thickness 5.5 mm.(weight not less than 13.50 kg/sqm).	sqm	430.00
3370	Float glass sheet of nominal thickness 8 mm	sqm	645.00
3372	Frosted glass sheet of nominal thickness 4 mm (weighing not less than 10 kg/sqm)	sqm	340.00
3375	Glass strip 40 mm wide 4 mm thick	metre	16.00
3381	Circular shape 450 mm dia Mirror with Plastic moulded frame	each	415.00
3382	Rectangular shape 453x357 mm Mirror with Plastic moulded frame	each	270.00
3383	Ovel shape 450x350 mm (outer dimensions) Mirror with Plastic moulded frame	each	310.00
3384	Mirror of superior make glass 60x45 cm	each	280.00
3385	Rectangular shape 1500x450 mm Mirror with Plastic moulded frame	each	660.00
3387	Resin Bonded Glass wool 16 kg/m ³ 50 mm thick	sqm	105.00
3388	Resin Bonded Glass wool 24 kg/m ³ 50 mm thick	sqm	150.00
3389	Fibre glass tissue reinforcement Type II Grade I	sqm	75.00
3390	Fiber glass reinforced plastic chajja.	sqm	3,230.00
3391	Glass reinforced Gyp sum (GRG) board 8.5 mm thick	sqm	230.00
3392	Fibre glass cloth	sqm	40.00
3394	Glue	kilogram	105.00

Code No	Description	Unit	Rate Rs.
3401	Bricks class 100 1st grade	Nos	3,710.00
3402	F.P.S. bricks class designation 75	Nos	3,640.00
3404	F.P.S. bricks tile class designation 100	Nos	3,850.00
3405	F.P.S. bricks tile class designation 75	Nos	3,475.00
3407	F.P.S. clay fly ash bricks class designation 75	Nos	3,758.00
3408	Modular bricks class designation 75	Nos	3,985.00
3409	Modular bricks of class designation 75	Nos	3,500.00
3410	Machine moulded FPS bricks of class designation 125	Nos	4,060.00
3411	Machine moulded tile bricks of class designation 125	Nos	3,820.00
3412	Machine moulded perforated FPS bricks of class designation 125	Nos	4,110.00
3413	Machine moulded modular perforated bricks of class designation 125	Nos	4,090.00
3414	Extruded burnt flyash clay sewer bricks conforming to I.S 4885 - 1988	Nos	4,155.00
3415	Fly ash lime bricks (FALG Bricks) conforming to I.S. 12894-1989	Nos	2,725.00
3416	Calcium Silicate Bricks machine moulded confirming to I.S. 4139 - 1989	Nos	4,230.00
3417	Mechanised Autoclaved flyash lime bricks.	Nos	3,970.00
3418	Autoclaved areated cement (AAC) blocks i/c carriage	cum	3,000.00
3420	Mangalore ridge tiles x.....mm and 20mm thick.	each	25.00
3421	Manglore tiles x.....mm 20mm thick.	each	10.00
3422	Pressed clay tiles	Nos	8,750.00
3423	Brick Aggregate (Single size) : 63 mm nominal size	cum	480.00
3425	Brick Aggregate (Single size) : 40 mm nominal size	cum	510.00
3427	Brick Aggregate (Single size) : 20 mm nominal size	cum	520.00
3428	Brick bats	cum	385.00
3429	Hard crete	litre	35.00
3432	Surkhi	cum	465.00
3433	Fly ash conforming to IS: 3812 (Part II & I) at HMP Plant / Batching Plant / Crushing Plant	Cum	305.00
3434	Flyash	cum	11.00
3435	Royalty for sludge	cum	85.00
3436	Grass (Doob)	kg	15.00
3437	Grass (Fine)	kg	50.00
3438	Hedge plants	each	22.00
3439	Sapling 2 m high 25 mm dia	each	115.00
3440	Flowering Plants	each	32.00
3441	Shrubs	each	11.00
3443	Sludge / Farm yard manure	cum	470.00
3444	Pesticide	kg	470.00

Code No	Description	Unit	Rate Rs.
3445	Cost of Water	KL	80.00
3446	Wedelia trilobata (SunFlower Family) 300mm height in poly bags /earthen pots	each	15.00
3447	Alternanthera green (Parrot Leaf) 300mm height in poly bags /earthen pots	each	57.00
3448	Iresine herbstii (Blood Leaf) 300mm height in poly bags /earthen pots	each	15.00
3449	Ophiopogon Black (Lily Turf, Mondograss) 300mm height in poly bags /earthen pots	each	20.00
3450	Asparagus myerii (Fox Tail) 300mm height in poly bags /earthen pots	each	48.00
3451	Lantana sellowiana 300mm height in poly bags /earthen pots	each	7.00
3452	Rhoeo spathacea 'Compacta' (Oyster, Boat Lily) 300mm height in poly bags /earthen pots	each	15.00
3453	Golden duranta 300mm height in poly bags /earthen pots	each	20.00
3454	Pennisetum setaceum (Fountain Grass) 300mm height in poly bags /earthen pots	each	17.00
3455	Ficus panda 900mm height in poly bags / earthen pots	each	170.00
3456	Tecoma capensis (Ratanjot) 900mm height in poly bags / earthen pots	each	48.00
3457	Clerodendron inermii (Choti Aari) 900mm height in poly bags / earthen pots	each	48.00
3458	Tabernaemontana variegated (Chandni) 900mm height in poly bags / earthen pots	each	48.00
3459	Hamelia patens (Firebush, Thal Kamal) 900mm height in poly bags / earthen pots	each	24.00
3460	Hibiscus variegated (Guddal) 900mm height in poly bags / earthen pots	each	34.00
3461	Rhaphis excelsa with 3-4 suckers (Lady Palm) 600mm height in pots	each	235.00
3462	Furcaria with 10-12 leaves (cactus) 600mm height in pots	each	375.00
3463	Agave with 10-12 leaves (Kamal Cactus) 600mm height in pots	each	520.00
3464	Phoenix sylvestris (Date Palm) 600mm height in pots	each	940.00
3465	Plumeria alba (Champa) 2 M height minimum	each	320.00
3466	Gulmohar(Delonix regia) 2 M height minimum	each	190.00
3467	Neem(Azadirachta indica) 2 M height minimum	each	57.00
3468	Jacaranda mimosifolia (Neelli Gulmohar) 2 M height minimum	each	57.00
3469	Bauhinia blakeana (Arckid) 2 M height minimum	each	76.00
3470	Erythrina variegata (Lantern Tree) 2 M height minimum	each	57.00
3471	Bottle Brush(Callistemon Lanciolatus) 2 M height minimum	each	95.00
3472	Mangifera indica (Mango) 2 M height minimum	each	113.00
3473	Yucca 2 M height minimum	each	320.00
3474	Bignonia Venusta 2 M height minimum	each	34.00

Code No	Description	Unit	Rate Rs.
3475	Quis quallis indica (Madhu Malti) 2 M height minimum	each	24.00
3476	Morning glory (Ipomea) 2 M height minimum	each	34.00
3477	Vernonium (Parda Bel) 2 M height minimum	each	34.00
3478	Bougain villea 2 M height minimum	each	34.00
3479	Plumeria alba (Champa) 3 M height minimum	each	115.00
3480	Gulmohar(Delonix regia) 3 M height minimum	each	57.00
3481	Neem(Azadirachta indica) 3 M height minimum	each	57.00
3482	Jacaranda mimosifolia (Neelli Gulmohar) 3 M height minimum	each	57.00
3483	Bauhinia blakeana (Arckid) 3 M height minimum	each	43.00
3484	Erythrina variegata (Lantern Tree) 3 M height minimum	each	635.00
3485	Bottle Brush(Callistemon Lanciolatous) 3 M height minimum	each	57.00
3486	Mangifera indica (Mango) 3 M height minimum	each	51.00
3487	Yucca 3 M height minimum	each	495.00
3488	Well deoiled neem cake duly packed in used gunny bags.	cum	320.00
3489	1500 Microns thick 6 m wide HDPE Geo membrane	sqm	235.00
3490	Synthetic clay liner	sqm	250.00
3491	Caw dung	cum	470.00
3492	Synthetic fibre 6 mm / 12 mm (125 gram)	pack of 125g	43.00
3493	HDPE sheet 2.5mm thick	sqm	265.00
3499	Flexcoat (EMCE COLOR FLEX)	kg	295.00
3500	Primar (Premix)	kg	222.00
3501	Enamel paint	litre	158.00
3502	Floor enamel paint in all shades except green	litre	158.00
3505	Roofing paint for iron sheets in red colour	litre	120.00
3506	Synthetic enamel paint in black or chocolate shade	litre	170.00
3507	Synthetic enamel paint in all shades except black or chocolate shade	litre	165.00
3508	Paint	litre	142.00
3509	Pavement Marking Paint	litre	160.00
3512	Primer for cement paint	litre	90.00
3513	Water based cement paint	litre	40.00
3514	Aluminium primer	litre	85.00
3515	Aluminium paint	litre	150.00
3517	Acid proof paint (chocolate or black)	litre	150.00
3518	Black japan	litre	80.00
3519	Special Primer	litre	125.00
3520	Metal Primer	litre	90.00
3523	Red oxide Zinc chromate primer	litre	70.00

Code No	Description	Unit	Rate Rs.
3525	White lead	kilogram	100.00
3526	Distemper primer	litre	60.00
3527	Dry distemper	kilogram	30.00
3528	Oil bound washable distemper/ Acrylic distemper	kilogram	40.00
3529	Multi surface paint	litre	280.00
3530	Acrylic exterior paint	litre	205.00
3531	Premium Acrylic exterior paint	litre	185.00
3532	Textured exterior paint	litre	240.00
3533	Expoxy harder and resin	kg	957.00
3534	Epoxy compound with accessories for preparing epoxy mortar	kg	630.00
3535	Epoxy primer	kg	430.00
3536	Epoxy paint	litre	250.00
3537	Fire retardant paint	litre	290.00
3539	Primer (for gypsum board)	litre	80.00
3540	Pink primer (for wood)	litre	91.00
3541	Plastic emulsion paint	litre	190.00
3543	Wax polish (ready made)	kilogram	235.00
3544	Ordinary varnish	litre	75.00
3545	Superior copal varnish	litre	110.00
3546	Superior spar varnish	litre	145.00
3547	Melamine polish	litre	275.00
3548	Black colour dark shade pigment	kilogram	58.00
3549	Red, chocolate, orange, buff or yellow (red oxide of iron) light shade pigment	kilogram	50.00
3550	Green or blue medium shade pigment	kilogram	50.00
3551	Shellac	kilogram	445.00
3552	Spirit	litre	50.00
3553	Oil type wood preservative	litre	80.00
3555	Water proofing materials	kilogram	27.00
3557	Copper acetate	kilogram	275.00
3558	Hydrochloric acid	kilogram	20.00
3559	Copper chloride	kilogram	265.00
3560	Copper nitrate	kilogram	195.00
3561	Ammonium chloride	kilogram	16.00
3562	Premixed super white gypsum plaster.	kg	7.00
3571	Analytical Balance (Quotation not available for 1.0mg accuracy)	No	23,460.00
3572	Autoclave	No	16,450.00
3573	Dissolved Oxygen Sampler	No	14,100.00
3574	Drying Oven (Hot Air)	No	14,100.00

Code No	Description	Unit	Rate Rs.
3575	Hot Plates	No	4,350.00
3576	Incubator 20°C (BOD)	No	4,250.00
3577	Microscope, Binocular with oil immersion and movable stage counting cell	No	16,900.00
3578	Membrane Filter Assembly	No	2,070.00
3579	Muffle Furnace	No	13,400.00
3580	PH Meter portable	No	3,285.00
3581	Refrigerator (165 ltr.)	No	5,640.00
3582	Sludge Sampler (Quotation not available)	No	3,285.00
3583	Soxhlet extraction unit (Quotation not available)	No	14,100.00
3584	Turbidity meter	No	11,300.00
3585	Vacuum pump	No	5,600.00
3586	Water bath (thermostat controlled)	No	5,600.00
3587	Glasswares and analytical chemicals as required (Lump sum).	No	18,770.00
3601	Ceiling sections	metre	46.00
3602	Perimetre channel	metre	28.00
3603	Intermediate channel	metre	50.00
3604	Ceiling angle	metre	20.00
3605	Soffit cleat	each	4.00
3606	Joint filler	kilogram	24.00
3607	Joint finisher	kilogram	24.00
3608	Joint tape roll	roll	105.00
3609	Wall form panel 1250x500 mm	each	710.00
3610	Corner angle 45x45x5 mm 1.50 m long	each	200.00
3611	100 mm channel shoulder 2.5 m long	each	740.00
3612	Single clip	each	58.00
3613	Wall form panel 1250x450 mm	each	660.00
3614	Corner angle 45x45x5 m 2.50 m long	each	255.00
3616	Perimeter channel having one flange of 20mm and another flange of 30mm with thickness of 0.55mm and web of length 27mm.	metre	35.00
3617	Ceiling sections 0.55 mm thick having a knurled web of 51.55mm and two flanges of 26mm each with lips of 10.55mm.	metre	40.00
3618	Main T ceiling sections 24x38x0.3 mm (3 metre long)	each	140.00
3619	Perimeter wall angle 21x21 mm (3 metre long)	each	85.00
3620	Intermediate cross channel (1.6 mtrs)	each	60.00
3621	Adjustment clip	each	6.00
3622	Soffit cleat	each	4.00
3623	Gypsum board	sqm	295.00
3624	8 mm thick tapered edge calcium silicate board .	sqm	255.00

Code No	Description	Unit	Rate Rs.
3625	10 mm thick calcium silicate board.	sqm	370.00
3626	12.5 mm thick Glass fibre reinforced Gypsum board .	sqm	170.00
3628	Hard board 6 mm thick	sqm	130.00
3629	Plain ceiling tiles (BWP type phenol formaldehyde synthetic resin bonded) (600x600x12 mm)	each	110.00
3631	12 thick particle board ceiling tile	sqm	150.00
3632	Bonding plaster for Gypsum panel.	kg	35.00
3633	Compressible Fibre Board(20mm thick)	sqm	610.00
3634	Designing of facia panel and its accessories, fabrication and supply of Geo grid strip and casting accessories to be used in facia panel	sqm	1,410.00
3635	Carriage of facia panel to site of work and its erection	sqm	376.00
3636	Putty for wood work	kilogram	32.00
3638	Plug	each	8.00
3711	Super plastisizer admixture IS marked as per 9103-1999	kg	45.00
3714	Blasting powder	kg	35.00
3715	Blasting fuse (Fuse wire)	each	15.00
3716	Gelatin 80%	kg	445.00
3718	Electric Detonators @ 1 detonator for 1/2 gelatin stick of 125 gms each	Nos	1,840.00
3720	Delineators from ISI certified firm as per the standard drawing given in IRC - 79	each	350.00
3722	HTS strand	tonne	54,000.00
3723	Pre moulded Joint filler,25 mm thick for expansion joint.	sqm	415.00
3724	Reflectorising glass beads	kg	90.00
3725	Joint Sealant Compound	kg	500.00
3726	Quick setting compound	kg	140.00
3727	High polymer modified quickset tile adhesive.	kg	15.00
3728	Polymer modified cementation coating	kg	60.00
3729	Silicon sealant.	cartridge	220.00
3730	Hot applied thermoplastic compound	litre	85.00
3731	Curing compound	liter	40.00
3736	Geotextile 120 gsm membrane	sqm	34.00
3742	Polymer modified cementation coating	kilogram	128.00
3746	Spun yarn	kilogram	45.00
3747	Spun yarn	kilogram	45.00
3748	Jute Rassi	kg	67.00
3749	Masking tape.	metre	4.00
3750	Bhusa	quintal	330.00
3753	Chlorpyrifos E.C. 20%	litre	155.00
3754	Bleaching powder	kg	17.00

Code No	Description	Unit	Rate Rs.
3757	Dowel bar made of 25mm MS round steel bar	kg	45.00
3758	Plastic sheath, 1.25 mm thick for dowel bars	sqm	50.00
3759	Separation Membrane of impermeable plastic sheeting 125 micron thick	sqm	25.00
3760	Sheathing duct 85mm dia	metre	200.00
3768	Bearing (Elastomeric bearing assembly consisting of 7 internal layers of elastomer bonded to 6 nos. internal reinforcing steel laminates by the process of vulcanisation,)	cc	1.00
3772	Bearing (Pot type bearing assembly consisting of a metal piston supported by a disc, PTFE pads providing sliding surfaces against stainless steel mating together with cast steel assemblies/fabricated structural steel assemblies duly painted with all components	nos	91,620.00
3783	Direction and place identifications retro-reflectrised sign as per IRC:67 made of high intensity grade sheeting vide clause 807.3, fixed over aluminium sheeting 2 mm thick size upto 0.9 sqm and as per approved drawing.	sqm	280.00
3784	Direction and place identifications retro-reflectrised sign as per IRC:67 made of high intensity grade sheeting vide clause 807.3, fixed over aluminium sheeting 2 mm thick size above 0.9 sqm and as per approved drawing.	sqm	860.00
3785	Single Molded twin Shank Cat's eye made of polycarbonate and ABS moulded body and reflective panels with micro prismatic lens shall support a load of 16000 kg complying to Specifications of Category A of MORTH The height, width and length shall not exceed 50 mm, 100 mm and 100 mm	each	280.00
3786	Fabricated sign board made of board base of A.C.P / transparent PVC acrylic sheet 3 mm thick fixed on MS hollow rectangular section size 50mmx25mm, letters made of acrylic material sheet 3 mm thick fixed with LED lights with all accessories	sqm	9,280.00
3787	ASA (Acrylic styrene Acrylortrite) cat's eye	each	160.00
3788	CAT's eye made of aluminium alloy size 75x100x22mm having 21 biconvex lenses embedded in circular disk of AS plastic on each side	each	100.00
3789	L type bollard	each	1,315.00
3790	SWISS type bollard	each	1,170.00
3791	Hazard Marker	each	400.00
3792	SWISS type Hazard Marker	each	530.00
3797	Sand bags (Cost of sand and Empty cement bag)	nos	10.00
3799	Cabel for 5 level water level indicator	metre	46.00
3800	Water level indicator with 5 level indications, prons and cabling upto length of 5 metre	set	7,297.00
3801	Capacitance type level indicator-transmitter for measuring liquid microprocessor based with 6 digit LCD display for 0-3 m depth	set	21,650.00
3802	Capacitance type level indicator-transmitter for measuring liquid microprocessor based with 6 digit LCD display for 0-6 m depth	set	28,210.00

Code No	Description	Unit	Rate Rs.
3803	Capacitance type level indicator-transmitter for measuring liquid microprocessor based with 6 digit LCD display for 0-10 m depth	set	37,440.00
3811	Electrically opeared overhead hoist (EOH) single bridge girder carrying two wheels with chain pulley block load chain, hand chain encased gears, trolley trolley track, wheels, axle & shaft, swivel type lifting hook for 2 MT capacity, 6 m lift and 7 m span	set	2,56,110.00
3812	Electrically opeared overhead hoist (EOH) single bridge girder carrying two wheels with chain pulley block load chain, hand chain encased gears, trolley trolley track, wheels, axle & shaft, swivel type lifting hook for 2 MT capacity, 6 m lift and 9 m span	set	2,94,520.00
3813	Electrically opeared overhead hoist (EOH) single bridge girder carrying two wheels with chain pulley block load chain, hand chain encased gears, trolley trolley track, wheels, axle & shaft, swivel type lifting hook for 3 MT capacity, 6 m lift and 7 m span	set	3,13,790.00
3814	Electrically opeared overhead hoist (EOH) single bridge girder carrying two wheels with chain pulley block load chain, hand chain encased gears, trolley trolley track, wheels, axle & shaft, swivel type lifting hook for 3 MT capacity, 6 m lift and 9 m span	set	3,57,080.00
3815	Electrically opeared overhead hoist (EOH) single bridge girder carrying two wheels with chain pulley block load chain, hand chain encased gears, trolley trolley track, wheels, axle & shaft, swivel type lifting hook for 5 MT capacity, 6 m lift and 7 m span	set	3,65,960.00
3816	Electrically opeared overhead hoist (EOH) single bridge girder carrying two wheels with chain pulley block load chain, hand chain encased gears, trolley trolley track, wheels, axle & shaft, swivel type lifting hook for 5 MT capacity, 6 m lift and 9 m span	set	4,00,960.00
3819	Set of Extra length of lifting chain and operating electrical cable of EOT crane upto 5MT	metre	638.00
3820	Set of Extra length of lifting chain and operating hand chain of HOT crane upto 5MT	metre	638.00
3821	Mono Rail single girder crane for 1 Tonne capacity for lift upto 9 m with chain pulley block and travelling trolley excluding girder.	set	16,920.00
3822	Mono Rail single girder crane for 2 Tonne capacity for lift upto 9 m with chain pulley block and travelling trolley excluding girder.	set	21,800.00
3823	Mono Rail single girder crane for 3 Tonne capacity for lift upto 9 m with chain pulley block and travelling trolley excluding girder.	set	26,770.00
3824	Vacuum feed gas chlorinator with all assessories for 1 Kg/Hr capacity	set	3,27,700.00
3825	Vacuum feed gas chlorinator with all assessories for 2 Kg/Hr capacity	set	3,34,250.00
3826	Vacuum feed gas chlorinator with all assessories for 3 Kg/Hr capacity	set	3,37,530.00
3827	Chlorine tonner with rollers complete	set	98,010.00
3828	Chlorine leak detector with two sensors	each	54,730.00
3829	Self contained compressed breathing apparatus complete	each	34,660.00
3830	safety shower with eye wash	each	9,577.00

Code No	Description	Unit	Rate Rs.
3831	Emergency toner repair kit	each	32,840.00
3832	Protective clothing such as PVC over all gloves, rubber boots	each	5,929.00
3900	Bitumenous washer	Nos	23.00
3903	Kerosene oil	litre	36.00
3904	LDO for steam curing	litre	42.00
3905	Commercial LPG in cylinder.	kg	70.00
3907	Low viscosity bitumen emulsion RS1	kg	37.40
3908	Bitumen VG-grade 30	tonne	35,540.00
3910	Paving bitumen S-90 of approved quality	tonne	32,690.00
3911	Bitumen (modified graded PMB-40)	tonne	35,450.00
3913	Bitumen (modified graded CRMB-60)	tonne	31,500.00
3916	Bitumen primer for bitumen membrane	litre	82.00
3917	Pre-moulded asphalt filler board	sqm	85.00
3918	Bitumen (emulsion)	tonne	30,800.00
3920	Blown type petroleum bitumen of penetration 85/25 of approved quality	tonne	31,800.00
3921	Bitumen hot sealing compound : grade A	kilogram	25.00
3922	Bitumen solution primer of approved quality	litre	50.00
3924	Bitumen felt fibre base (vegetable or animal):Type 2 grade 1	sqm	65.00
3926	Bitumen felt :Type 3 grade 1	sqm	65.00
3927	Coal Tar	litre	36.00
3928	Anticorrosive bituminous paint (black)	litre	90.00
3929	Oxygen Cylinder	each	456.00
3930	DA Cylinder	each	610.00
3931	Linseed oil (double boiled)	Litre	158.00
3932	Mobil Oil	Litre	260.00
3933	High Speed Diesel	Litre	107.00
4001	3-6 months Slaked lime	Qtl	740.00
4004	Coconut oil	litre	110.00
4007	Jhikki	cum	2,582.00
4008	Lapti	Kg	22.00
4010	Malmal cloth	metre	32.00
4015	Stone Slab 3.3 to 5.5 mtr. (100-150mm thick) (as per existing matching to particular temple site)	sqm	1,550.00
4023	Wacker-290 (Chemical)	Kg	725.00
4024	Wacker-Ceilent	Kg	1,020.00
4025	Solvent (Mintrolium)	litre	180.00
4026	Protekta-Guard	litre	122.00
4027	Protekta-Base	litre	235.00

Code No	Description	Unit	Rate Rs.
4028	Protekta-G.A.	litre	390.00
4029	Protekta-Micro Emulsion	litre	455.00
4073	Hirmich	kg	95.00
4074	Washing soap	each	40.00
4075	Bectokill chemical	0.15	1,313.00
4076	UV tube	0.1	6,763.00
4081	R.C.C. pipes NP4 class with steel pushing collar 150 mm dia	metre	903.00
4082	R.C.C. pipes NP4 class with steel pushing collar 200 mm dia	metre	1,179.00
4083	R.C.C. pipes NP4 class with steel pushing collar 250 mm dia	metre	1,707.00
4084	R.C.C. pipes NP4 class with steel pushing collar 300 mm dia	metre	2,280.00
4085	R.C.C. pipes NP4 class with steel pushing collar 350 mm dia	metre	2,500.00
4086	R.C.C. pipes NP4 class with steel pushing collar 400 mm dia	metre	2,940.00
4087	R.C.C. pipes NP4 class with steel pushing collar 450 mm dia	metre	3,640.00
4088	R.C.C. pipes NP4 class with steel pushing collar 500 mm dia	metre	4,080.00
4089	R.C.C. pipes NP4 class with steel pushing collar 600 mm dia	metre	5,120.00
4090	R.C.C. pipes NP4 class with steel pushing collar 700 mm dia	metre	6,400.00
4091	R.C.C. pipes NP4 class with steel pushing collar 800 mm dia	metre	8,280.00
4092	R.C.C. pipes NP4 class with steel pushing collar 900 mm dia	metre	9,200.00
4093	R.C.C. pipes NP4 class with steel pushing collar 1000 mm dia	metre	10,200.00
4094	R.C.C. pipes NP4 class with steel pushing collar 1100 mm dia	metre	11,640.00
4095	R.C.C. pipes NP4 class with steel pushing collar 1200 mm dia	metre	13,250.00
4096	R.C.C. pipes NP4 class with steel pushing collar 1400 mm dia	metre	18,200.00
4097	R.C.C. pipes NP4 class with steel pushing collar 1600 mm dia	metre	21,420.00
4098	R.C.C. pipes NP4 class with steel pushing collar 1800 mm dia	metre	28,050.00
4099	R.C.C. pipes NP4 class with steel pushing collar 2000 mm dia	metre	37,230.00
4101	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pulling upto 200 mm dia (ID) HDPE pipe including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pi	metre	2,240.00
4102	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pulling 225-315 mm dia (ID) HDPE pipe including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pi	metre	3,360.00
4103	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pulling 350-450 mm dia (ID) HDPE pipe including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pi	metre	5,950.00
4104	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pulling 500-630 mm dia (ID) HDPE pipe including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pi	metre	13,300.00

Code No	Description	Unit	Rate Rs.
4105	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pulling 700-1000 mm dia (ID) HDPE pipe including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pi	metre	19,600.00
4106	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of rocksand pulling upto 200 mm dia (ID) HDPE pipe including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pi	metre	16,800.00
4107	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of rocksand pulling 225-315 mm dia (ID) HDPE pipe including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pi	metre	19,600.00
4108	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of rocksand pulling 350-450 mm dia (ID) HDPE pipe including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pi	metre	42,000.00
4109	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of rocksand pulling 500-630 mm dia (ID) HDPE pipe including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pi	metre	51,800.00
4110	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of rocksand pulling 700-1000 mm dia (ID) HDPE pipe including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pi	metre	67,900.00
4111	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing upto 300 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pit of dep	metre	9,050.00
4112	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 350-450 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pit of dep	metre	10,120.00
4113	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 500-600mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving	metre	11,130.00
4114	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 700-900mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving	metre	15,170.00
4115	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 1000-1200 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving	metre	21,000.00
4116	Horizontal directinal drilling (by trenchless technology) of suitable	metre	28,500.00

Code No	Description	Unit	Rate Rs.
	dia hole below natural ground level in all type of soil and pushing 1400mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receivin		
4117	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 1600mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receivin	metre	28,500.00
4118	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 1800-2000 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receivin	metre	31,750.00
4119	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing upto 300 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pit of depth	metre	66,500.00
4120	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing 350-450 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pit of depth	metre	84,000.00
4121	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing 500-600 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pit of depth	metre	1,05,000.00
4122	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing 700-900 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pit of dept	metre	1,19,000.00
4123	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing 1000-1200 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pit of dep	metre	1,54,000.00
4124	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing 1400 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pit of dep	metre	2,08,600.00
4125	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing 1600 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pit of dep	metre	2,24,000.00
4126	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing 1800-2000 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pit of dep	metre	2,45,000.00
4131	Extra for excavation in all type of soil of driven/ exit pit beyond 3 metre depth, required for pushing/ pulling of MS/HDPE/RCC pipe in trenchless technology, with proper protection at three sides with shoring sheets/ wooden planks and ISMB's, maintaining, back filling, necessary de-watering.	per pit per metre	21,530.00
4132	Extra for excavation in rocks of driven/ exit pit beyond 3 metre depth,	per pit	43,050.00

Code No	Description	Unit	Rate Rs.
	required for pushing/ pulling of MS/HDPE/RCC pipe in trenchless technology, with proper protection at three sides with shoring sheets/ wooden planks and ISMB's, maintaining, back filling, necessary de-watering.	per metre	
4152	90 mm dia HDPE pipe PE-100 PN-10 for potable water as per IS 4984	metre	205.00
4153	110 mm dia HDPE pipe PE-100 PN-10 for potable water as per IS 4984	metre	310.00
4154	125 mm dia HDPE pipe PE-100 PN-10 for potable water as per IS 4984	metre	440.00
4155	140 mm dia HDPE pipe PE-100 PN-10 for potable water as per IS 4984	metre	540.00
4156	160 mm dia HDPE pipe PE-100 PN-10 for potable water as per IS 4984	metre	710.00
4157	180 mm dia HDPE pipe PE-100 PN-10 for potable water as per IS 4984	metre	885.00
4158	200 mm dia HDPE pipe PE-100 PN-10 for potable water as per IS 4984	metre	1,075.00
4159	225 mm dia HDPE pipe PE-100 PN-10 for potable water as per IS 4984	metre	1,350.00
4201	75 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	140.00
4202	90 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	146.00
4203	110 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	250.00
4204	125 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	325.00
4205	140 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	405.00
4206	160 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	510.00
4207	180 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	640.00
4208	200 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	770.00
4209	225 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	970.00
4210	250 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	1,102.00
4211	280 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	1,383.00
4212	315 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	1,750.00
4213	355 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	2,601.00
4214	400 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	3,364.00

Code No	Description	Unit	Rate Rs.
4215	450 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984	metre	4,254.00
4221	75 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	88.90
4222	90 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	151.00
4223	110 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	352.00
4224	125 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	509.00
4225	140 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	629.00
4226	160 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	887.00
4227	180 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	1,259.00
4228	200 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	1,661.00
4229	225 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	2,384.00
4230	250 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	3,309.00
4231	280 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	4,630.00
4232	315 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	5,498.00
4233	355 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	7,787.00
4234	400 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	11,230.00
4235	450 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984	each	16,000.00
4241	75 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	97.60
4242	90 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	156.00
4243	110 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	215.00
4244	125 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	318.00
4245	140 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	440.00
4246	160 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	651.00
4247	180 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	921.00

Code No	Description	Unit	Rate Rs.
4248	200 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	1,257.00
4249	225 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	1,803.00
4250	250 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	2,482.00
4251	280 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	3,433.00
4252	315 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	4,972.00
4253	355 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	6,969.00
4254	400 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	10,210.00
4255	450 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984	each	14,540.00
4261	75 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	30.20
4262	90 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	44.90
4263	110 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	83.50
4264	125 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	102.00
4265	140 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	130.00
4266	160 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	210.00
4267	180 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	216.00
4268	200 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	334.00
4269	225 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	436.00
4270	250 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	536.00
4271	280 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	676.00
4272	315 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	773.00
4273	355 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	1,092.00
4274	400 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984	each	1,684.00
4275	450 mm dia HDPE End Plug PE-100 PN6 for potable water as per	each	2,118.00

Code No	Description	Unit	Rate Rs.
	IS 4984		
4281	110mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 100mm dia	each	607.00
4282	140/160 mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 125mm dia	each	663.00
4283	200mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 200mm dia	each	789.00
4284	250mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 250mm dia	each	912.00
4285	315 mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 300mm dia	each	1,003.00
4321	80 mm dia DI Sluice valve PN 1.0	each	4,220.00
4322	100 mm dia DI Sluice valve PN 1.0	each	5,456.00
4323	125 mm dia DI Sluice valve PN 1.0	each	6,534.00
4324	150 mm dia DI Sluice valve PN 1.0	each	7,611.00
4325	200 mm dia DI Sluice valve PN 1.0	each	12,080.00
4326	250 mm dia DI Sluice valve PN 1.0	each	21,400.00
4327	300 mm dia DI Sluice valve PN 1.0	each	28,680.00
4328	350 mm dia DI Sluice valve PN 1.0	each	38,450.00
4329	400 mm dia DI Sluice valve PN 1.0	each	42,080.00
4330	450 mm dia DI Sluice valve PN 1.0	each	74,910.00
4331	500 mm dia DI Sluice valve PN 1.0	each	75,970.00
4332	600 mm dia DI Sluice valve PN 1.0	each	1,08,000.00
4333	700 mm dia DI Sluice valve PN 1.0	each	2,27,320.00
4334	750 mm dia DI Sluice valve PN 1.0	each	2,75,770.00
4335	800 mm dia DI Sluice valve PN 1.0	each	2,87,920.00
4336	900 mm dia DI Sluice valve PN 1.0	each	4,96,670.00
4337	1000 mm dia DI Sluice valve PN 1.0	each	5,28,470.00
4361	80 mm dia DI butterfly valve PN 1.0	each	3,657.00
4362	100 mm dia DI butterfly valve PN 1.0	each	4,333.00
4363	125 mm dia DI butterfly valve PN 1.0	each	5,958.00
4364	150 mm dia DI butterfly valve PN 1.0	each	6,771.00
4365	200 mm dia DI butterfly valve PN 1.0	each	12,190.00
4366	250 mm dia DI butterfly valve PN 1.0	each	16,520.00
4367	300 mm dia DI butterfly valve PN 1.0	each	20,310.00
4368	350 mm dia DI butterfly valve PN 1.0	each	31,150.00
4369	400 mm dia DI butterfly valve PN 1.0	each	41,170.00
4370	450 mm dia DI butterfly valve PN 1.0	each	44,150.00
4371	500 mm dia DI butterfly valve PN 1.0	each	45,770.00
4372	600 mm dia DI butterfly valve PN 1.0	each	74,480.00

Code No	Description	Unit	Rate Rs.
4373	700 mm dia DI butterfly valve PN 1.0	each	1,28,860.00
4374	750 mm dia DI butterfly valve PN 1.0	each	1,49,990.00
4375	800 mm dia DI butterfly valve PN 1.0	each	1,58,440.00
4376	900 mm dia DI butterfly valve PN 1.0	each	2,06,600.00
4377	1000 mm dia DI butterfly valve PN 1.0	each	2,73,000.00
4441	80 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	4,286.00
4442	100 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	5,586.00
4443	125 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	9,015.00
4444	150 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	9,321.00
4445	200 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	14,000.00
4446	250 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	21,800.00
4447	300 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	27,010.00
4448	350 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	41,170.00
4449	400 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	52,980.00
4450	450 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	66,790.00
4451	500 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	87,110.00
4452	600 mm dia DI Resilient Seated Sluice Valve PN 1.0 Manually operated	each	1,26,540.00
4461	80 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	5,050.00
4462	100 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	6,425.00
4463	125 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	9,490.00
4464	150 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	10,360.00
4465	200 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	15,560.00
4466	250 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	24,220.00
4467	300 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	30,470.00
4468	350 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	49,400.00

Code No	Description	Unit	Rate Rs.
	operated		
4469	400 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	63,570.00
4470	450 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	81,630.00
4471	500 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	1,07,370.00
4472	600 mm dia DI Resilient Seated Sluice Valve PN 1.6 Manually operated	each	1,58,170.00
4481	700 mm dia DI Resilient Seated Sluice Valve PN 1.6 with gear	each	4,29,700.00
4482	800 mm dia DI Resilient Seated Sluice Valve PN 1.6 with gear	each	6,08,000.00
4483	900 mm dia DI Resilient Seated Sluice Valve PN 1.6 with gear	each	8,42,200.00
4484	1000 mm dia DI Resilient Seated Sluice Valve PN 1.6 with gear	each	11,04,150.00
4499	80mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	1,69,200.00
4500	100mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	1,90,000.00
4501	125mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	2,16,000.00
4502	150mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	2,43,000.00
4503	200mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	2,84,000.00
4504	250mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	3,53,500.00
4505	300mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	4,39,300.00
4506	350mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	4,73,500.00
4507	400mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	6,14,000.00
4508	450mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	6,51,000.00
4509	500mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	8,78,000.00
4510	600mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	11,40,000.00
4511	700mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	18,90,000.00
4512	800mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	24,47,000.00
4513	900mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	33,93,500.00
4514	1000mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class	Each	35,24,000.00

Code No	Description	Unit	Rate Rs.
4521	100mm diameter D/F DI Pressure Reducing Valve	Each	39,490.00
4522	150mm diameter D/F DI Pressure Reducing Valve	Each	53,080.00
4523	200mm diameter D/F DI Pressure Reducing Valve	Each	75,290.00
4524	250mm diameter D/F DI Pressure Reducing Valve	Each	1,08,170.00
4525	300mm diameter D/F DI Pressure Reducing Valve	Each	1,41,380.00
4526	350mm diameter D/F DI Pressure Reducing Valve	Each	2,32,920.00
4527	400mm diameter D/F DI Pressure Reducing Valve	Each	2,97,920.00
4581	Spur Gear box for operating valve size 80mm to 150mm	each	7,042.00
4582	Spur Gear box for operating valve size 200mm to 300mm	each	10,560.00
4583	Spur Gear box for operating valve size 350mm to 600mm	each	18,310.00
4584	Spur Gear box for operating valve size 700mm to 900mm	each	25,200.00
4585	Spur Gear box for operating valve 1000mm to 1200mm	each	42,250.00
4586	Electrical Actuator for operating valve of size 80mm to 150mm	each	39,490.00
4587	Electrical Actuator for operating valve of size 200mm to 300mm	each	52,860.00
4588	Electrical Actuator for operating valve of size 350mm to 600mm	each	76,380.00
4589	Electrical Actuator for operating valve of size 700mm to 900mm	each	1,19,280.00
4590	Electrical Actuator for operating valve of size 1000mm to 1200mm	each	1,69,000.00
4591	810 cum per hour Air Blowers coupled with suitable capacity 415V 3 phase 50Hz AC induction motor complete with base frame, suction air filter, silencer, pressure relief valve, delivery non return valve and with all required accessories	Set	2,12,610.00
4592	1600 cum per hour Air Blowers coupled with suitable capacity 415V 3 phase 50Hz AC induction motor complete with base frame, suction air filter, silencer, pressure relief valve, delivery non return valve and with all required accessories	Set	3,27,490.00
4593	2200 cum per hour Air Blowers coupled with suitable capacity 415V 3 phase 50Hz AC induction motor complete with base frame, suction air filter, silencer, pressure relief valve, delivery non return valve and with all required accessories	Set	3,56,700.00
4613	80 mm dia DI Resilient Seated Wafer Type Butterfly Valve Class PN 1.6	each	5,925.00
4614	100 mm dia DI Resilient Seated Wafer Type Butterfly Valve Class PN 1.6	each	7,200.00
4615	125 mm dia DI Resilient Seated Wafer Type Butterfly Valve Class PN 1.6	each	12,450.00
4616	150 mm dia DI Resilient Seated Wafer Type Butterfly Valve Class PN 1.6	each	13,500.00
4617	200 mm dia DI Resilient Seated Wafer Type Butterfly Valve Class PN 1.6	each	20,600.00
4618	250 mm dia DI Resilient Seated Wafer Type Butterfly Valve Class PN 1.6	each	26,750.00
4619	300 mm dia DI Resilient Seated Wafer Type Butterfly Valve Class PN 1.6	each	29,600.00

Code No	Description	Unit	Rate Rs.
4641	80 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	5,366.00
4642	100 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	6,503.00
4643	125 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	8,535.00
4644	150 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	10,160.00
4645	200 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	16,520.00
4646	250 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	21,130.00
4647	300 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	29,790.00
4648	350 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	33,040.00
4649	400 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	46,310.00
4650	450 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	58,120.00
4651	500 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	66,080.00
4652	600 mm dia DI Resilient Seated Butterfly Valve PN 1.0	each	80,820.00
4661	80 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	7,289.00
4662	100 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	9,954.00
4663	125 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	12,480.00
4664	150 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	14,250.00
4665	200 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	18,060.00
4666	250 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	23,300.00
4667	300 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	31,410.00
4668	350 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	44,280.00
4669	400 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	61,870.00
4670	450 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	76,170.00
4671	500 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	1,07,630.00
4672	600 mm dia DI Resilient Seated Butterfly Valve PN 1.6	each	1,38,100.00
4721	80 mm dia DI dual plate check valve PN 1.0	each	3,509.00
4722	100 mm dia DI dual plate check valve PN 1.0	each	4,333.00
4723	125 mm dia DI dual plate check valve PN 1.0	each	5,448.00
4724	150 mm dia DI dual plate check valve PN 1.0	each	6,771.00
4725	200 mm dia DI dual plate check valve PN 1.0	each	12,190.00
4726	250 mm dia DI dual plate check valve PN 1.0	each	16,520.00
4727	300 mm dia DI dual plate check valve PN 1.0	each	20,310.00
4728	350 mm dia DI dual plate check valve PN 1.0	each	31,150.00
4729	400 mm dia DI dual plate check valve PN 1.0	each	41,170.00
4730	450 mm dia DI dual plate check valve PN 1.0	each	44,150.00
4731	500 mm dia DI dual plate check valve PN 1.0	each	45,770.00
4732	600 mm dia DI dual plate check valve PN 1.0	each	74,480.00
4733	700 mm dia DI dual plate check valve PN 1.0	each	1,98,250.00
4734	750 mm dia DI dual plate check valve PN 1.0	each	2,30,750.00

Code No	Description	Unit	Rate Rs.
4735	800 mm dia DI dual plate check valve PN 1.0	each	2,43,750.00
4736	900 mm dia DI dual plate check valve PN 1.0	each	3,17,850.00
4737	1000 mm dia DI dual plate check valve PN 1.0	each	3,90,000.00
4761	100mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.0 rating	Each	3,562.00
4762	150mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.0 rating	Each	5,785.00
4763	200mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.0 rating	Each	9,028.00
4764	250mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.0 rating	Each	14,880.00
4771	100mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.6 rating	Each	3,918.00
4772	150mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.6 rating	Each	6,364.00
4773	200mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.6 rating	Each	9,931.00
4774	250mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.6 rating	Each	16,370.00
4791	50 mm dia DI Kinetic Air Valve	each	5,850.00
4792	80 mm dia DI Kinetic Air Valve	each	6,500.00
4793	100 mm dia DI Kinetic Air Valve	each	9,750.00
4794	150 mm dia DI Kinetic Air Valve	each	21,670.00
4795	200 mm dia DI Kinetic Air Valve	each	23,350.00
4801	80 mm dia DI Duckfoot Bend	each	1,219.00
4802	100 mm dia DI Duckfoot Bend	each	1,497.00
4803	125 mm dia DI Duckfoot Bend	each	2,059.00
4804	150 mm dia DI Duckfoot Bend	each	2,719.00
4805	200 mm dia DI Duckfoot Bend	each	4,309.00
4806	250 mm dia DI Duckfoot Bend	each	7,500.00
4807	300 mm dia DI Duckfoot Bend	each	9,550.00
4808	350 mm dia DI Duckfoot Bend	each	15,380.00
4809	400 mm dia DI Duckfoot Bend	each	20,630.00
4821	80 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	5,275.00
4822	100 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	7,050.00
4823	125 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	10,180.00
4824	150 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	12,580.00
4825	200 mm dia DI Resilient Seated Swing type Non Return Valve Class	each	21,650.00

Code No	Description	Unit	Rate Rs.
	PN 1.6		
4826	250 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	33,150.00
4827	300 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	47,150.00
4828	350 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	76,200.00
4829	400 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	78,150.00
4830	450 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	1,27,350.00
4831	500 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	1,52,030.00
4832	600 mm dia DI Resilient Seated Swing type Non Return Valve Class PN 1.6	each	2,00,780.00
4841	40 mm dia DI, DF Temper proof Kinetic Air Valve Class PN 1.6	each	7,500.00
4842	50 mm dia DI, DF Temper proof Kinetic Air Valve Class PN 1.6	each	7,750.00
4843	80 mm dia DI, DF Temper proof Kinetic Air Valve Class PN 1.6	each	9,050.00
4844	100 mm dia DI, DF Temper proof Kinetic Air Valve Class PN 1.6	each	13,600.00
4845	150 mm dia DI, DF Temper proof Kinetic Air Valve Class PN 1.6	each	23,600.00
4846	200 mm dia DI, DF Temper proof Kinetic Air Valve Class PN 1.6	each	32,500.00
4851	50 mm dia DI, DF Single chamber 3 functions Kinetic Air Valve Class PN 1.6	each	10,500.00
4852	80 mm dia DI, DF Single chamber 3 functions Kinetic Air Valve Class PN 1.6	each	13,550.00
4853	100 mm dia DI, DF Single chamber 3 functions Kinetic Air Valve Class PN 1.6	each	18,200.00
4854	150 mm dia DI, DF Single chamber 3 functions Kinetic Air Valve Class PN 1.6	each	29,300.00
4855	200 mm dia DI, DF Single chamber 3 functions Kinetic Air Valve Class PN 1.6	each	36,800.00
4861	80 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	65,000.00
4862	100 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	71,900.00
4863	125 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	85,500.00
4864	150 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	93,000.00
4865	200 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	1,08,880.00
4866	250 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	1,56,800.00
4867	300 mm dia DI DF Diaphragm Type Flow Control/ Pressure	each	2,18,000.00

Code No	Description	Unit	Rate Rs.
	Reducing Valve Pilot operated suitable for scada (PN 1.6)		
4868	350 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	2,98,000.00
4869	400 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	5,29,100.00
4870	450 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	7,31,000.00
4871	500 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	8,79,130.00
4872	600 mm dia DI DF Diaphragm Type Flow Control/ Pressure Reducing Valve Pilot operated suitable for scada (PN 1.6)	each	12,87,600.00
4878	40 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for scada (PN 1.6)	each	1,18,200.00
4879	50 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for scada (PN 1.6)	each	1,20,200.00
4880	65 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for scada (PN 1.6)	each	1,27,000.00
4881	80 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for scada (PN 1.6)	each	1,35,250.00
4882	100 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for scada (PN 1.6)	each	1,40,750.00
4883	125 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for scada (PN 1.6)	each	1,42,500.00
4884	150 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for scada (PN 1.6)	each	1,61,550.00
4885	200 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for scada (PN 1.6)	each	1,86,150.00
4886	250 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for scada (PN 1.6)	each	2,47,250.00
4887	300 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for scada (PN 1.6)	each	3,38,300.00
4888	350 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for scada (PN 1.6)	each	4,46,750.00
4889	400 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for scada (PN 1.6)	each	5,19,650.00
4890	450 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for scada (PN 1.6)	each	7,29,000.00
4891	500 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for scada (PN 1.6)	each	8,45,000.00
4892	600 mm dia DI DF Diaphragm Type Flow Control Valve With Electrical Actuator suitable for scada (PN 1.6)	each	11,64,000.00
4901	40 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for scada (Class PN 1.6)	each	72,750.00
4902	50 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for scada (Class PN 1.6)	each	72,750.00
4903	65 mm dia DI DF Solenoid operated Diaphragm Type Flow Control	each	81,500.00

Code No	Description	Unit	Rate Rs.
	Valve suitable for scada (Class PN 1.6)		
4904	80 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for scada (Class PN 1.6)	each	87,500.00
4905	100 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for scada (Class PN 1.6)	each	93,500.00
4906	125 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for scada (Class PN 1.6)	each	97,000.00
4907	150 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for scada (Class PN 1.6)	each	1,02,300.00
4908	200 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for scada (Class PN 1.6)	each	1,22,500.00
4909	250 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for scada (Class PN 1.6)	each	1,90,800.00
4910	300 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for scada (Class PN 1.6)	each	2,52,800.00
4911	350 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for scada (Class PN 1.6)	each	3,44,500.00
4912	400 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for scada (Class PN 1.6)	each	4,19,000.00
4913	450 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for scada (Class PN 1.6)	each	5,20,550.00
4914	500 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for scada (Class PN 1.6)	each	7,41,800.00
4915	600 mm dia DI DF Solenoid operated Diaphragm Type Flow Control Valve suitable for scada (Class PN 1.6)	each	10,25,600.00
5011	Cleaning of external surface of MS pipe with sand blasting and or abrasive blasting at facory/ site complete	sqm	125.00
5012	Cleaning of internal surface of MS pipe with sand blasting and or abrasive blasting at facory/ site complete	sqm	135.00
5013	3 LPE (3 Layer Polyethylene) Coating to the External surface of MS pipes including field joint portion	sqm	600.00
5014	Two pack liquid epoxy (approved for drinking water) lining to internal surface of M.S. Pipe	sqm	225.00
5015	Applying 100% Solids, Rigid, DTM Polyurethane Coating (approved for drinking water) to internal surface of M.S. Pipe	sqm	250.00
5016	Cement mortar (1:1) lining to internal surface of M.S. Pipes upto 700 mm dia with mechanical devices	sqm	225.00
5017	Cement mortar (1:1) lining to internal surface of M.S. Pipes upto above mm dia with mechanical devices	sqm	250.00
5021	100mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	758.00
5022	150mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	1,150.00
5023	200mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	1,500.00
5024	250mm dia DI K-7 grade S&S pipe with internal high alumina	metre	1,977.00

Code No	Description	Unit	Rate Rs.
	cement mortar lining conforming to I.S. 8329		
5025	300mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	2,499.00
5026	350mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	3,115.00
5027	400mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	3,731.00
5028	450mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	4,394.00
5029	500mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	5,172.00
5030	600mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	6,831.00
5031	700mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	9,244.00
5032	800mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	12,170.00
5033	900mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	14,780.00
5034	1000mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	17,640.00
5035	1100mm dia DI K-7 grade S&S pipe with internal high alumina cement mortar lining conforming to I.S. 8329	metre	23,110.00
5041	100mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	1,510.00
5042	150mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	2,146.00
5043	200mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	2,727.00
5044	250mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	3,667.00
5045	300mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	4,667.00
5046	350mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	5,750.00
5047	400mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	6,989.00
5048	450mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	8,349.00
5049	500mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	9,960.00
5050	600mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	13,020.00
5051	700mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	17,170.00

Code No	Description	Unit	Rate Rs.
5052	800mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	18,890.00
5053	900mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	20,680.00
5054	1000mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	25,250.00
5055	1100mm dia DI K-9 Double Chambered Restrained Joint pipe conforming to I.S. 8329	metre	29,780.00
5081	SS 304 32mm dia pipe with 1.5mm thickness	metre	400.00
5082	1000 mm wide Auto-glow Aluminium extruded strips	each	907.00
5083	Rollar Blinds of 38mm round Aluminium channel with fabric & telting with all necessary fixtures and fitting	sqm	1,400.00
5084	Vertical Blinds of 100mm regular fabric with powder coated aluminium channel with telting PVC chain & bottom weight plate with all necessary fixtures and fitting	sqm	638.00
5085	1000 gsm synthetic wool 50mm thick	sqm	312.00
5086	100% stain proof carpet 800+ gsm for acoustic purpose	sqm	885.00
5087	5mm thick foam underlay	sqm	80.00
5088	Auditorium chair as approved	each	3,745.00
5089	1.0mm thick laminates	sqm	505.00
5090	Fabric wrapped Compressed polyester fibre nonwoven 9mm panels	sqm	1,977.00
5091	Acoustical Panelling made from 12mm thick Agro wood strips of 50, 75, 100 mm	sqm	3,006.00
5092	Gypsum Plain panels	sqm	477.00
5093	Compressed polyester fibre nonwoven 9mm panels	sqm	1,457.00
5094	Rigitone 8/18 perforated panels	sqm	291.00
5095	Fabric wrapped Compressed polyester fibre nonwoven 9 mm panels	sqm	2,667.00
5096	Wood- wool board 20mm panels	sqm	1,854.00
5097	Gypsum plain 12mm panels	sqm	1,063.00
5098	12mm wp Ply wood & 1.5mm laminate panels	sqm	3,017.00
5099	Acoustical Doors along with 150 x 150 mm teak wood frame, doors made from 50mm Teak wood frame 600 x600 c to c filled with 1000 Gsm synthetic wool 50mm thick and 3mm Tecsound from both sides, 12mm waterproof ply & veneer from both sides	each	15,440.00
5100	18mm Teakwood planks 100 x 800 having tongue & grove	sqm	4,600.00
5101	Hanger rod 0.5 mm thick, 1m long	each	9.32
5102	Adjustment clip	each	4.24
5103	Soffit cleat	each	2.54
5111	Main T ceiling sections 24x38x0.3 mm (in 3 m lenght)	metre	175.00
5112	Perimeter wall angle 21x21 mm (in 3 m lenght)	metre	109.00
5113	Intermediate cross T-section 24x25x0.30mm (in 3 m lenght)	metre	104.00
5114	Ceiling sections 22x37x1.6mm	metre	44.90

Code No	Description	Unit	Rate Rs.
5115	Perimetre channel 45x15x0.9mm	metre	27.10
5116	Intermediate channel 25x25x0.55	metre	46.60
5117	Strap hanger (Ceiling angle) 25x25x0.55mm	metre	17.80
5118	Connecting clips 2.64mm dia 230mm long	each	5.08
5119	Nuts and bolts 6 mm dia (25mm)	Nos	17.80
5120	Soffit cleat	each	3.39
5121	Drive all screws 25 mm long	100 Nos	44.90
5122	Joint filler	kg	22.00
5123	Joint finisher	kg	24.60
5124	Joint tape	roll	125.00
5125	Galvanised Steel main Tee ceiling section Size	metre	126.00
5126	Galvanised Steel perimeter wall Angle Size 24x24x0.40 mm	metre	107.00
5127	Galvanised Steel intermediate cross T section Size 24 x 32 x 0.33 mm	metre	107.00
5129	Hanger rod 6mm thick G.I. fully threaded rods	metre	26.00
5130	Adjuster Size 80x25x2 mm	each	15.00
5131	12 mm thick tegular edge Glass Fibre Reinforced Gypsum false ceiling tiles	sqm	814.00
5132	6mm thick calcium silicate perforated ceiling tiles	sqm	356.00
5133	8mm thick calcium silicate perforated ceiling tiles	sqm	454.00
5134	6 mm thick calcium silicate board	sqm	207.00
5135	8 mm thick calcium silicate board	sqm	276.00
5140	GI in Plain Tegular edge Global white colour 0.5 mm thick with 8 mm drop, having galvanizing of 100 gms/sqm (boths ides inclusive) and electro statically polyester powder coated of thickness 60 microns (minimum).	sqm	784.00
5141	GI perforated Tegular edge global white colour 0.5 mm thick with 8 mm drop having galvanizing of 100 gms/ sqm (both sides inclusive) and 20% perforation area with 1.8 mm dia holes and having NRC (Noise Reduction Coefficient) of 0.5, electro statically polyester powder coated of thickness 60 microns (minimum)	sqm	847.00
5145	15mm thick Mineral Fibre Anti Bacterial tiles with Bioguard (Bevelled Tegular) EDGE TILES WITH 15 mm Exposed GRID. The tiles should have Humidity Resistance (RH) of 95% Light Reflectance 90%, Thermal Conductivity K =0.052-0.057 w/m K, Colour White with Anti Microbial coating on the face of the tile	sqm	726.00
5146	16mm thick Mineral Fibre Acoustical tiles with Bioguard (Bevelled Tegular) EDGE TILES WITH 15 mm Exposed GRID. The tiles should have Humidity Resistance (RH) of 99% NRC 0.5, Light Reflectance _>85%, Thermal Conductivity K =0.052-0.057 w/m K, Colour White	sqm	666.00
5147	300C Aluminium Panel with perforation of 2mm diameter and 5mm centre to centre to give 15% open area with Non woven textile 300 mm wide X 30 mm deep X 0.7 mm thick	metre	864.00

Code No	Description	Unit	Rate Rs.
5148	Perforated Metal Ceiling Tile 600mm x 600mm x 0.7mm thick aluminium alloy 3105 with beveled edge of 4.15mm width and height of 32mm and perforated to 1.5mm dia with open area of 23%.	each	780.00
5149	Un-perforated Metal Tile of 600mm x 600mm x 0.7mm thick aluminium alloy 3105 with beveled edge of 4.15mm width height of 32mm.	each	620.00
5150	Antibacterial Un-perforated Metal Tile of 600mm x 600mm x 0.7mm thick aluminium alloy 3105 with beveled edge of 4.15mm width height of 32mm.	each	865.00
5151	Perforated Metal Tile 600mm x 600mm x 0.5mm thick Galvanised Iron with beveled edge of 4.15mm width height of 32mm, perforated to 1.5mm dia with open area of 23%.	each	660.00
5152	Un-perforated Metal Tile 600mm x 600mm x 0.5mm thick Galvanised Iron with beveled edge of 4.15mm width height of 32mm.	each	593.00
5153	Torsion spring Plank 600mm x 1200mm x 0.7mm thick Aluminium Alloy 3105 perforated to 1.5mm dia and 22% area.	each	1,950.00
5154	Torsion spring Plank 600mm x 600mm x 0.7mm thick Aluminium Alloy 3105 perforated to 1.5mm dia and 22% area.	each	890.00
5155	Torsion spring Plank 600mm x 1200mm x 0.6mm thick GALVANISED IRON perforated to 1.5mm dia and 22% area.	each	1,400.00
5175	Pre-painted steel T Section 24x27x0.4mm	metre	38.00
5176	Pre-painted steel T Section 24x25x0.4mm	metre	35.00
5177	Pre-painted steel Flat Section 24x0.6mm	metre	14.00
5178	GI Stud section 48x35x0.55mm	metre	45.00
5179	GI track section 50x35x0.55mm	metre	48.00
5180	Prepainted steel L Section 19x19x0.4mm	metre	56.70
5181	Wooden screws with plastic rawl plugs 35mm x8mm	each	107.00
5182	G.I. Main Runner 15mm x 32mm x 0.33 mm thick	metre	117.00
5183	G.I. Cross Tee 15mm x 32mm x 0.33 mm thick	metre	74.00
5184	G.I. Cross Tee 15mm x 32mm x 0.33 mm thick	metre	37.00
5185	G.I. Angle 24mm x 24mm x 0.40 mm thick	metre	90.00
5186	Suspension Accessories	each	12.00
5187	Galvanised iron Hanger rod 6mm dia fully threaded upto 1000mm length	each	27.00
5188	Galvanised iron L-Shape level Adjuster of size 85x25x25x2mm	each	12.70
5191	300C Aluminium Carrier	metre	360.00
5192	M6 Threaded Rod with Nuts	each	76.30
5193	Suspension Clip	each	10.00
5194	Edge Profile	metre	90.00
5195	CLIP IN PROFILE	metre	100.00
5196	CLIP IN PROFILE CONNECTOR	each	12.50

Code No	Description	Unit	Rate Rs.
5197	HOLD ON CLAMP WITH CLIPS	each	45.00
5198	RAIL CROSS CONNECTOR	each	35.00
5199	M6 Threaded Rods	each	44.10
5200	Main Tee 3600mm for Torsion System	metre	90.00
5201	Cross Tee 1200mm for Torsion System	each	75.00
5202	Torsion Springs	each	42.40
5203	Torsion Spring Brackets	each	42.00
5211	Earthen pots 8" ht	each	15.30
5212	8mm thick laminated floor	sqm	1,424.00
5213	89 mm wide having both side laminations	metre	534.00
5214	1 mm thich PVC sheet confirming to IS 3462	sqm	320.00
5215	1.5 mm thich PVC sheet confirming to IS 3462	sqm	378.00
5216	2 mm thich PVC sheet confirming to IS 3462	sqm	427.00
5217	Rubber adhesive	kg	153.00
5218	Stainless steel (Grade-304)hollow section round/square tubes	kg	212.00
5219	Stainless steel bolts/square bar and plates	kg	102.00
5221	Alumium grill (size 7.5mm x 6mm and opening of size 102mm x 99mm)	sqm	534.00
5222	Aluminium H & Y section for fixing aluminium grill	metre	44.90
5223	Anodising AC 15 of aluminium sections	sqm	401.00
5224	Powder coating of aluminium sections	sqm	445.00
5225	Polyester Powder coating of aluminium sections	sqm	534.00
5226	Drapery rod (20 gauge, 25.4 mm diameter) made of MS with PVC coating	metre	160.00
5227	Bracket for Drapery rod 25.4mm dia made of MS with PVC coating/ painting	each	9.00
5228	Curtain rings for Drapery rod 25.4mm dia made of MS with PVC coating/ painted	each	2.12
5229	Sun control film	sqm	267.00
5231	Multi Rib Proofing /Cladding Sheet thickness 0.50mm TCT(Total Coated thickness) high tensile Zinc aluminum alloy	sqm	343.00
5232	Multi Rib Proofing /Cladding Sheet thickness 0.60mm TCT(Total Coated thickness) high tensile Zinc aluminum alloy	sqm	395.00
5233	Multi Rib Proofing /Cladding Sheet thickness 0.80mm TCT(Total Coated thickness) high tensile Zinc aluminum alloy	sqm	498.00
5234	Prefabricated Insulated PPGL sandwich panels for wall/ roof of total thickness 55mm exclusive of crest height of top corrugation made of 0.50mm (+/-0.04mm) thick PPGL (Pre Painted Galvalume Sheet with AZ coating) metal sheet on both sides of rigid polyurethane insulation.	sqm	1,263.00
5235	Prefabricated Insulated PPGL sandwich panels for wall/ roof of total thickness 65mm exclusive of crest height of top corrugation made of	sqm	1,263.00

Code No	Description	Unit	Rate Rs.
	0.50mm (+/-0.04mm) thick PPGL (Pre Painted Galvalume Sheet with AZ coating) metal sheet on both sides of rigid polyurethane insulation.		
5236	Prefabricated Insulated PPGL sandwich panels for wall/ roof of total thickness 105mm exclusive of crest height of top corrugation made of 0.50mm (+/-0.04mm) thick PPGL (Pre Painted Galvalume Sheet with AZ coating) metal sheet on both sides of rigid polyurethane insulation.	sqm	1,428.00
5237	Factory-readymade structural reinforced prefabricated insulated cement wall panel of thickness 65mm made of 6mm (+/-0.6mm) thick asbestos-free fiber cement sheet/ cement bonded particle board as per is:14276:1995 on both sides of rigid PUR insulation.	sqm	1,263.00
5238	Factory-readymade structural reinforced prefabricated insulated cement wall panel of thickness 75mm made of 6mm (+/-0.6mm) thick asbestos-free fiber cement sheet/ cement bonded particle board as per is:14276:1995 on both sides of rigid PUR insulation.	sqm	1,326.00
5239	Factory-readymade structural reinforced prefabricated insulated cement wall panel of thickness 65mm made of min 4mm (+/- 0.5mm) thick laminated wood based medium density fiber board sheet on both sides of rigid PUR insulation.	sqm	1,326.00
5240	Factory-readymade structural reinforced prefabricated insulated cement wall panel of thickness 75mm made of min 4mm (+/- 0.5mm) thick laminated wood based medium density fiber board sheet on both sides of rigid PUR insulation.	sqm	1,398.00
5241	Prefabricated Insulated PPGL sandwich panels for door, wall and roof of thickness 32mm made of 0.50mm (+/-0.04mm) thick pre-coated PPGL (Pre Painted Galvalume Sheet with AZ coating) metal sheet on both sides of rigid PUR insulation.	sqm	1,742.00
5242	Prefabricated Insulated PPGL sandwich panels for door, wall and roof of thickness 50mm made of 0.50mm (+/-0.04mm) thick pre-coated PPGL (Pre Painted Galvalume Sheet with AZ coating) metal sheet on both sides of rigid PUR insulation.	sqm	1,869.00
5243	U-track for mounting panels with floor made from minimum 1.15 mm thick PPGL sheet with flange height of minimum 35 mm and width as per thickness of panel used.	metre	169.00
5244	Corner angle flashings of equal shape for covering various corners and open sides of panels made from 0.5mm thick pre-coated PPGL sheet in size 50x50mm.	metre	127.00
5245	Corner angle flashings of equal shape for covering various corners and open sides of panels made from 0.5mm thick pre-coated PPGL sheet in size 100x100mm.	metre	169.00
5246	Ridge flashings of roof panels made from 0.5mm thick pre-coated PPGL sheet in size 200x200mm.	metre	169.00
5247	Front side flashing for roof panels (corrugated trapazodial shape) shall be made from 0.5mm thick pre-coated PPGL sheet.	metre	169.00
5248	End cap for closing ends of roof panels made from 0.5mm thick PPGL sheet.	metre	127.00
5249	Door/ Window Frame made out of min 1.15mm thick press steel sheet.	metre	169.00

Code No	Description	Unit	Rate Rs.
5250	U or L shape panel end caps suitable for thickness of panel used, with 30mm flange. It should be made from 0.5mm Pre coated PPGL sheet.	metre	70.00
5251	6mm thick Cement Bonded Particle Board (as per IS 14276)	sqm	170.00
5252	10mm thick Cement Bonded Particle Board (as per IS 14276)	sqm	750.00
5253	10mm thick Factory Laminated Cement Bonded Particle Board	sqm	1,020.00
5254	Bath room / Toilet door shutter with 16mm Factory Laminated Cement Bonded Particle Board BISON Lam (IS 14276) with all-round U lipping of PPS section of size 12mm X 18mmX 12mmX0.6mm necessary hardware 12mm dia X200mm long aluminum aldop, 2 nos 125mm long handles and 3 no 304 grade Patee Hinges	sqm	1,690.00
5255	CC M-20 Grade Solid Rectangular Block mechanically casted of size 400x200x200mm, 400x200x150mm, 400x200x100, 225x200x100	cum	5,161.00
5256	CC M-20 Grade Hollow Rectangular Block mechanically casted of size 400x200x200mm, 400x200x100	cum	4,000.00
5261	Needle punched and mechanically bonded non-woven Geotextile indigenously manufactured from high quality Polypropylene stable fibres	sqm	100.00
5421	80 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	4,286.00
5422	100 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	5,586.00
5423	125 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	9,015.00
5424	150 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	9,321.00
5425	200 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	14,000.00
5426	250 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	21,800.00
5427	300 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	27,010.00
5428	350 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	41,170.00
5429	400 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	52,980.00
5430	450 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	66,790.00
5431	500 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	87,110.00
5432	600 mm dia DI Resilient Seated Sluice Valve PN 1.0 Electrically operated	each	1,26,540.00
5441	80 mm dia DI Resilient Seated Sluice Valve PN 1.6 Electrically operated	each	5,050.00

Code No	Description	Unit	Rate Rs.
5442	100 mm dia DI Resilient Seated Sluice Valve PN 1.6 Electrically operated	each	6,425.00
5443	125 mm dia DI Resilient Seated Sluice Valve PN 1.6 Electrically operated	each	9,800.00
5444	150 mm dia DI Resilient Seated Sluice Valve PN 1.6 Electrically operated	each	10,900.00
5445	200 mm dia DI Resilient Seated Sluice Valve PN 1.6 Electrically operated	each	17,000.00
5446	250 mm dia DI Resilient Seated Sluice Valve PN 1.6 Electrically operated	each	28,700.00
5447	300 mm dia DI Resilient Seated Sluice Valve PN 1.6 Electrically operated	each	36,550.00
5448	350 mm dia DI Resilient Seated Sluice Valve PN 1.6 Electrically operated	each	69,000.00
5449	400 mm dia DI Resilient Seated Sluice Valve PN 1.6 Electrically operated	each	90,300.00
5450	450 mm dia DI Resilient Seated Sluice Valve PN 1.6 Electrically operated	each	1,20,750.00
5451	500 mm dia DI Resilient Seated Sluice Valve PN 1.6 Electrically operated	each	1,55,700.00
5452	600 mm dia DI Resilient Seated Sluice Valve PN 1.6 Electrically operated	each	2,29,300.00
5461	100 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	10,000.00
5462	150 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	20,000.00
5463	200 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	30,000.00
5464	250 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	40,000.00
5465	300 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	50,000.00
5466	350 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	60,000.00
5467	400 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	70,000.00
5468	450 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	80,000.00
5469	500 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	90,000.00
5470	600 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	1,00,000.00
5471	700 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated	each	1,10,000.00
5472	800 mm dia DI D/F resilient seated short body Butterfly valves Class	each	1,20,000.00

Code No	Description	Unit	Rate Rs.
	PN 1.6, Manually Operated.		
5473	900 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated.	each	1,30,000.00
5474	1000 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually Operated.	each	1,40,000.00
5481	100 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	12,000.00
5482	150 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	22,000.00
5483	200 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	32,000.00
5484	250 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	42,000.00
5485	300 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	53,000.00
5486	350 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	63,000.00
5487	400 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	73,000.00
5488	450 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	83,000.00
5489	500 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	93,000.00
5490	600 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	1,04,000.00
5491	700 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear	each	1,14,000.00
5492	800 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear.	each	1,24,000.00
5493	900 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear.	each	1,34,000.00
5494	1000 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Manually operated with gear.	each	1,44,000.00
5501	700 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.0, Motorised Operated	each	1,10,000.00
5502	800 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.0, Motorised Operated	each	1,20,000.00
5503	900 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.0, Motorised Operated	each	1,30,000.00
5504	1000 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.0, Motorised Operated	each	1,40,000.00
5511	700 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Motorised Operated	each	1,10,000.00
5512	800 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Motorised Operated	each	1,20,000.00

Code No	Description	Unit	Rate Rs.
5513	900 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Motorised Operated	each	1,30,000.00
5514	1000 mm dia DI D/F resilient seated short body Butterfly valves Class PN 1.6, Motorised Operated	each	1,40,000.00
5521	80 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	7,289.00
5522	100 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	7,350.00
5523	125 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	12,480.00
5524	150 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	12,400.00
5525	200 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	19,000.00
5526	250 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	29,400.00
5527	300 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	31,410.00
5528	350 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	44,280.00
5529	400 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	61,870.00
5530	450 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	76,170.00
5531	500 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	1,07,630.00
5532	600 mm dia DI Resilient Seated Dual Plate check Valve Class PN 1.6	each	1,02,000.00
5541	80 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	4,100.00
5542	100 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	4,475.00
5543	125 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	5,200.00
5544	150 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	6,175.00
5545	200 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	7,963.00
5546	250 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	10,124.00
5547	300 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	11,000.00
5548	350 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	13,500.00
5549	400 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	19,800.00

Code No	Description	Unit	Rate Rs.
5550	450 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	20,584.00
5551	500 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	28,709.00
5552	600 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	37,424.00
5553	700 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	55,000.00
5554	800 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	70,000.00
5555	900 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	84,800.00
5556	1000 mm dia Stain less steel AISI 304 Expansion bellows of 10/16 bar rating	each	1,08,150.00
5581	Placing HDPE pipe in place of old damaged RCC/CI/PVC by Pneumatic Pipe Bursting process including making of bursting tool entry pits and all related civil works - Upto 200 mm	metre	8,780.00
5582	Placing HDPE pipe in place of old damaged RCC/CI/PVC by Pneumatic Pipe Bursting process including making of bursting tool entry pits and all related civil works - 225-250 mm	metre	9,640.00
5583	Placing HDPE pipe in place of old damaged RCC/CI/PVC by Pneumatic Pipe Bursting process including making of bursting tool entry pits and all related civil works - 300-350 mm	metre	10,200.00
5584	Placing HDPE pipe in place of old damaged RCC/CI/PVC by Pneumatic Pipe Bursting process including making of bursting tool entry pits and all related civil works - 350-400 mm	metre	13,500.00
5585	Placing HDPE pipe in place of old damaged RCC/CI/PVC by Pneumatic Pipe Bursting process including making of bursting tool entry pits and all related civil works - 450-500 mm	metre	17,300.00
5586	Placing HDPE pipe in place of old damaged RCC/CI/PVC by Pneumatic Pipe Bursting process including making of bursting tool entry pits and all related civil works - 600-700 mm	metre	18,300.00
8888	Percentage	%	1.00
9999	LS Provision	LS	1.00

D – HORTICULTURE SUPPLY ITEMS

Note: These basic prices/rates are inclusive of material price, freight, loading & unloading, GST, contractor's profit but exclusive of over heads etc.

Code No	Description	Unit	Rate Rs.
8001	Supply of Cement pot / Plastic pot 300 mm size at site/ store i/c all complete	Each	150.00
8002	Supply of Cement pot / Plastic pot 350 mm size at site/ store i/c all complete	Each	216.00
8003	Supply of Cement pot / Plastic pot 375 mm size at site/ store i/c all complete	Each	264.00
8004	Supply of Cement pot / Plastic pot 450 mm size at site/ store i/c all complete	Each	465.00
8005	Supply of Cement pot / Plastic pot 525 mm size at site/ store i/c all complete	Each	818.00
8006	Supply of Earthen pot 150 mm size at site/ store i/c all complete	Each	18.00
8007	Supply of Earthen pot 225 mm size at site/ store i/c all complete	Each	30.00
8008	Supply of Earthen pot 300 mm size at site/ store i/c all complete	Each	43.00
8009	Supply of Earthen pot 350 mm size at site/ store i/c all complete	Each	125.00
8010	Supply of Earthen pot 225 mm size(Kundi shape) at site/ store i/c all complete	Each	30.00
8011	Supply of Earthen pot 300 mm size(Kundi shape) at site/ store i/c all complete	Each	45.00
8012	Supply of Earthen pot 350 mm size(Kundi shape) at site/ store i/c all complete	Each	125.00
8013	Supply of 300 mm size Hand Lawn Mower(Roller Type) at site/ store i/c all complete	Each	4,320.00
8014	Supply of 350 mm size Hand Lawn Mower(Roller Type) at site/ store i/c all complete	Each	4,800.00
8015	Supply of 300 mm Electric Lawn Mower at site/ store i/c all complete	Each	18,000.00
8016	Supply of 350 mm Electric Lawn Mower at site/ store i/c all complete	Each	20,000.00
8017	Supply of 400 mm Electric Lawn Mower at site/ store i/c all complete	Each	22,000.00
8018	Supply of 450 mm Electric Lawn Mower at site/ store i/c all complete	Each	25,000.00
8019	Supply of 500 mm Electric Lawn Mower at site/ store i/c all complete	Each	28,000.00
8020	Supply of Electric Lawn Mower sarfex 16 EL at site/ store i/c all complete	Each	30,000.00
8021	Supply of Electric Lawn Mower sarfex 18 EL at site/ store i/c all complete	Each	36,000.00
8022	Supply of Electric Lawn Mower sarfex 21 EL at site/ store i/c all complete	Each	40,000.00
8023	Supply of Merigold Garland A Class (Big flowers) 2 feet long at site/ store i/c all complete	Each	75.00
8024	Supply of Merigold Garland B Class (Small flowers) 1.5 feet long at site/ store i/c all complete	Each	50.00

Code No	Description	Unit	Rate Rs.
8025	Supply of Green Garland (Ashok Leaf) 2 feet long at site/ store i/c all complete	Each	15.00
8026	Supply of Rose Garland 1.5 feet long at site/ store i/c all complete	Each	125.00
8027	Supply of Jalusi Garland (VIP A Class) Double fold at site/ store i/c all complete	Each	500.00
8028	Supply of Jalusi Garland (VIP B Class) Single fold at site/ store i/c all complete	Each	400.00
8029	Supply of Mogra Garland 1.5 feet long at site/ store i/c all complete	Each	125.00
8030	Supply of Kunj Garland 1.0 feet long at site/ store i/c all complete	Each	150.00
8031	Supply of Rose petal's at site/ store i/c all complete	kg	400.00
8032	Supply of Merigold petal's at site/ store i/c all complete	kg	250.00
8033	Supply of Crisenthimum petal's at site/ store i/c all complete	kg	300.00
8034	Supply of Chandine flower at site/ store i/c all complete	kg	300.00
8035	Supply of Mogra Flower at site/ store i/c all complete	kg	450.00
8036	Supply of Kunj Flower at site/ store i/c all complete	kg	475.00
8037	Supply of cut flower 'Tata Rose' at site/ store i/c all complete	Each	15.00
8038	Supply of cut flower 'Carnation' at site/ store i/c all complete	Each	18.00
8039	Supply of cut flower 'Gladioli' at site/ store i/c all complete	Each	20.00
8040	Supply of cut flower 'Tube rose single' at site/ store i/c all complete	Each	12.00
8041	Supply of cut flower 'Tube rose double' at site/ store i/c all complete	Each	15.00
8042	Supply of cut flower 'Ilium Asiatic' at site/ store i/c all complete	Each	75.00
8043	Supply of cut flower 'Ilium Oriental' at site/ store i/c all complete	Each	125.00
8044	Supply of cut flower 'An thorium' at site/ store i/c all complete	Each	75.00
8045	Supply of cut flower 'Arched Mix' at site/ store i/c all complete	Each	40.00
8046	Supply of cut flower 'Zarbera' at site/ store i/c all complete	Each	20.00
8047	Supply of cut flower 'Dasy' at site/ store i/c all complete	Each	25.00
8048	Supply of cut flower 'Chrysanthemum' at site/ store i/c all complete	Each	20.00
8049	Supply of cut flower 'Candytuft' at site/ store i/c all complete	Each	4.00
8050	Supply of cut flower 'Aster' at site/ store i/c all complete	Each	6.00
8051	Supply of cut flower 'Lotus' at site/ store i/c all complete	Each	40.00
8052	Supply of Chemical Fertilizers 'Urea' at site/ store i/c all complete	Bag	267.90
8053	Supply of Chemical Fertilizers 'DAP' at site/ store i/c all complete	Bag	902.50
8054	Supply of Chemical Fertilizers 'Super Phosphate' at site/ store i/c all complete	Bag	285.00
8055	Supply of Chemical Fertilizers 'Murrate of Photash' at site/ store i/c all complete	Bag	427.50
8056	Supply of Chemical Fertilizers 'Straw Meal' at site/ store i/c all complete	Bag	855.00
8057	Supply of Insecticides & Pesticides 'Methyl Prathion 2%. 50 kg bag' at site/ store i/c all complete	Bag	475.00

Code No	Description	Unit	Rate Rs.
8058	Supply of Insecticides & Pesticides 'Karathion (Liquid). 250ml packing' at site/ store i/c all complete	Each	475.00
8059	Supply of Insecticides & Pesticides 'Metacid (Liquid).' at site/ store i/c all complete	Litre	351.50
8060	Supply of Insecticides & Pesticides 'Roger (Liquid).' at site/ store i/c all complete	Litre	266.00
8061	Supply of Insecticides & Pesticides 'Cholorophyriphos 20 Ec.' at site/ store i/c all complete	Litre	308.75
8062	Supply of Insecticides & Pesticides 'Bauiston 50 %. 100 grams packing' at site/ store i/c all complete	Litre	95.00
8063	Supply of Garden Tool 'Spade weighing 1.5 kg. with Handle.' at site/ store i/c all complete	Each	118.75
8064	Supply of Garden Tool 'Khurpa weighing 500 gm with Handle.' at site/ store i/c all complete	Each	66.50
8065	Supply of Garden Tool 'Gurvana weighing 800 gm. with Handle' at site/ store i/c all complete	Each	76.00
8066	Supply of Garden Tool 'Hedge Shear (kamani Steel)' at site/ store i/c all complete	Each	475.00
8067	Supply of Garden Tool 'Secaetur' at site/ store i/c all complete	Each	190.00
8068	Supply of Garden Tool 'Garden Rack with Handle.' at site/ store i/c all complete	Each	118.75
8069	Supply of Garden Tool 'Pick - Axe.' at site/ store i/c all complete	Each	114.00
8070	Supply of P.V.C. hose pipe 50 mm dia at site/ store i/c all complete	Metre	114.00
8071	Supply of P.V.C. hose pipe 38 m dia at site/ store i/c all complete	Metre	95.00
8072	Supply of P.V.C. hose pipe 25 mm dia at site/ store i/c all complete	Metre	57.00
8073	Supply of P.V.C. hose pipe 17 mm dia at site/ store i/c all complete	Metre	47.50
8074	Supply of P.V.C. hose pipe 12.5 mm dia at site/ store i/c all complete	Metre	36.10