

ABSTRACT ESTIMATE						
PROPOSED OFFICE BUILDING OF MPFC, INDORE						
S.No	Source MPPWD SOR 2014	Description	Qty	Unit	Rate	Amount
1	2	3	4	5	6	7
<u>CIVIL WORK</u>						
UP TO PLINTH LEVEL						
1	2.1	Surface dressing of the ground including removing vegetation and in-equalities not exceeding 15 cm deep and disposal of rubbish, lead upto 50 m and lift upto 1.5 m. All kinds of soil.	2850	sqm	8.03	22886
2	2.6	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottom disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed. (No extra lift is payable if work is done by mechanical means)				
	2.6.1	All kind of soil upto 1.5mtr	28500	Cum	129.0	3676500
3	1.1	Transportation By Mechanical Transport including loading , unloading and stacking.				
	1.1.2	Earth	21569.6	Cum	278.19	6000447
4	2.25	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 mtr and more	8008.88	Cum	72	576639.36
5	2.28	Supplying and filling in plinth with Hard muram/ Hard copra under floors including, watering, ramming consolidating and dressing complete	2156.96	Cum	300	647088
6	2.27	supplying and filling in plinth with crusher stone dust/coarse sand under floors including watering ramming consolidating in layer not exceeding 20 cm in depth in layers not exceeding 20cm in depth and dressing complete.	431.392	Cum	672	289895
7	2.32	Preconstruction curative Cum. preventive antitermite treatment to the building under construction by providing (i) surface treatment by spreading emulsion over the plinth area before laying the base concrete under floors @ 5.0 litres/Sqm.(ii) Pumping the emulsion in plinth masonry on filling side at floor junction @ 7.5 litres/Sqm. (iii) Pumping the emulsion from outer side of the plinth below ground around the masonry @ 5.0 litres/Sqm as per I.S. 8944 (1Chlorpyrifos: 19 water) with five years service guarantee Emulsion. (Measurements to betaken for plinth area)	2156.96	Sqm	136	293347
8	4.1	Providing and laying in position cement concrete of specified grade the cost of centering and shuttering - All worki upto plinth level.centering shuttering upto plinth				

	4.1.2	With 40mm nominal size graded stone aggregate.				
	4.1.2.1	M15	1165.61	Cum	4403	5132181
9	5.31	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centering, shuttering, finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate / retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. Make - Ultratech, JK, ACC, Lafarge.				
		Note : Cement content considered in this item is @ 330 kg/cum. Excess/ less cement used as per design mix is payable/ recoverable separately)				
	5.31.1	All works upto plinth level.	5743.22	Cum	6280	36067422
10	5.27	Providing and laying in position machine batched, machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centring, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge.				
		(Note :- Cement content considered in this item is 330 kg/cum excess/ less cement used as per design mix is payable/ recoverable separately).				
	5.27.1	All works upto plinth level.	191.695	Cum	5641	1081351
11	5.28	Extra for providing richer mixes at all floor levels.				
		Note : If Excess/ less cement over the specified cement content used is payable/ recoverable separately)				
	5.28.2	Providing M-35 grade concrete instead of M-25 grade BMC/RMC .				
		Note: Cement content considered in M-35 is @ 350 kg/cum)	5934.92	Cum	140	830889
12	5.16	Reinforcement for RCC work including straightening, cutting, bending, placing in position and binding including cost of binding wire upto all height and level including wastage etc complete				
	5.16.6	TMT (Thermo-Mechanically Treated Bars) @130 kg per cum	771540	Kg	54	41663160

13	5.9	Providing and laying of Centering and shuttering including strutting, propping etc. and removal of form for :				
a	5.9.1	Foundations, footings, bases of columns, etc. for mass concrete up to plinth level.	844.16	Sqm	174	146884
b	5.9.2	Walls (any thickness) including attached pilasters buttersesse s, plinth beams and string courses etc.up to plinth level.	5372.8	Sqm	267	1434538
c	5.9.20	Suspended floors, roofs, landings, balconies and access platform. with water proof ply 12mm thick. (item to be executed with prior permission of S.E. in case of B & R works and from Additional Project Director in case of PIU works)	4313.92	sqm	381	1643604
d	5.9.21	Lintels, beams, columns, girders, bressumers and cantilevers with water proof ply 12mm thick (item to be executed with prior permission of S.E. in case of B & R works and from Additional Project Director in case of PIU works)	3046.4	Sqm	343	1044915
14	10.2	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.	1736	KG	68.7	119263
15	22.1	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 consisting of :				
		a) 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 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 .				
		b) 2nd layer of 25mm thick cement mortar 1:3 (1 cement : 3 sand) mixed with water proofing compound in recommended proportions.				
		c) Finishing top with stone aggregate of 10mm to 12mm nominal size spreading @ 8 cudm/sqm thoroughly embedded in the 2nd layer. (with 5 years service guarantee)				
	22.1.1	Using rough Kota stone.	2457	sqm	916.00	2250612

16	22.2	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 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 : (with 5 years service guarantee) using Kota Stone.				
	22.2.1	Using rough Kota stone B2 WALL	2360	sqm	1013	2390680
17	5.31	Providing and laying in position ready mixed M-25 grade concrete for reinforced cement concrete work, using cement content as per approved design mix and manufactured in fully automatic batching plant and transported to site of work in transit mixer for all leads, having continuous agitated mixer, manufactured as per mix design of specified grade for reinforced cement concrete work, including pumping of R.M.C. from transit mixer to site of laying, excluding the cost of centering, shuttering, finishing and reinforcement, including cost of admixtures in recommended proportions as per IS : 9103 to accelerate / retard setting of concrete, improve workability without impairing strength and durability as per direction of the Engineer - in - charge. Make - Ultratech, JK, ACC, Lafarge.				
		Note : Cement content considered in this item is @ 330 kg/cum. Excess/ less cement used as per design mix is payable/ recoverable separately)				
	5.31.2	All works above plinth level and upto floor V level.	6560	Cum	6434	42207040
18	5.27	Providing and laying in position machine batched, machine mixed design mix M-25 grade cement concrete for reinforced cement concrete work using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centring, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge.				
		(Note :- Cement content considered in this item is 330 kg/cum excess/ less cement used as per design mix is payable/ recoverable separately).				
	5.27.2	All works above plinth level and upto floor five level.	1259.59	Cum	5757	7251460

19	5.28	Extra for providing richer mixes at all floor levels.				
		Note : If Excess/ less cement over the specified cement content used is payable/ recoverable separately)				
	5.28.2	Providing M-35 grade concrete instead of M-25 grade BMC/RMC .				
		Note: Cement content considered in M-35 is @ 350 kg/cum)	7819.59	Cum	140	1094743
20	5.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope of any degree landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases up to floor two level excluding the cost of centering, shuttering, finishing and reinforcement in concrete grade.				
	5.3.1	M 20 Nomial mix (with 20mm nominal size graded stone aggregate)	127.41	Cum	5284	673234
21	5.9	Providing and laying of Centering and shuttering including strutting, propping etc. and removal of form for :				
a	5.9.2	Walls (any thickness) including attached pilasters butteresses, plinth beams and string courses etc. up to plinth level.	3719.52	sqm	267	993112
b	5.9.20	Suspended floors, roofs, landings, balconies and access platform. with water proof ply 12mm thick. (item to be executed with prior permission of S.E. in case of B & R works and from Additional Project Director in case of PIU works)	17094.96	sqm	381	6513180
c	5.9.21	Lintels, beams, columns, girders, bressumers and cantilevers with water proof ply 12mm thick (item to be executed with prior permission of S.E. in case of B & R works and from Additional Project Director in case of PIU works)	15047.98	Sqm	343	5161457
22	5.9.7	All types of staircases including riser & landing.	533	Sqm	332	176956
23	5.1	Extra for additional height in centering, shuttering where ever required with adequate bracing, propping etc. including cost of deshuttering and decentering at all levels, over a height of 3.6 metre, for every additional height of 1 metre or part thereof (Plan area to be measured)				
	5.10.1	Suspended floors, roofs, landing, beams and balconies	26916	Sqm	107	2880012
24	5.16	Reinforcement for RCC work including straightening, cutting, bending, placing in position and binding including cost of binding wire upto all height and level including wastage etc complete				
	5.16.6	TMT (Thermo-Mechanically Treated Bars) @ 130kg/Cum	1016547	Kg	54	54893522
25	5.17	Add extra for providing reinforcement above Floor two level for every additional floor or part there of.	508273.4	Kg	0.2	101655

26	6.28	Providing and laying autoclaved aerated concrete (AAC) masonry blocks (Size in mm length 400, 400, 600 Height 200, 250, 300 Width 100, 150, 200, 250) confirming to IS 2185 PART 3, having compressive strength not less than 3MPa (Grade II), and the block is jointed with ready mix build fast and eco friendly wet mix pre-polymerized/ polymer modified adhesive (make such as kerakoll, ultratech, Magicrete, Fairmate, all Endura, Letecrete or equivalent) having minimum compressive strength and minimum splitting tensile strength of not less than 5MPa and 0.34MPa respectively as per	1971	Cum	5039	9931869
		ASTM international and ensuring long lasting thermal insulation according to European norms (EN13501-2) suitable for high performance of external & internal concrete masonry walls; joint having thickness in thin layer of 3mm to 4mm between masonry units in superstructure including striking joints, racking out joints faces and scaffolding and all labour etc. complete, The surface of masonry units (AAC-Block) should be slightly wet prior to application of jointing mortar and there is no need to post cure the wall with water. <u>Note: Minimum compressive strength of block should be not less than 5Mpa.</u>				
27	13.1	12 mm cement plaster of mix:				
	13.1.2	1:6 (1 cement: 6 sand)	20052	Sqm	110	2205720
28	13.3	20 mm cement plaster of mix:				
	13.3.2	1:6 (1 cement: 6 sand)	6767	Sqm	156	1055652
29	13.14	Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers.	676.7	Nos.	79	53459
30	5.24	Providing for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	6000	Rm	18.5	111000
31	13.8.1	6 mm cement plaster of mix :CM 1:3 (1 cement: 3 sand)	20068	Sqm	96	1926528
32	13.15	Extra for plastering exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof.	3383.5	Sqm	27	91355
33	13.41	Providing and applying Birla/J.K. or equivalent wall care exterior/interior mix putty for outer surface i/c sand pappering for making the surface smooth for applying any or vinyle paint with all cost of materials, labours, and scaffolding etc. in all position complete.	40120	Sqm	74	2968880
34	13.49	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade:				
	13.49.1	Two or more coats on new work.	40120	Sqm	64	2567680
35	13.55	Finishing walls with Acrylic Smooth exterior +paint of required shade:				
36	13.55.1	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).	6767	Sqm	87	588729

37	11.34	Kota / cuddapah stone slab flooring 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 sand) :				
	11.34.1	25mm thick	4425	Sqm	1043	4615275
38	11.35	Kota /cuddapah 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 sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	169.9	Sqm	1012	171939
39	11.33	Pre polished Granite stone work 18mm thick of any colour in riser of steps, skirting, dado and pillars laid on 12 mm average thick cement mortar 1:3 (1 cement:3 sand) and jointed with white cement slurry mixed with pigment to match the shade of slab.	521.8	Sqm	3413	1780903
40	11.43	Providing nosing in treads of steps of Kota stone/sand stone slab./ Marble stone i/c rubbing polishing etc. Complete.	1323	Rmt	39	51597
41	11.29	Providing and laying gang saw cut 18 mm thick, mirror polished pre moulded (wherever required) and pre polished machine cut granite stone of required size and shape of approved shade, colour and texture in flooring laid over 20mm thick base of cement mortar 1:4 (1cement : 4 sand) including grouting the joints with white cement mixed with matching pigment, epoxy touch ups etc. complete as per direction of Engineer-in-Charge.				
	11.29. 2.2	Area of slab more than 0.50 sqm.	3336	Sqm	3695	12326520
42	11.58	Providing and laying matt finished vitrified tile of size 100x100x16mm having water absorption less than 0.05% and conforming to IS: 15622 of approved make in all colours and shades for out door floors such as footpath, court yard multi models location etc., laid on 20mm thick base of cement mortar 1:4 (1cement : 4 sand) in all shapes and patterns including grouting the joints with white cement mixed with matching pigments etc. complete as per direction of Engineer-in-Charge.	3362	Sqm	1397	4696714
43	11.53	Providing and laying polished vitrified floor tiles in different sizes of 10mm thickness with water absorption's less than 0.08% and conforming to IS : 15622 of approved make in all colours and shades, laid on 20mm thick cement mortar 1:4 (1 cement : 4 sand) including grouting the joints with white cement and matching pigments etc., complete.				
	11.53.4	Size of Tile 1000x1000 x 10-12 mm	10979	Sqm	1620	17785980

44	11.29	Providing and fixing 16mm thick gang saw cut mirror polished premoulded and prepolished) machine cut for kitchen platforms, vanity counters, window sills , facias and similar locations of required size of approved shade, colour and texture laid over 20mm thick base cement mortar 1:4 (1 cement : 4 sand) with joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edge to give high gloss finish etc complete at all levels (Sample to be got approved by Engineer-in-charge.				
	11.29.1	Black	689.8	Sqm	3477	2398435
45	11.28	Granite work gang saw cut (polished and machine cut) of thickness 18mm for wall lining (veneer work), backing filled with a grout of average 12 mm thick in cement mortar 1:3 (1 cement : 3 sand) including pointing with white cement mortar 1:2 (1 white cement : 2 marble dust) with an admixture of pigment to match the marble shade: (To be secured to the backing by means of cramps, which shall be paid for separately).				
	11.28.1	Black				
	11.28.1.1	Area of slab upto 0.50 sqm	734.4	Sqm	3483	2557915
46	9.1	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia and length (hold fast lugs or dash fastener shall be paid for separately).				
	9.1.2	Sal Wood	7.32	Cum	71308	521975
47	9.18	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters of such as duro board, century or equivalent make.				
	9.18.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	500.2	Sqm	3869	1935274
48	9.134	Providing and Fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt / suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS : 2046 Type S including cost of adhesive of approved quality.				
	9.134.1	1.5 mm thick.	1000	Sqm	851	851000
49	9.65	Providing and fixing ISI marked stainless steel sliding door bolts with nuts and screws etc. complete :				
	9.65.1	300x16 mm	100	each	389	38900
	9.65.2	250x16 mm	25	each	326	8150
50	9.66	Providing and fixing ISI marked stainless steel tower bolt black finish, (Barrel type) with necessary screws etc. complete :				

	9.66.2	200x10 mm	150	each	93	13950
	9.66.4	100x10 mm	110	each	50	5500
51	9.68	Providing and fixing ISI marked stainless steel door latches with screws etc. complete :				
	9.68.2	250x20x6 mm	100	each	173	17300
52	9.69	Providing and fixing ISI marked stainless steel handles with necessary screws etc. complete :				
	9.69.1	125 mm	516	each	60	30960
53	9.76	Providing and fixing Stainless steel hanging type floor door stopper with necessary screws, etc. complete.	300	each	103	30900
54	10.6	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 manufactured from high tensile steel wire of adequate strength conforming to I.S. 4454- part-1 and M.S. top cover of required thickness for rolling shutters.			.	
	10.6.1	80x1.25mm M.S. laths with 1.25 mm thick top cover	1314	sqm	2200.1	2890931
55	10.7	Providing and fixing ball bearing for rolling shutters.	76	each	517.75	39349
56	10.22	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. hoisting, fixing in position and applying a priming coat of approved steel				
	10.22.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	3239	Kg	85.10	275639
57	10.25	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 and 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.)				
		@10KG/Mtr. 14 gauge consisting of 50mm top and 4 horizontal member of 20mm dia	18529	KG	793.75	14707394

58	10.23	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying a priming coat of approved steel primer.				
	10.23.1	M.S. tube.	1590	KG	110.4	175536
59	22.3	Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of :				
		a) Ist 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.				
		b) IInd course of 20mm cement plaster 1:3 (1 cement : 3 sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface.				
		c) IIIrd course of applying blown or residual bitumen applied hot at 1.7 Kg. per sqm of area.				
		d) 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.) (with 5 years service guarantee)	2429	Sqm	440	1068760
60	22.7	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 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 sand) admixed with water proofing compound conforming to IS : 2645 and 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 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 : (with 5 years service guarantee)				
	22.7.1	With average thickness of 120mm and minimum thickness at khurra as 65 mm.	4355	Sqm	885	3854175
61	21.1	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, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :				
	21.1.1	For fixed portion.				
	21.1.1.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	2547	Kg	383.00	975501
	21.1.2	For shutters of doors, windows and ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately).				
	21.1.2.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)				
		Qty. from above item	2547	Kg	431.00	1097757
62	21.3	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber/ 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) :				
	21.3.1	With float glass panes of 4.0 mm thickness	509.3	sqm	849.00	432396

63	8.2	<p>Designing, fabricating, testing, protection, installing and fixing in position semi (grid) unitized system of structural glazing (with open joints) for linear as well as curvilinear portions of the building for all heights and all levels, including:</p>				
		<p>(A) Structural analysis and design and preparation of shop drawings for the specified design loads conforming to IS 875 part III (the system must passed the proof test at 1.5 times design wind pressure without any failure), including functional design of the aluminum sections for fixing glazing panels of various thicknesses, aluminium cleats, sleeves and splice plates etc. gaskets, screws, toggles, nuts, bolts, clamps etc., structural and weather silicone sealants, flashings, fire stop (barrier)-cum-smoke seals, microwave cured EPDM gaskets for water tightness, pressure equalisation and drainage and protection against fire hazard including:</p>				
		<p>(B) Fabricating and supplying serrated M.S. hot dip galvanised / Aluminium alloy of 6005 T5 brackets of required sizes, sections and profiles etc. to accommodate 3 Dimensional movement for achieving perfect verticality and fixing structural glazing system rigidly to the RCC/masonry/structural steel framework of building structure using stainless steel anchor fasteners/bolts, nylon seperator to prevent bimetallic contacts with nuts and washers etc. of stainless steel grade 316, of the required capacity and in required numbers.</p>				
		<p>(C) Providing and filling, two part pump filled, structural silicone sealant and one part weather silicone sealant compatible with the structural silicone sealant of required bite size in a clean and controlled factory / work shop environment , including double sided spacer tape, setting blocks and backer rod, all of approved grade, brand and manufacture, as per the approved sealant design, within and all around the perimeter for holding glass.</p>				
		<p>(D) Providing and fixing in position flashings of solid aluminium sheet 1 mm thick and of sizes, shapes and profiles, as required as per the site conditions, to seal the gap between the building structure and all its interfaces with curtain glazing to make it watertight.</p>				

		(E) Making provision for drainage of moisture/ water that enters the curtain glazing system to make it watertight, by incorporating principles of pressure equalization, providing suitable gutter profiles at bottom (if required), making necessary holes of required sizes and of required numbers etc. complete. This item includes cost of all inputs of designing, labour for fabricating and installation of aluminium grid, installation of glazed units, TandP, scaffolding and other incidental charges including wastages etc., enabling temporary structures and services, cranes or cradles etc. as described above and as specified.				
		The item includes the cost of getting all the structural and functional design including shop drawings checked by a structural designer, dully approved by Engineer-in-charge. The item also includes the cost of all mock ups at site, cost of all samples of the individual components for testing in an approved laboratory, field tests on the assembled working structural glazing as specified, cleaning and protection till the handing over of the building for occupation. In the end, the Contractor shall provide a water tight structural glazing having all the performance characteristics etc. all complete as required, as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings and as directed by the Engineerin- Charge.	2908	Sqm	2674	7775992
64	8.7	Designing, fabricating, testing, installing and fixing in position Curtain Wall with Aluminium Composite Panel Cladding, with open grooves for linear as well as curvilinear portions of the building , for all heights and all levels etc. including:				
		a) Structural analysis and design and preparation of shop drawings for pressure equalisation or rain screen principle as required, proper drainage of water to make it watertight including checking of all the structural and functional design.				
		b) Providing, fabricating and supplying and fixing panels of aluminium composite panel cladding in pan shape in metallic colour of approved shades. The aluminium composite panel cladding sheet shall be coil coated, with Kynar 500 based PVDF / Lumiflon based fluoropolymer resin coating of approved colour and shade on face # 1 and polymer (Service) coating on face # 2 as specified using stainless steel screws, nuts, bolts, washers, cleats, weather silicone sealant, backer rods etc.				

		<p>c) The fastening brackets of Aluminium alloy 6005 T5 / MS with Hot Dip Galvanised with serrations and serrated washers to arrest the wind load movement, fasteners, SS 316 Pins and anchor bolts of approved make in SS 316, Nylon separators to prevent bi-metallic contacts all complete required to perform as per specification and drawing The item includes cost of all material and labour component, the cost of all mock ups at site, cost of all samples of the individual components for testing in an approved laboratory, field tests on the assembled working curtain wall with aluminium composite panel cladding, cleaning and protection of the curtain wall with aluminium composite panel cladding till the handing over of the building for occupation. Base frame work for ACP cladding is payable under the relevant aluminium items. The Contractor shall provide curtain wall with aluminium composite panel cladding, having all the performance characteristics all complete, as per the Architectural drawings, as per item description, as specified, as per the approved shop drawings and as directed by the Engineer-in-Charge.</p>				
		<p>However, for the purpose of payment, only the actual area on the external face of the curtain wall with Aluminum Composite Panel Cladding (including width of groove) shall be measured in sqm. up to two decimal places.</p>				
	8.7.1	<p>4 mm thick aluminium composite pannel material consisting of 3 mm thick FR grade mineral core sandwiched between two aluminium sheets (each 0.5mm thick)</p>	130	sqm	3800	494000

65	8.6	<p>Providing and supplying Spandrel Glass Panels comprising of 6 mm thick heat strengthened monolithic float glass of approved colour and shade with reflective soft coating on surface # 2 of approved colour and shade so as to match the colour and shade of the IGUs in the vision panels etc. , all complete for the required performances as specified, as per the Architectural drawings, as per the approved shop drawings, as specified, and as directed by the Engineer- in- Charge. For payment, only the actual area of glass on face # 1 of the glass panels (but excluding the area of grooves and weather silicone sealant) provided and fixed in position, shall be measured in sqm.(Payment for fixing of Spandrel Glass Panels in the curtain glazing is included in cost of relevent Item). (i) Coloured tinted float glass 6mm thick substrate with reflective soft coating on face # 2, having properties as visible Light transmittance (VLT) of 25 to 35 %, Light reflection internal 10 to 15%, light reflection external 10 to 20 %, shading coefficient (0.25- 0.28) and U value of 3.0 to 3.3 W/m² degree K etc. The properties of performance glass shall be decided by technical sanctioning authority as per the site requirement.</p>	1009	Sqm	2174	2193566
66	8.8	<p>"Design supply and installation of suspended Spider Glazing system designed to withstand the wind pressure as pr IS 875 (Part-III). The Suspended System held with Spider Fittings of SS-316 Grade Steel of approved manufacturer with glass panel having 12 mm thick clear toughened glass held together with SS- 316 Grade Stainless steel Spider and bolt assembly with laminated glass fins 21 mm thick. The Glass fins and glass panel assembly shall be connected to Slab/beams by means of SS- 316 Grade stainless steel brackets and Anchor bolts and at the bottom using SS channel of 50x25x2mm using fastener and anchor bolts, non staining weather sealants of approved make, Teflon/ nylon bushes and separators to prevent bi-metallic contacts, all complete to perform as per specification and approved drawings. The complete system to be designed to accommodate thermal expansion and seismic movements etc.</p>	650	Sqm	5983	3888950

		The joints between glass panels (6 to 8 mm) and gaps at the perimeter and in U channel of the assembly to be filled with non staining weather sealant, so as to make the entire system fully water proof and dust proof. The rate shall include all design, Engineering and shop drawing including approval from structural designer, labour, TandP, scaffolding , other incidental charges including wastage, enabling temporary services all fitting fixers nut bolts, washer, Buffer plates, fastener, anchors, SS channel laminated glass etc. all complete. For the purpose of payment, actual elevation area of Glazing including thickness of joints and the portion of Glass panel inside the SS channel shall be measured."				
67	10.15	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses/frame work etc. including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.				
	10.15.3	Electric resistance or induction butt welded tubes.	32183	Kg	126	4055058
68	21.18	Providing and fixing 12 mm thick frameless toughened glass door shutter of approved brand and manufacture, including providing and fixing top bottom pivot spring type fixing arrangement and making necessary holes etc. for fixing required door fittings, all complete as per direction of Engineer-incharge (Door handle, lock and stopper etc.to be paid separately).	266.4	sqm	4958	1320811.2
69	11.84	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	22.5	cum	6775	152437.5
70	6.7	Brick work with fly ash lime bricks (FALG Bricks) conforming to IS:12894-2002, in super structure above plinth level up to floor II level in : Make - Ultratech.				
	6.7.1	having 100 kg / cm ² average compressive strength				
	6.7.1.2	Cement mortar 1:6 (1 cement : 6 sand)	85	cum	5212	443020
71	6.15	Half brick masonry with fly ash lime Gypsum bricks (FALG bricks) conforming to IS : 12894, in super structure above plinth and upto floor two level. Make - Ultratech.				

	6.15.1	having 100 kg/cm ² average compressive strength				
	6.15.1.2	Cement mortar 1 : 4 (1 cement : 4 sand)	494	sqm	696	343824
72	NON SOR	Providing and fixing 12 mm thick frameless toughened glass in elevation at all height including cutting, making hole as required and filling the gap with silicon sealant, all complete as per direction of Engineer-incharge.	2040	sqm	2500	5100000
73	NON SOR	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M-30 grade reflective type rubber moduled glossy colour paving block made by block making machine with strong vibratory compaction and of approved size and shape laid in required colour and pattern over and including 60mm thick compacted bed of stone dust filling the joints with sand etc. all complete as per the direction of Engineer in charge including locking edges wherever required with cement concrete M15 grade or cement mortar 1:3 with pigment of required shade to match the colour /shade of block including cost of labour, material , etc. all complete.				
		At Footpath 60mm thick paver blocks	294	sqm	570.00	167580
		At Parkings 100mm thick paver blocks	300	sqm	950.00	285000
74	NON SOR	Supply and installation of modular and component (Weld free) based system of satin finish stainless steel AISI 304 SS handrail and balustrade system having minimum 50mm dia tube handrail (3mm thickness) to be fixed on the top of an SS flat 6mmx25mm grout in floor/ brickwork at a distance of 900 mm c/c with patch fitting to the 10 mm thick toughened glass complete with all necessary bends and termination. Ht. 1000 mm. All complete as directed by Architect/Engineer in Charge.	448	Rmt	2000	896000
75	NON SOR	VERTICAL GARDEN / GREEN WALL Providing, fixing and installing the Green Wall with specified plants and growing medium as per detailed drawing no._____. The wall will be movable on channels as/drg. detail so as to facilitate maintainance from inside corridore. The rate shall include drip and drainage system as per detail and exclude of fabrication work.	1609	Sqm	7000	11263000
76	NON SOR	Providing and Laying shoring by gunite method including cost of GI wiremesh of 4mm thick, Nailing of 20mm bar of every 1 mtr upto the depth of 3 mtr. Including scaffolding, spray wet and dry mix with pneumatic pressure gun etc. inclusive all to complete the job with any extra cost as approved by EIC.	750	Sqm	1600	1200000
Total of Civil work (A)						363695405
<u>ELECTRICAL WORK</u>						
		WIRING IN CONCEALED RIGID PVC CONDUIT(HMS) SYSTEM WITH COPPER CONDUCTOR				

77	4	Point wiring (excluding metallic switch box & sheet but including switches, sockets, lamp, holders, ceiling roses etc) with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in concealed rigid P.V.C. conduit (HMS) ISI Marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit etc. as required as per specification for :-			Using Modular Accessories	
	4.1	Light Point/Fan Points.				
		a) Short point	900	Each	394	354600.00
		b) Medium point	725	Each	671	486475.00
		c) Long point	465	Each	1083	503595.00
78	4.2	3 Pin 6 Amp socket outlet on Separate Board				
		a) Short point	113	Each	503	56839.00
		b) Medium point	212	Each	780	165360.00
		c) Long point	211	Each	1192	251512.00
79	4.3	Call Bell / Buzzer Points				
		a) Short point	69	Each	388	26772.00
		b) Medium point	43	Each	637	27391.00
		c) Long point	20	Each	983	19660.00
80	4.4	Twin Control light points				
		a) Short point	825	Each	486	400950.00
		b) Medium point	337	Each	812	273644.00
		c) Long point	196	Each	1285	251860.00
81	4.5	Point wiring (excluding metallic switch box & sheet but including switches, sockets) for 3 pin 6 Amp. Socket outlet point with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in concealed rigid P.V.C. conduit (HMS) ISI marked of suitable size and 1.5 Sqmm. PVC insulated copper earth continuity conductor of green colour inside conduit with required materials as per specification on same board.	480	Each	285	136800.00
82	4.6	Wiring for circuit wiring with PVC insulated cable FR with copper multi strand conductor ISI marked in concealed rigid P.V.C. conduit (HMS) of ISI marked suitable size etc. as required as per specification				
		a) 2x2.5 Sq.mm.	22200	Metre	117	2597400.00
		b) 4x2.5 Sq.mm.	1400	Metre	176	246400.00
		POWER WIRING IN CONCEALED RIGID PVC CONDUIT (HMS) SYSTEM WITH COPPER CONDUCTOR				
83	9.1	Point wiring (excluding metallic switch box & sheet) for 3 Pin 16 Amp. Socket Outlet Point With 4 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Concealed rigid P.V.C Conduit (HMS) ISI Marked of suitable size etc. with 16 Amp. F.T. Switch & Socket / S.S.Combined 6/16 Amp. of ISI Marked and 4 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit as per specification for			Using Modular Accessories	
		On Separate Board				
		A. Short Point	75	Each	816	61200.00
		B. Medium Point	87	Each	1335	116145.00
		C. Long Point	26	Each	1930	50180.00

		D. Extra Long –I	16	Each	2643	42288.00
		E. Extra Long –II	11	Each	3417	37587.00
		F. Extra Long –III	11	Each	4193	46123.00
84	9.2	Same board switch socket 6/16 Amp	162	Each	468	75816.00
		SUPPLYING AND FIXING PVC CONDUIT(HMS) FOR CONCEALED CONDUIT SYSTEM				
85	16	Supplying and fixing PVC conduit ISI marked along with the accessories in concealed system etc. as required				
	16.1	PVC . Conduit 20 mm (HMS)	100	Metre	61	6100.00
	16.2	PVC . Conduit 25 mm (HMS)	23000	Metre	72	1656000.00
	16.3	PVC . Conduit 32 mm (HMS)	770	Metre	108	83160.00
	16.4	PVC . Conduit 40 mm (HMS)	770	Metre	137	105490.00
	16.5	PVC . Conduit 50 mm (HMS)	50	Metre	196	9800.00
		METALLIC SWITCH BOXES & MODULAR BOXES				
86	18.1	Supplying and fixing factory fabricated hot dip galvanized switch box for normal flush type accessories of minimum 1.2 mm (18 SWG gauge) thickness with earth terminal stud with nut and washer, with 3 mm thick synthetic phenolic resin bonded laminated sheet conforming to grade P-I of IS:2036-1974 on surface / concealed including painting etc. as required as per specification:				
		FOR SURFACE/CONCEALED				
	18.1.1	MS Box 100 mm X 100 mm X60mm deep	20	Each	98	1960.00
	18.1.2	MS Box 200 mm X 150 mm X 60 mm Deep	47	Each	181	8507.00
	18.1.3	MS Box 180 mm X 100 mm X 60 mm Deep	46	Each	133	6118.00
	18.1.4	MS Box 125 mm X 300 mm X 60 mm Deep	47	Each	237	11139.00
	18.1.5	MS Box 200 mm X 250 mm X 60 mm Deep	45	Each	271	12195.00
	18.1.6	MS Box 250 mm X 300 mm X 60 mm Deep 1.6mm(16swg)	18	Each	427	7686.00
	18.1.7	MS Box 300mm X 380 mm X 60 mm Deep 1.6mm(16swg)	18	Each	594	10692.00
87	18.2	Supplying and fixing of approved make modular type metal box with modular frame/ base plate and cover plate including fixing in concealed / surface excluding switch,socket etc. as required for:-				
	18.2.1	1 Or 2 Module	135	Each	156	21060.00
	18.2.2	3 Module	232	Each	208	48256.00
	18.2.3	4 Module	66	Each	236	15576.00
	18.2.4	6 Module	139	Each	326	45314.00
	18.2.5	8 / 9 Module	142	Each	400	56800.00
	18.2.6	12 Module	22	Each	487	10714.00
	18.2.7	16 Module	22	Each	532	11704.00
		WIRING IN EXISTING CONDUIT / PVC CASING CAPPING WITH COPPER CONDUCTOR				
88	19	Supplying and drawing single core PVC insulated cable FR with copper multi strand conductor ISI marked in existing rigid PVC Casing-N-Capping / conduit in surface or concealed as per specification.				
	19.2	1 X 2.5 sq mm				
	19.2.1	(a) 1 X 2.5 sq mm	22200	Per Mtr	30	666000.00
	19.2.3	(c) 3 X 2.5 sq mm	4200	Per Mtr	78	327600.00

CONTROL SWITCH GEARS						
89	25.13	Supplying of ISI Marked Direct On-Line Starters confirming to IS : 13947-4 with suitable over load relay range and contactor size, 415 V, 3 -Phase with two earthing terminals				
	25.13.1	0.75 / 1.0 / 2.0 / 3.0 / 5.0 / 7.5 HP	5	Each	2218	11090.00
	25.13.2	10 HP	2	Each	3323	6646.00
90	25.14	Supplying of ISI Marked Automatic Star-Delta Starters confirming to IS : 13947-4 with suitable over load relay range and contactor size & timer 415 V , 3 -Phase with two earthing terminals				
	25.14.1	12.5 HP	1	Each	7840	7840.00
	25.14.2	15.0 HP	2	Each	7886	15772.00
	25.14.3	20 HP	1	Each	9857	9857.00
91	25.18	Supplying & fixing of ISI marked DMC /Nylon Fuse holder fitting / Fuse Base for knife type HBC fuse Links of approved make & confirming to IS:13703-2-1				
	25.18.1	DMC /Nylon Fuse holder fitting 20 Amps /415 Volts	500	Each	126	63000.00
	25.18.5	DMC /Nylon Fuse Base 160 Amps /415 Volts	40	Each	273	10920.00
		MCCBs, ISOLATORS, MCBs, RCBOs, MCB DBs				
92	27.1	Supplying of ISI Marked and approved make of Moulded Case Circuit Breaker (MCCB) suitable for 3 phase,3 pole, 50 Hz, 415 Volts, AC supply with respective interrupting capacity (KA) at 415 Volts cited against their range standard conforming to IS – 8828				
	27.1.2	MCCB with Breaking Capacity 25 KA at 415 V				
	27.1.2.1	Current Rating -25 to100 Amps & 80% -100% adjustable	20	Each	5601	112020.00
	27.1.2.2	Current Rating -125 Amps & 80% -100% adjustable	3	Each	7229	21687.00
	27.1.2.3	Current Rating -160 Amps & 80% -100% adjustable	3	Each	9879	29637.00
	27.1.3	MCCB with Breaking Capacity 35 KA at 415 V				
	27.1.3.1	Current Rating -160 Amps & Adjustable: 80% -100% thermal	35	Each	10927	382445.00
	27.1.3.2	Current Rating -200 Amps & Adjustable: 80% -100% thermal	4	Each	14289	57156.00
	27.1.3.3	Current Rating -250 Amps & Adjustable: 80% -100% thermal	15	Each	16615	249225.00
	27.1.3.4	Current Rating -315 Amps & Adjustable: 80% -100% thermal	10	Each	21632	216320.00
	27.1.3.5	Current Rating -400 Amps & Adjustable: 80% -100% thermal	6	Each	24115	144690.00
	27.1.3.6	Current Rating -500/630 Amps & Adjustable: 80% -100% thermal	6	Each	27988	167928.00
93	27.4	Supplying of ISI Marked and approved make of Air Circuit Breaker (ACB) with Microprocessor release with LCD screen showing kW, kVA, PF, maximum demand with breaking capacity of 50 kA , 4 pole , 415 Volts conforming to IEC : 60947-2 / IS :13947-II				
	27.4.8	800 Amp,manual,drawout	1	Each	131803	131803.00

	27.4.10	1250 Amp,manual,drawout	2	Each	151322	302644.00
	27.4.11	1600 Amp,manual,drawout	8	Each	174201	1393608.00
94	27.5	Supplying of ISI Marked and accepted standard of Miniature Circuit Breaker (MCB) of 'C' series suitable for 240/415 Volts, 50 Cycle, 10 kA Value AC supply confirming to IS : 8828 : 1996, IEC : 60898 : 2002 but without enclosures :-				
	27.5.1	SINGLE POLE (SP)				
	27.5.1.2	6 Amp to 32 Amp Rating	200	Each	205	41000.00
	27.5.1.3	For 40 Amps. Rating only.	5	Each	447	2235.00
	27.5.1.4	50 Amp to 63 Amp Rating	5	Each	472	2360.00
	27.5.3	DOUBLE POLE (DP)				
	27.5.3.2	6 Amp to 32 Amp Rating	50	Each	617	30850.00
	27.5.3.3	For 40 Amps. Rating only.	10	Each	982	9820.00
	27.5.3.4	50 Amp to 63 Amp Rating	10	Each	1022	10220.00
	27.5.4	FOR TRIPLE POLE (TP)				
	27.5.4.2	6 Amp to 32 Amp Rating	20	Each	985	19700.00
	27.5.4.3	For 40 Amps. Rating only.	10	Each	1483	14830.00
	27.5.4.4	50 Amp to 63 Amp Rating	10	Each	1527	15270.00
	27.5.6	FOUR POLE(FP)				
	27.5.6.2	6 Amp to 32 Amp Rating	70	Each	1358	95060.00
	27.5.6.3	For 40 Amps. Rating only.	20	Each	1923	38460.00
	27.5.6.4	50 Amp to 63 Amp Rating	20	Each	1975	39500.00
95	27.6	Supplying of MCB Isolators suitable for 240/415 Volts, 50 Hz AC supply with KA value rating 10 kA of approved make confirming to IS :13947- Part III : 1993 & IEC :60947- 3:2001 (without enclosures) :-				
	27.6.1	SINGLE POLE				
	27.6.1.1	40 Amps.	5	Each	236	1180.00
	27.6.1.2	63 Amps.	5	Each	264	1320.00
	27.6.2	DOUBLE POLE				
	27.6.2.1	40 Amps.	5	Each	389	1945.00
	27.6.2.2	63 Amps.	5	Each	505	2525.00
	27.6.3	TRIPLE POLE				
	27.6.3.1	40 Amps.	5	Each	701	3505.00
	27.6.3.2	63 Amps.	5	Each	802	4010.00
	27.6.4	FOUR POLE				
	27.6.4.1	40 Amps.	2	Each	880	1760.00
	27.6.4.2	63 Amps.	2	Each	926	1852.00
96	27.7	Supply of approved make powder coated sheet steel encloser SPN MCB DB inclusive of Bus bar, Neutral bar, Earth bar & two earth terminals etc. complete as per IS:13032(exclusive of MCB & isolator)-				
	27.7.4	6 way Double Door IP 43 protection	2	Each	1280	2560.00
	27.7.5	8 way Double Door IP 43 protection	2	Each	1478	2956.00
	27.7.6	12 way Double Door IP 43 protection	2	Each	1794	3588.00
	27.7.7	16 way Double Door IP 43 protection	1	Each	2228	2228.00
97	27.8	Supplying of approved make TPN MCB DB Metal Double Door IP 43 protection with provision for FP MCB/ Isolator/ RCCB/ RCBO as incomer and SP MCBs as outgoing inclusive of Bus bar, Neutral bar, Earth bar & two earth terminals etc. complete as per IS:13032(exclusive of MCB & isolator):				
	27.8.2	4 way (8+12)	20	Each	2961	59220.00
	27.8.3	6 way (8+18)	35	Each	3650	127750.00
	27.8.4	8 way (8+24)	20	Each	4379	87580.00

	27.8.5	12 way (8+36)	5	Each	6552	32760.00
98	27.10	Supplying of approved make, powder coated Metal Double Door Vertical TPN MCB DB IP 43 protection with provision for MCCB up to 160A TP/ FP 36kA as incomer and space for SP/TP MCBs as outgoing (without MCCB / MCBs) inclusive of bus bar & connections etc				
	27.10.2	8 way without MCCB	5	Each	10815	54075.00
	27.10.3	12 way without MCCB	2	Each	14341	28682.00
99	27.12	Supplying & fixing of approved make Industrial type metal plug & socket DBs (without MCB) SPN sheet encloser (dust protected) inclusive of 2 pole and earth metal plug and socket and space to incorporate SP MCB complete as per specification as required.				
	27.12.1	10 Amps	1	Each	1036	1036.00
	27.12.2	20 Amps	1	Each	1092	1092.00
100	27.13	Supplying & fixing of ISI marked Industrial type metal plug socket D.B.s (without MCBs) for TPN encloser three pole and earth metal plug and socket including space incorporating TP MCB complete as per specification as required.				
	27.13.1	20 Amps	2	Each	2341	4682.00
	27.13.2	30 Amps	2	Each	2640	5280.00
101	27.14	Supply & fixing of approved make Industrial type metal plug & socket, 3 pin (2P + E) conforming to IEC : 60309 - 1&3 complete as per specification				
	27.14.1	10 Amps Plug only	1	Each	145	145.00
	27.14.2	10 Amps socket only	1	Each	145	145.00
	27.14.3	20 Amps Plug only	1	Each	159	159.00
	27.14.4	20 Amps socket only	1	Each	169	169.00
102	27.15	Supplying and installing of RCBOs (Residual current circuit breaker with overload and short circuit protection) ISI marked complete as per I.S. standard confirming to IEC:61009-2-1 & IS:12640-2:2001,240/415V 50 Hz with 10 kA short circuit withstand capacity for earth leakage, overload & short circuit protection including connection in existing enclosure in approved manner as per specification.				
	27.15.1	DP(4 module)				
	27.15.1.5	2 pole 6 to 25 Amps, 100 mA sensitivity	10	Each	3738	37380.00
	27.15.2	FP(8 module)				
	27.15.2.6	4 pole 25-32 Amps, 100/300 mA sensitivity	10	Each	4505	45050.00
		FIXING OF SFUs, DBs, BUSBAR, MCCBs, MCBs, ISOLATORs & RCBOs				
103	28.7	Labour charges for fixing sheet steel enclosures, MCB DB flush mounting type, as per accepted practice, duly embedded and end plate completely flushed in wall, cable connection etc.complete :-				
		FOR S.No :-				
	28.7.1	27.7.1 to 27.7.7 ; 27.8.1 to 27.8.3 & 27.9.1,	62	Each	232	14384.00
	28.7.2	27.8.4 & 27.8.5 ; 27.9.2 to 27.9.3 ; 27.10.1 to 27.10.3 & 27.11.1 to 27.11.3	32	Each	271	8672.00
		WIRING ACCESSORIES,PANELS,LAMPS,				

104	29.3	Supplying and fixing as per specification Call bell / buzzer of approved make with necessary materials complete.				
	29.3.1	Buzzer	20	Each	58	1160.00
105	29.9	Supplying and fixing as per specification 6 Amp 250 Volt Bell Push switch of approved make ISI marked with necessary material complete.				
	29.9.1	6/10 Amps S.P.250 Volt Modular Switch Bell Push	20	Each	154	3080.00
106	29.14	Supplying and fixing as per specification Caution / Danger Board as required of approved make & design with necessary material complete.				
	29.14.1	Small Size	15	Each	80	1200.00
	29.14.2	Large Size	3	Each	160	480.00
107	29.17	Supplying, Fixing and Testing of mixed dielectric ultra heavy duty APP capacitor 440 Volt, 3 Ph., peak inrush current upto 500 x In, over current upto 3 x In(normal current), operating losses total not more than 0.35 W / KVAR, operating life not less than 300000 hrs, switching 20000 operation / year, as per IS:13340-1993, IS:13341- 1992, IS:13585-1994, of approved make as required as per specification				
	29.17.1	5 to 25 KVAR bank	1150	P KVAR	633	727950.00
108	29.23	Supplying, Fixing and Testing of Compact Fluorescent Lamp (CFL) with inbuilt electronic ballast ISI marked BC / ES cap of approved make as required as per specification				
	29.23.3	11 Watt	135	Each	177	23895.00
	29.23.5	18 Watt	10	Each	227	2270.00
109	29.31	Supplying and fixing of approved make step type Modular electronic Fan regulator including connection etc. as required on existing board				
	29.31.2	100 Watt (2 module)	20	Each	689	13780.00
		Locking arrangement for Switch Gear Mounting				
110	29.33	Supplying, fixing, testing & commissioning wall / floor mounted LT Panel primer coated with powder coated paint & provided with required gasket for dust / vermin proof with degree of protection IP42 suitable for 415V 3 phase, 50 Hz, 4 wire system fabricated out of CRCA sheet up to 2 mm thick (1.6 mm for doors) duly compartmentalized for incomer, bus section, outgoing, cable alleys & CT, PT Ampere Meter, Volt Meter, selector switches, Frequency Meter, phase indicating lamps, Energy Meter complete including cost of busbar supports, detachable cable gland plates, 2 earthing terminals, internal wiring & fixing of separately supplied MCBs, MCCBs , ACB, panel mounted Changeover switch / SFUs, etc. as required but excluding cost of bus bar strips, Ampere Meter, Volt Meter, Selector switch as per approved design & specification	12500	Kg	180	2250000.00

111	29.34	Supplying and fixing of LT Panel accessories of approved make in existing LT Panel including connections etc.as required as per specefication				
	29.34.1	Digital Ampere Meter with CTs with selector switch	15	per set	1950	29250.00
	29.34.2	Digital Volt Meter with selector switch & HRC fuse	15	per set	2100	31500.00
	29.34.3	Frequency Meter	5	Each	1200	6000.00
	29.34.5	Aluminium bus bar strips with PVC sleeves	2000	Kg	300	600000.00
	29.34.6	LED lamp indicator	200	each	200	40000.00
		FAN				
112	30.1	Supplying, erection and testing of approved make electric Ceiling fan of double ball bearing complete with standard down rod, canopy, hanging shackle, Aluminium blades, without regulator, A.C. 230-250 volts including connections with all necessary material complete of approved as required confirming to IS :374/1979 with up to date ammendments.				
	30.1.1	Ceiling Fan (5 star & ISI)-1200 mm Sweep	20	Each	2276	45520.00
113	30.2	Supplying, erection and testing of approved make Wall Mounting fan complete with Wall Bracket ,canopy, blades, speed Regulator etc .A.C 230-250 volts with connections and including raw bolt/Anchor hole fastener etc. complete finished of approved as required.				
	30.2.2	400 sweep	5	Each	2771	13855.00
114	30.3	Supplying, erection and testing of approved make Cabin fan oscillating type with base, blades, guard, etc. AC 230-250 volts with connections and including raw bolt/Anchor hole fastener etc. complete finished and as required.				
	30.3.1	300 sweep	2	Each	2201	4402.00
115	30.6	Supplying, erecting and testing of approved make Exhaust Fan heavy duty with mounting frame, blades AC 230-250 complete connection and including, frame bolt/ Anchor hole fastners etc. complete finished of approved as required.				
	30.6.1	300mm sweep 900 RPM	20	Each	2918	58360.00
		LUMINAIRES				
		Fluorescent Tube Fitting				
116	31.2	Supplying fixing and testing of T- 5 lamp Batten type Tube fitting with epoxy white powder coated CRCA sheet steel complete with electronic ballast (HF), rotor holders, duly wired (without tube rod) fixing wall/ceiling on PVC clamp/round plate with necessary materials complete as required.				
	31.2.1	T - 5 Lamp 1 X 28 watt	300	Each	535	160500.00
		BULK HEAD				
117	31.6	Supplying, fixing and testing of approved make bulk head luminary consisting of pressure die aluminium housing lamp holder, prismatic glass cover, rubber gasket and wire guard, deluxe type, including fixing on wall as required, with necessary material complete Fitting suitable for Retrofit 10W CFL / GLS Lamp	125	Each	594	74250.00

118	31.14	Supplying, fixing & testing of approved make of integral type bollard cylindrical shape housing cast aluminium dome shape top cover fixed with cylindrical shape poly carbonate cover having base plate with holes for direct mounting complete with all accessories and control gear box (without lamp) including preparatoion of foundation including fixing with connection and all required material as required.				
	31.14.3	LED 9 Watt Mashroom shape Height > 600mm	25		9702	242550.00
		LED LIGHTING				
119	31.22	Supply and fixing Led tube rod comprising of LED tube with non integral / integral driver, 6500K color temp having 40000 burning hrs life with minimum @ L 70, system lumen output should be minimum with efficacy > 80 lm/W. LED driver PF 0.95 & THD < 20%. The colour rendering index of LED light should be more than 70. Submission LM 80-08 Form LED Source Manufacturer & LM79-08 / IS16106 from NABL approved lab. Manufacturer mandatory i/c connection wire, testing etc. to complete the job. 2 Yrs Guarantee certificate from manufacturer.				
	31.22.3	1 X 18/20/22W, Non Integral with driver	300		3067	920100.00
120	31.26	Supplying and fixing surface mounting LED down lighter, LED of 1 to 3 W each assembled on single MCPCB, having color temp 6500K & having 50000 burning hrs life with minimum @ L 70, system lumen output should be minimum with efficacy>80lm/W. LED driver PF 0.95 & THD < 20%. The colour rendering index of LED light should be more than 70. Housing made of CRCA powder coated frame with glare free diffused polycarbonate cover. Submission LM 80-08 Form LED Source Manufacturer & LM79-08 / IS16106 from NABL approved lab. Manufacturer mandatory. i/c connection wire, testing etc. to complete the job. 2 Yrs Guarantee certificate from manufacturer.				
	31.26.1	7 W/8 W, 100/150mm	10		2348	23480.00
	31.26.2	15 W , 180/200mm	80		3822	305760.00
121	31.27	Supplying and fixing recessed mounting LED down lighter, LED of 1 to 3 W each assembled on single MCPCB, having color temp 6500K & having 50000 burning hrs life with minimum @ L 70, system lumen output should be minimum with efficacy>80lm/W. LED driver PF 0.95 & THD < 20%. The colour rendering index of LED light should be more than 70. Housing made of CRCA powder coated frame with glare free diffused polycarbonate cover. Submission LM 80-08 Form LED Source Manufacturer & LM79-08 / IS16106 from NABL approved lab. Manufacturer manadatory. i/c connection wire, testing etc. to complete the job. 2 Yrs Guarantee certificate from manufacturer.				
	31.27.3	15 W, 180/200mm	500		2763	1381500.00

122	31.28	Supplying and fixing integral post top lantern LED fitting comprises of copper dust finish cast aluminium spigot and spun aluminium canopy fixed with opal polycarbonate, pipe arrangement for vertical mounting, open construction driver and accessories are wired up to terminal block. LED of 1 to 3 W each assembled on single MCPCB, having color temp 6500K & having 50000 burning hrs life with minimum @ L 70, system lumen output should be minimum with efficacy>80lm/W. LED driver PF 0.95 & surge protection 2KV. The colour rendering index of LED light should be more than 70. Submission LM 80-08 Form LED Source Manufacturer & LM79-08 / IS16106 from NABL approved lab. Manufacturer mandatory. i/c connection wire, testing etc. to complete the job. 2 Yrs Guarantee certificate from manufacturer.				
	31.28.1	40 W LED	60		16654	999240.00
		EARTHING , LOOP EARTHING,LIGHTNING CONDUCTOR				
123	37.4	Earthing with Copper Earth plate 600mm X 600mm X 3mm thick including accessories and providing masonry encloser in cement mortar, cover plate having locking arrangement on the top and G.I. watering pipe 20mm dia 2.7 Metre long etc. (but without charcoal or coke and salt) complete as required.	16	Each	8013	128208.00
	37.5.2	Add Extra for using salt and charcoal / coke for G.I. Plate or Copper plate earth electrode as required including excavation in hard rock and refilling the pit with black soil.	16	Each	3353	53648.00
124	37.6	Supplying and laying 8 SWG (4 mm) copper wire at 0.5 Metre below ground level as conductor earth electrode including soldering etc. as required.	200	metre	85	17000.00
125	37.7	Supplying and laying 6SWG (5.6mm) G.I. wire at 0.5 Metre below ground level as conductor earth electrode including soldering etc. as required.	100	metre	23	2300.00
126	37.8	Supplying and laying 25mm X 5mm G.I. strip at 0.5 Metre below ground level as strip earth electrode including soldering etc. as required.	100	metre	95	9500.00
127	37.9	Supplying and laying 25mm X 6mm G.I. strip at 0.5 Metre below ground level as strip earth electrode including soldering etc. as required.	100	metre	113	11300.00
128	37.10	Providing & fixing 25mm X 5mm copper strip in 40mm dia G.I.pipe (B class) from earth electrode as required.	100	metre	1043	104300.00
129	37.11	Providing & fixing 25mm X 5mm G.I.strip in 40mm dia G.I. Pipe (B class) from earth electrode as required.	100	metre	423	42300.00
130	37.14	Providing & fixing 25mm X 5mm copper strip on surface or recessed for connection etc. as required.	600	metre	808	484800.00
131	37.15	Providing and fixing 25mm X 4mm G.I. strip on surface or in recessed/concealed for connection etc. as required.	100	metre	123	12300.00
132	37.16	Providing and fixing 6 SWG (5.6mm) G.I. wire on surface or in recessed/concealed for loop earthing as required.	100	metre	19	1900.00

133	37.17	Providing and fixing 4.00mm copper wire on surface or in recessed/concealed for loop earthing as required.	100	metre	86	8600.00
134	37.18	Supplying and laying 50mm X 6mm G.I. strip at 0.5 metre below ground level / surface as strip earth electrode including jointing etc. as required.	300	metre	95	28500.00
		EARTHING FOR DOMESTIC ELECTRIC INSTALLATION				
135	37.39	Supplying and drawing PVC insulated copper cable (Earth Continuity Conductor) of Green colour FR with copper multi strand conductor ISI marked in existing conduit along with other wires as required as per specification :				
	37.39.1	4 Sq mm	1000	Metre	41	41000.00
	37.39.2	6 Sq mm.	500	Metre	58	29000.00
	37.39.3	10 Sq mm.	500	Metre	88	44000.00
	37.39.4	16 Sq mm	100	Metre	136	13600.00
136	37.40	supplying and erecting earth pit of minimum bore dia. 150mm size , approved make Safe Earthing Electrode consisting Pipe-in-Pipe technology as per IS 3043-1987 made of corrosion free G.I. Pipes with constant ohmic value surrounded by highly conductive compound with high charge dissipation suitable for effective and maintenance free earthing as mentioned below :				
	37.40.4	With 3 mtr. Pipe of 80mm outer dia. , 40mm inner dia and 14mm terminal dia. In soft rock/marshy soil with 50 kgs. (Two Bag) Back filling Compound.	23	Each	19195	441485.00
137	37.42	Supplying, installing, testing and commissioning of Lightning protection system with Early Streamer Emission (ESE), OPR (Optimized Pulse Rod) technology, of protection level -1, having a coverage range and mounted at a height as mentioned below including stainless steel mast & mounting structure kit as per specifications.				
	37.42.1	OPR 30, radius 67Mt., Height 3 Mt	1	Each	180000	180000.00
138	37.43	Supplying, installing, testing and commissioning of Lightning Discharging Counter to verify the lightning discharge occurrence.	1	Each	45000	45000.00
		TELEPHONE, LAN, TV CABLE				
139	38.1	supplying and drawing Co-axial T.V. Cable RG-6 Grade , 0.7 mm Solid Copper conductor PF Insulated , Shielded with fine tined copper braid and protected with PVC Sheathed in the existing surface / concealed ,steel / PVC. Conduit as required.	1000	Metre	28	28000.00
140	38.2	Supplying and drawing following pair of 0.5 mm size solid annealed copper conductor PVC Insulated telephone cable as per DOT Specifications in existing surface / concealed steel / PVC Conduit / Casing-N-Capping as required.				
	38.2.2	(ii) 2 Pair	100	Metre	11	1100.00
	38.2.3	(iii) 4 Pair	5000	Metre	22	110000.00
	38.2.4	(iv) 10 Pair	200	Metre	53	10600.00

141	38.3	Supply installation, testing commissioning of 0.5 mm size Solid annealed copper, Jelly Filled Telephone Cables, Polythene Insulated, Petroleum Jelly Filled with Poly-al laminate moisture barrier, Polythene Sheathed, Unarmoured Polythene Jacketed Telephone Cables as per DOT Specifications of following sizes				
	38.3.1	10 Pair	100	Metre	70	7000.00
	38.3.2	20 Pair	200	Metre	126	25200.00
	38.3.3	50 Pair	200	Metre	297	59400.00
142	38.4	Supply, Installation testing and commissioning of telephone Tag block Krone connector with enclosure and lock complete as mentioned below :-				
	38.4.1	10 Pair	5	each	263	1315.00
	38.4.2	20 Pair	10	each	273	2730.00
	38.4.3	30 Pair	10	each	297	2970.00
	38.4.4	50 Pair	2	each	341	682.00
143	38.6	Supply, fixing and testing of RJ 11 telephone jack modular (1 Module)	200	each	129	25800.00
144	38.8	Supply, fixing and testing of T.V. Outlet Modular (1Module)	30		129	3870.00
145	38.9	Supply, Installation testing and commissioning RJ - 45 Computer Jack cat 6 with shutter Modular (1Module)	100	each	491	49100.00
146	38.10	Supply, Installation testing and commissioning RJ - 45 Computer Jack cat 6 with shutter Modular (2Module)	10	each	501	5010.00
147	38.11	Suppling and drawing 4 pair shielded, 0.5 mm PVC.Insulated copper conductor un-armoured Cat-6 computer cable FR in existing surface / concealed ,steel / PVC. Conduit/Casing-N-Capping as required.	4000	per Mtr	46	184000.00
148	38.12	Supply, Installation testing and commissioning of patch cord as mentioned below :-				
	38.12.1	CAT 6 RJ45 Patch Cord F/UTP 1 Mtr.	50	each	407	20350.00
	38.12.2	CAT 6 RJ45 Patch Cord F/UTP 2 Mtr.	50	each	450	22500.00
	38.12.3	CAT 6 RJ45 Patch Cord F/UTP 3 Mtr.	5	each	585	2925.00
	38.12.4	CAT 6 RJ45 Patch Cord F/UTP 5 Mtr.	5	each	698	3490.00
149	38.13	Supply, Installation testing and commissioning of 19" Modular Patch - 1 U Patch Panel 24, RJ 45 Cat-6 connector	4	each	10926	43704.00
150	38.14	Supply, Installation testing and commissioning of 19" Modular telephone Patch Panel 24 - 1 U with RJ 11 connector	2	each	20018	40036.00
151	38.15	Supply, Installation testing and commissioning of wall mounting rack, for computer switches complete as mentioned below :-				
	38.15.1	6U cabinet 371.30X600X500, wall mounting with power supply and Fan etc.	1	each	13187	13187.00
	38.15.2	9U cabinet 504.65X600X500, wall mounting with power supply and Fan etc.	1	each	15809	15809.00
		UNDER GROUND CABLES				
152	41.1	Supply of XLPE Insulated power cable (confirming IS-7098 Part-I) 1100 Volt grade, 1 core /2 core /3½ core/4 core ISI MARKED with Alu. Stranded /solid conductor				
	41.1.6	ARMOURED 3 Core				
	41.1.6.1	6 Sq.mm.	100	Metre	127	12700.00
	41.1.6.2	10 Sq.mm.	200	Metre	151	30200.00
	41.1.6.3	16 Sq.mm.	100	Metre	168	16800.00

	41.1.8	3½ CORE ARMoured				
	41.1.8.1	25 Sq.mm	50	Metre	252	12600.00
	41.1.8.2	35 Sq.mm	200	Metre	311	62200.00
	41.1.8.3	50 Sq.mm	50	Metre	401	20050.00
	41.1.8.4	70 Sq.mm	150	Metre	538	80700.00
	41.1.8.5	95 Sq.mm.	50	Metre	677	33850.00
	41.1.8.6	120 Sq.mm.	50	Metre	846	42300.00
	41.1.8.7	150 Sq.mm.	1200	Metre	1003	1203600.00
	41.1.8.8	185 Sq.mm.	1500	Metre	1240	1860000.00
	41.1.8.9	240 Sq.mm.	50	Metre	1567	78350.00
	41.1.8.10	300 Sq.mm.	1500	Metre	1909	2863500.00
	41.1.10	4 CORE ARMoured				
	41.1.10.1	6 Sq.mm.	200	Metre	140	28000.00
	41.1.10.2	10 Sq.mm.	4000	Metre	181	724000.00
	41.1.10.3	16 Sq.mm.	1000	Metre	197	197000.00
	41.1.10.4	25 Sq.mm	50	Metre	272	13600.00
		BRASS COMPRESSION GLAND				
153	41.5	Supplying and fixing heavy duty cable gland for P.V.C. insulated armoured cable with brass washer, Rubber ring complete erected with cable and lead connection etc. as per specification complete.				
	41.5.1	Gland Size 22mm suitable for cable 2,3,3½ & 4 x up to 6 Sq.mm	200	Each	34	6800.00
	41.5.2	Gland Size 22mm suitable for cable 2/3, 3½, 2/4 x 10 Sq.mm or 2x 16 Sq.mm	100	Each	46	4600.00
	41.5.3	Gland size 28mm for 3/4 x 16 Sq.mm	100	Each	70	7000.00
	41.5.4	Gland size 32mm for 2/3, 3½, 4 x 25 Sq.mm OR 2/3, 3½ x 35 Sq.mm OR 2/3 x 50 Sq.mm.	50	Each	80	4000.00
	41.5.5	Gland size 38mm 3½ x 70 Sq.mm, 3x95 Sq.mm	20	Each	115	2300.00
	41.5.6	Gland Size 45mm 3/3½ x 120 Sq.mm, 3½ x 95 Sq.mm 3 x 150 Sq.mm.	20	Each	137	2740.00
	41.5.7	Gland Size 50 mm 3½ x 150 Sq.mm, 3 x 185 Sq.mm	20	Each	177	3540.00
	41.5.8	Gland Size 57mm 3 x 225 Sq.mm, 3 ½ x 185 Sq.mm	20	Each	244	4880.00
	41.5.9	Gland Size 70mm 3 x 240 Sq.mm, 3½ x 300 Sq.mm	20	Each	333	6660.00
154	41.6	Supplying and fixing ferrules as per IS - specification suitable for following size of cable for circuit identification including connection as required complete.				
		For Conductor Size-				
	41.6.1	2.5 to 6.00 Sq.mm	2000	Each	1	2000.00
	41.6.2	10.00 Sq.mm	500	Each	2	1000.00
	41.6.3	16.00 Sq.mm	200	Each	2	400.00
	41.6.4	25.00 Sq.mm	200	Each	3	600.00
	41.6.5	35.00 Sq.mm	200	Each	3	600.00
	41.6.6	50.00 Sq.mm	50	Each	5	250.00
	41.6.7	70.00 Sq.mm	20	Each	8	160.00
	41.6.8	95.00 Sq.mm	20	Each	9	180.00
	41.6.9	120.00 Sq.mm	20	Each	13	260.00
	41.6.10	150.00 Sq.mm	50	Each	18	900.00
	41.6.11	185.00 Sq.mm	50	Each	22	1100.00
	41.6.12	240.00 Sq.mm	20	Each	36	720.00

	41.6.13	300.00 Sq.mm	50	Each	52	2600.00
		LUGS:-				
155	41.7	Supplying and fixing cramping type Alum. lugs as per I.S.S. Specification suitable for following size of cable with Alu. /Copper solid/stranded conductor evenly cramped with high/pressure tool and connected to switch gear/Bus/M.C.C.B./M.C.B. etc. as required complete.				
		For Conductor Size-				
	41.7.1	6mm to 16 Sq.mm	210	Each	2	420.00
	41.7.2	25 Sq.mm	20	Each	4	80.00
	41.7.3	35 Sq.mm	50	Each	5	250.00
	41.7.4	50 Sq.mm	20	Each	8	160.00
	41.7.5	70 Sq.mm	30	Each	11	330.00
	41.7.6	95 Sq.mm.	20	Each	16	320.00
	41.7.7	120 Sq.mm.	20	Each	21	420.00
	41.7.8	150 Sq.mm.	50	Each	30	1500.00
	41.7.9	180 Sq.mm	50	Each	40	2000.00
	41.7.10	240 Sq.mm.	20	Each	55	1100.00
	41.7.11	300 Sq.mm.	50	Each	72	3600.00
		CABLE LAYING				
156	41.15	Laying of one number armoured / unarmoured power cable 1.1kV grade of size not exceeding 25 Sq.mm direct in ground including excavation in all soil / murrum / soft rock, sand cushioning, protective covering and refilling the pit etc. as required.	100	Metre	202	20200.00
157	41.16	Laying of one number armoured / unarmoured power cable 1.1.kV grade of size exceeding 25Sq.mm but not exceeding 120 Sq.mm direct in ground including excavation in all soil / murrum / soft rock, sand cushioning, protective covering and refilling the pit etc. as required.	100	Metre	211	21100.00
158	41.17	Laying of one number armoured / unarmoured cable 1.1.kV grade of size exceeding 120 Sq mm but not exceeding 400 Sq.mm direct in ground including excavation in all soil / murrum / soft rock, and sand cushioning protective covering and refilling the pit etc. as required.	100	Metre	229	22900.00
159	41.18	Laying of one number additional armoured / unarmoured power cable 1.1kV grade of size not exceeding 25Sq.mm direct in ground in the same trench in one tier horizontal formation including excavation in all soil / murrum / soft rock, sand cushioning protective covering and refilling the pit etc. as required.	100	Metre	111	11100.00
160	41.19	Laying of one number additional armoured / unarmoured power cable 1.1kV grade of size exceeding 25 Sq.mm but not exceeding 120 Sq.mm direct in ground in the same trench in one tier horizontal formation including excavation, sand cushioning, protective covering and refilling the pit etc. as required.	100	Metre	120	12000.00

161	41.20	Laying of one number additional armoured / unarmoured power cable 1.1kV grade of size exceeding 120 Sq mm but not exceeding 400 Sq mm direct in ground in the same trench in one tier horizontal formation including excavation, sand cushioning, protective covering and refilling the pit etc. as required.	100	Metre	138	13800.00
162	41.21	Laying of one number armoured / unarmoured power cable 1:1 kV grade of size not exceeding 25 Sq.mm in the existing RCC Hume/Stone ware/G.I. pipe / surface in existing trench as required.	50	Metre	25	1250.00
163	41.22	Laying of one number armoured / unarmoured power cable 1.1 kV grade of size exceeding 25 Sq.mm but not exceeding 400 Sq mm in the existing RCC Hume /Stone ware/G.I. Pipe/ surface in existing trench as required.	50	Metre	43	2150.00
164	41.23	Laying of one number armoured / unarmoured power cable 1.1 kV grade of size not exceeding 25 Sq.mm in th existing masonry open duct as required.	50	Metre	20	1000.00
165	41.24	Laying of one number armoured / unarmoured power cable 1.1kV grade of size exceeding 25Sq.mm but not exceeding 400 Sq.mm in the existing masonry open duct as required.	200	Metre	43	8600.00
166	41.43	Laying of one number armoured / unarmoured cable 1.1kV grade of size not exceeding 25 Sq.mm on surface in existing trench etc. as required.	50	Metre	20	1000.00
167	41.44	Laying of one number armoured / unarmoured cable 1.1kV grade of size exceeding 25 Sq.mm but not exceeding 120 Sq.mm on surface in existing trench etc. as required.	100	Metre	34	3400.00
168	41.45	Laying of one number armoured / unarmoured cable 1.1kV grade of size exceeding 120 Sq.mm but not exceeding 400 Sq.mm on surface in existing trench etc. as required.	100	Metre	43	4300.00
169	41.46	Excavation of the trenches in Hard Rock not exceeding 1.5 metre in width and lift upto 1.5 metre including getting out the excavated metal and disposal of surplus excavated soil/metal as directed within the lead of 50 metre (without blasting)	400	Cu. Mtr.	506	202400.00
170	41.47	Laying of one number armoured / unarmoured cable 1.1kV grade of size not exceeding 25 Sq.mm on wall/truss with approved type of iron clamps etc. as required.	5250	Metre	40	210000.00
171	41.48	Laying of one number armoured / unarmoured cable 1.1kV grade of size exceeding 25 Sq.mm but not exceeding 120 Sq.mm on wall/truss with approved type of iron clamps etc. as required.	100	Metre	90	9000.00
172	41.49	Laying of one number armoured / unarmoured cable 1.1kV grade of size exceeding 120 Sq.mm but not exceeding 400 Sq.mm on wall/truss with approved type of iron clamps etc. as required.	3800	Metre	105	399000.00

173	41.50	Laying of underground cable armoured./ unarmoured as per specification in air suspended on existing approved type of iron clamps, G.I wire 7/1.6mm & shackle insulator / insulated strip complete.				
	41.50.1	1/2 / 3 / 4 Core cable up to 16 Sq.mm	50	Metre	11	550.00
	41.50.2	1 / 2 / 3 / 3½ / 4 Core cable 25 Sq.mm to 120 Sq.mm	50	Metre	20	1000.00
	41.50.3	1 / 2 / 3 / 3½ / 4 Core cable 150 Sq.mm and above	50	Metre	34	1700.00
174	41.51	Laying of cement concrete or approved type of cable cover/flag stone over L.T. / H.T. cable & refill trench as per specification.	200	Metre	11	2200.00
175	41.52	Supply of approved type cable cover flag stone 200mm width & 32mm to 50mm thick of required length inclusive of transport as required.	50	Metre	45	2250.00
176	41.53	Supply & Fixing Cable Route Marker round / square size 100mm, 5mm. Thick, G.I. Plate duly bolted/welded on 35mm x 35mm x 5mm angle iron 60cm long including excavation, grouting in cement concrete 1:2:4 (1cement and 2 coarse sand :4 graded stone aggregate 20mm nominal size) foundation of size 20cm x 20cm x 30cm duly embedded in ground 30cm depth or as required.	20	Each	250	5000.00
177	41.54	Supply and erection of hot dip G.I. cable tray perforation not more than 17.5% for specific dimensions along with tees, bends.. The cable tray shall be hang from ceiling/ fixed to wall with necessary angle/flat iron / hanging rod, for ceiling suspensions, clamps, anchor fastner, nuts, bolts, washers, not mor than 1.5 mtr. apart complete as per specification to complete the job. The tray shall be as follows :-				
	41.54.1	100 x 50 mm x 1.6mm thick	100	per Mtr	495	49500.00
	41.54.2	150 x 50 mm x 1.6mm thick	200	per Mtr	572	114400.00
	41.54.3	300 x 50 mm x 1.6mm thick	1500	per Mtr	844	1266000.00
	41.54.4	450 x 50 mm x 2 mm thick	750	per Mtr	1296	972000.00
	41.54.5	600 x 50 mm 2 mm thick	1500	per Mtr	1603	2404500.00
		EXTERNAL ELECTRIFICATION AND OVERHEAD LINES				
		SUPPORT FOR OVER HEAD LINE				
178	42.2	Supply of support for overhead line RS joist /H' Beam of I.S. standard including drilling of required hole etc. complete as required.				
	42.2.6	H - Beam 152 x 152mm, Std weight 37.1 Kg / Mtr	52	Metre	2545	132340.00
179	42.6	Supplying and drawing of stranded Aluminium Conductor Steel Reinforced (ACSR) conforming to IS:398-1976 of approved make, stringing, making off complete with binding at existing insulator, jointing, jumpering, tearing off, connecting etc. as required and clearing of obstacles (if any) etc.				
	42.6.4	ACSR 0.075 sq inch (80 Sq.mm Al. EQ.) - (Raccoon)	0.1	Km.	73831	7383.10

180	42.8	Supplying and drawing guard wire/earth wire/bearer wire 13mm ² (4mm. Dia) G.I. including stringing, binding at existing insulators or brackets, jointing, jumpering, connecting & cradle etc. as required and clearing of obstacles (if any)	0.1	Km.	14690	1469.00
181	42.9	Supplying and drawing guard wire/earth wire/bearer wire 18.62 mm ² (4.87mm. Dia / 6swg) G.I. including stringing, binding at existing insulators or brackets, jointing, jumpering, connecting & cradle etc. as required and clearing of obstacles (if any)	0.1	Km.	17198	1719.80
182	42.10	Supplying and drawing G.I. bearer wire 7/1.6mm including stringing, binding at existing brackets / pole, etc. for cable support in air as required and clearing of obstacles (if any)	15	PM	17	255.00
183	42.14	Erection of RS Joist pole / 'H' Beam / steel tubular / steel rail pole of length exceeding 10 metres but not exceeding 13 metres in cement concrete M-10 (1 cement:3 core sand: 6 graded stone aggregate 40mm nominal size) base, foundation, muffing including excavation and back refilling etc. as required.	4	Each	4027	16108.00
184	42.20	Supplying and erection of stay set complete (Galvanized) 19mm. Dia x 1.8 metre long stay rod anchor plate of size 300 mm x 300 mm x 7.5mm, thimble, stay clamps, turn buckle (19mm dia x 600mm), 7/4.00mm dia G.I. Stay wire etc. in cement concrete M-10 (1 Cement : 3 Coarse sand : 6 graded stone aggregate 40mm nominal size) foundation including excavation and refilling etc. as required.	4	Each	3906	15624.00
185	42.36	Supply, fabrication and erection of Angle/Chanel/Flat iron fitting for over head line & sub-station etc such as 'D' bracket, cross arms, top clamp, 'V' cross arms, Back/Support clamps or other similar work etc. including nut bolts of required size, making holes, fabrication, welding, cutting, etc. and painting with one coat of red oxide paint & two coat of aluminium paint as required as per specification.	250	Kg.	80	20000.00
186	42.40	Supplying and erection of 33kV Porcelain pin insulator complete with long steel head G.I. pin, nut, washer etc. as required	6	Each	503	3018.00
187	42.41	Supplying and erection of a set of three 11kV porcelain disc insulators for 33kV overhead lines with galvanized insulator fittings, ball and socket type, and complete with galvanized strain clamp, bolts, nuts, washers etc. as required.	3	Each	1212	3636.00
188	42.43	Labour for erection of 11/33kV Porcelain pin insulator complete with hardware as required.	6	Each	91	546.00
189	42.45	Labour for erection of a set of three/ four 11kV porcelain disc insulators for 33kV overhead lines complete with hardware as required.	3	Each	219	657.00

190	42.55	Supplying and erection of single piece non-linear resistor polymer type lightning arrester (Set of 3 Nos.) for 3 wire, 33kV overhead lines/ sub-station with rated voltage of 27kV (rms) with a nominal discharge current rating of 10 KA and complete with galvanized clamping arrangement, G.I. bolts, nuts, washer etc. as required.	1	Set	36006	36006.00
191	42.56	Supplying installing, testing & commissioning of outdoor H.T., AB switch assembly set gang operated with brass contact parts, including required GI pipe operating rod, handle & locking arrangement on On-Off position conforming to IS complete with required material and installing on existing DP structure to complete the job as required as per specification.(Set of 3 nos.)				
	42.56.2	33kV, 600A.	1	set	21291	21291.00
192	42.57	Supplying installing, testing & commissioning D.O. fuse assembly with brass part contact for 33 or 11/0.4 KV DP Structure set of 3 Nos. with fuse barrel i/c required fuse element & other materials as per specification on existing D.P. structure as required.				
	42.57.2	33kV	1	set	14485	14485.00
193	42.61	Supply & fixing anti climbing device with 2 ply G.I. barbed wire 1 Kg. per pole complete as per specification.	5	Each	126	630.00
194	42.62	Supply, laying and fixing of G.I. earth coil of 4mm dia G.I. wire having 120 turns of nearly 50mm dia. and 3 mt. long tail in existing pit duly earthed with pole etc complete as required as per specification.	4	Each	220	880.00
195	42.63	Supplying and fixing 33/11/0.4 KV enamel coated danger board size 200x250mm with clamp on existing HT/LT structure / poles.	4	Each	148	592.00
196	42.68	Supplying and fixing Limit switch with accessories & arrangement on existing HT/LT structure / poles AB switch handle for inter locking between distribution panel main incoming LT switch gear/ system as required to complete the job.	1	each	1778	1778.00
197	42.69	Supply & fixing fencing of chain link mesh 100 x 100 mm, 12 SWG GI wire for for D.P. structure electric sub-station including single post of angle iron size 50x50x5mm, 2.5 mt long should be provided up to 2.00 mt. apart or as required .The panel frame with required angle iron/ flat iron members /cross members including mesh welded in frame panel, shall be erected between the post. The angle iron post shall be erected in cement concrete 1:2:4 (20 mm graded metal) foundation, including excavation of pit and refilling the same. The fencing shall be provided with one entrance gate including locking arrangement as required as per specification. The height of fencing shall be 2 mt. above ground level. Fencing shall be painted with required shade.	30	Sq.Mt	1110	33300.00
198	42.71	Supplying & fixing of Fire Extinguisher/Refills as per IS specification				

	42.71.1	ABC type duly refilled 6 Kg & ready to use	6	each	3616	21696.00
	42.71.2	ABC type duly refilled 4 Kg & ready to use	2	each	3277	6554.00
	42.71.5	4 buckets set with sand, self supported M.S. stand i/c shed duly painted with red colour as per IS.	2	each	4407	8814.00
199	42.72	Supply of Rubber mat 2 x 1.0Mtr, 1100V Tested	40	each	1582	63280.00
200	42.74	Supply of Hand Gloves 33KV Tested	2	pair	938	1876.00
201	42.75	Supply of Fiber Discharge Rod I/C Connection copper Lead Tested	1	each	2995	2995.00
202	42.76	Supply of Fiber D.O Operating Rod for 11 / 33KV Tested	1	each	2656	2656.00
203	42.77	Supply of First Aid Box complete with medicine & bandage as per specification.	2	set	565	1130.00
204	42.78	Supply of shock instruction chart duly framed with glass, as reqd.	3	each	339	1017.00
205	42.83	Collection and spreading of metal dust, Murom and 40mm graded hard metal in sub-station yard or as required as mentioned below -				
	42.83.3	(iii) Metal 40 mm	2	Cu. Mt.	1087	2174.00
		Inter Com/EPABX Systems				
206	43.A.1	Supply Installation, testing & Commissioning of EPABX System consist, No. of Extension, No. of Junction No. of Expandable ports, Operator console. Current on max. load with ISDN compatible of approved make and labor as required as per				
	43.A.1.1	EPABX System consists of 16Nos Extensions 8Nos Junctions, & up to 64nos .Expandable e ports with one Operator Console,	1	each	64894	64894.00
	43.A.2	Supplying & fixing Float cum boost charges for EPABX System of approved make with all necessary material as required as per Specification.				
	43.A.2.1	10 Amp, 48 V Float cum boost charger.	1	each	19316	19316.00
207	43.A.3	Supplying fixing of Essential additional Accessories to EPABX System of approved make with all necessary material as required as per Specification.				
	43.A.3.1	EPABX E-1 Card	1	each	28393	28393.00
	43.A.3.4	EPABX- Operator console	1	each	6475	6475.00
		DIESEL GENERATING SET				
208	43.B.19	Supply Installation, testing & Commissioning of . Diesel Generating Set Three phase, water cooled with AMF control panel. 400KVA 415V.	1	each	3805178	3805178.00
		FIRE DETECTION AND ALARM SYSTEM				
	43.C.A	MICROPROCESSOR BASED, ADDRESSABLE				

209	43.C.A.2	Supply Installation ,Testing & Commissioning of 4 Loop Microprocessor based intelligent and electronically Addressable, modular, with networking card & printer port- loops Panel (expandable) with each loop capacity of 159 detectors.· Fire alarm control panel with 5.7 inch touch screen LCD display, multiple access levels 10,000 event historylogs in the non volatile memory (EEPROM). The panel should be modular microprocessor based m nature and should be expandable from single loop to up to 32loops. The panel shall have 240V AC power supply, Automatic battery charger, 24 V, ceiled lead acid maintenance free batteries sufficient for 24 hours normal working and then be capable of operating the system for 30 minutes during emergency condition .Provision for integration to BMS Back net software. The panel shall be EN 54 /UL Certification.	1	each	471900	471900.00
210	43.C.A.3	·Supply Installation, Testing and Commissioning of Loop Card LSN 0300 A LSN Module.	4	each	37450	149800.00
211	43.C.A.4	Supply, Installation, Testing and Commissioning of Active and networkable repeater panel with LCD display complete system function keys for programming and control like system reset, alarm acknowledgement, alarm silence, trouble acknowledgement UL /EN54 certified.	1	each	146024	146024.00
212	43.C.A.5	Supply, Installation, Testing and Commissioning of addressable -Optical Detector with Inbuilt Isolator, Automatic addressing. Shall be UL/EN 54 certified.	100	each	4789	478900.00
213	43.C.A.6	Supply, Installation, Testing and Commissioning of addressable-Optical Thermal Detector with Inbuilt Isolator, Automatic addressing. Shall be UL/EN54 certified	50	each	5445	272250.00
214	43.C.A.8	Supply, Installation, Testing and Commissioning of addressable- Automatic Dual LED Multi detector with two integrated light -scattering smoke sensors using LEDs with different colors /wavelengths (blue/infrared) to avoid False alarm & With Thermal sensor, Inbuilt Isolator, Automatic addressing. Shall be UL /EN54 certified	50	each	8152	407600.00
215	43.C.A.10	Supply, Installation, Testing and Commissioning of Indoor addressable manual break glass unit (Double action) with inbuilt isolators, with flexible network structures & necessary fixing arrangements with key complete as required. Shall be UL/EN54 certified.	20	each	5182	103640.00
216	43.C.A.11	Supply, Installation, Testing and Commissioning of Outdoor addressable manual break glass unit (Double action) with inbuilt isolators, with flexible network structures & necessary fixing arrangements with key complete as required. Shall be UL/EN54 certified	2	each	10926	21852.00

217	43.C.A.1 2	Supply, Installation, Testing and Commissioning of Indoor Stand alone Loop Powered detector base sounder with inbuilt isolators & with 32 different tone variants selection options & adjustable sound pressure by 5 levels, the sound pressure 92.1 dB(A), Shall be UL/EN54 certified	20	each	8878	177560.00
218	43.C.A.1 3	Supply, Installation, Testing and Commissioning of Outdoor Stand alone Loop Powered detector base sounder with inbuilt isolators & with 32 different tone variants selection options & adjustable sound pressure by 5 levels, the sound pressure 92.1 dB(A), Shall be UL/EN54 certified	2	each	10639	21278.00
219	43.C.A.1 6	Supply, Installation, Testing and Commissioning of Addressable Control Relay Module with inbuilt isolators & with flexible network structures with a maximum: switching current of 1A@ 30V DC. Shall be UL/EN54 certified	2	each	18150	36300.00
220	43.C.A.1 9	Supply, Installation, Testing and Commissioning of Response Indicator shall be UL/EN54	50	each	145	7250.00
		NON SOR ITEMS				
	NON SOR	CCTV SYSTEM				
221	NON SOR	Supply, installation, testing and commissioning of 24 Port POE+ Network Switch (Makes Cisco/HP) (FOR CCTV AND DATA)	6	Nos.	29354	176124.00
222	NON SOR	Supply , installation, Testing & Commissioning of 2 MP Full HD IR Array Dome Camera - 30Mtr.1/3" 2MP PS CMOS Image Sensor; Max 25fps@1080P; H.264 and MJPEG Triple-stream Encoding; DWDR, Day/Night(ICR), 2D/3D-DNR, AWB, AGC, BLC; 2.8mm fixed lens;IR Range of 30 Mtrs, IP66, PoE ;Mobile Software for Android, iOS;CMS Software: IVMS (Makes Axis/Pelco/CP Plus Indigo series)	95	Each	5414	514330.00
223	NON SOR	16 Channel NVR Up to 4/8/16 channel with 1080P realtime live view H.264/MJPEG dual codec decoding Max 48Mbps for NVR2204/2208, 80Mbps for NVR2216 ; HDMI / VGA simultaneous video output. All channel synchronous realtime playback, GRID interface ; Support Multi-brand network cameras: Dahua, Arecont Vision, AXIS, Bosch, Brickcom, Canon, CP Plus, Honeywell, Panasonic, Pelco, Samsung, Sanyo, Sony, Videosec, Vivotek and etc. ONVIF Version 2. 0 conformance 3D intelligent positioning with Dahua PTZ camera Support 2 SATA HDD up to 8TB, 2 USB2.0 Multiple network monitoring: Web viewer, CMS(DSS/PSS) & DMSS	6	Each	21045	126270.00
224	NON SOR	Supply and fixing of 3 TB surveillance HDD	6	Each	9775	58650.00
225	NON SOR	Supply and fixing of power supply for CCTV system, 16 CH (SMPS).	1	Each	3715	3715.00
226	NON SOR	Supply and fixing of 32" LED TV for CCTV monitoring.	1	Each	18242	18242.00
	NON SOR	SOUND & SPEAKER SYSTEM				

227	NON SOR	Supply, installation, testing and commissioning of 2cx1.5 sq. mm .shielded Armoured screened Black Speaker Cable in already laid PVC conduit (HMS). (Makes RR Kabel/Lapp/Beldon)	1560	Mtr	275	429000.00
228	NON SOR	Supply, installation, testing and commissioning of 1X250W Amplifier. (Makes Ahuja / Bosch / Philips)	1	Each	19541	19541.00
229	NON SOR	Supply, installation, testing and commissioning of 6W Ceiling Speaker with max SPL1M/1W 96dB . Frequency response of 80Hz-20KHz with a dispersion angle of 160 deg. The speaker should have tapings at 6W/3W/1.5W. (Makes Bosch / Honeywell PAVA/ Ateis)	60	Nos.	1650	99000.00
230	NON SOR	Supply, installation, testing and commissioning of 20W Wall mount with max SPL1M/1W 101/92 dB. Frequency response of 160Hz-20KHz. The speaker should have tapings at 20/10 W. (Makes Ahuja / Bosch / Philips)	6	Nos.	3499	20994.00
	NON SOR	SWITCHGEAR				
231	NON SOR	Supply, installation, testing and commissioning of Capacitor Duty Contactors suitable to handle the Inrush current of capacitor bank (L&T TYPE MO C OR EQ)				
	a	10 KVAR	6	EACH	2075	12450.00
	b	25 KVAR	4	EACH	3800	15200.00
	c	50 KVAR	20	EACH	10000	200000.00
232	NON SOR	Supply, installation, testing and commissioning of 3 pole AC3 Duty Contactors (L&T TYPE MNX OR EQ)				
	a	25 Amp.	25	EACH	1300	32500.00
	b	32 Amp.	20	EACH	2700	54000.00
	c	50 Amp.	20	EACH	5800	116000.00
	d	140 Amp.	1	EACH	20000	20000.00
	e	300 Amp.	2	EACH	35000	70000.00
233	NON SOR	Supply, installation, testing and commissioning of 4 pole power Contactor 25A (L&T MAKE MCX 11 OR EQ)	2	EACH	2200	4400.00
234	NON SOR	Supply, installation, testing and commissioning of Thermal Over Load Relays (L&T TYPE MN OR EQ)				
	a	9 to 15 Amp.	15	EACH	1400	21000.00
	b	14 to 23 Amp.	10	EACH	1550	15500.00
	c	36 to 52 Amp.	6	EACH	3500	21000.00
235	NON SOR	Supply, installation, testing and commissioning of Microprocessor Based APFC Relay with set of CTs				
	a	12 STAGE (L&T ETACON OR EQ)	2	EACH	18550	37100.00
236	NON SOR	Supply, installation, testing and commissioning of following METERS :-				

	a	3 Phase 4 Wire Digital Multifunction Meter Class 1 (V, A, Hz, PF, KVA, KVAH, KW, KWH, THD & WITH RS 485 COMMUNICATION PORT) suitable for 415V, 50Hz AC Supply with Programable CT Ratio (Primary 50A to 2000A and Secondary 5A) with set of CTs (L&T WC4410310000 OR EQ)	6	EACH	10700	64200.00
	b	3 Phase 4 Wire Digital KWH Meter Class - 1, suitable for 415V, 50Hz AC Supply with Programable CT Ratio (Primary 50A to 2000A and Secondary 5A) with RS 485 Communication PORT (L&T WM301BC7D10 OR EQ)	3	EACH	4200	12600.00
	c	3 Phase 4 Wire Digital KW Meter Class - 1, suitable for 415V, 50Hz AC Supply with Programable CT Ratio (Primary 50A to 2000A and Secondary 5A) with set of CTs	3	EACH	2500	7500.00
	d	3 Phase 4 Wire Digital Multifunction Meter Dual Source Class 0.5 (V, A, Hz, PF, KW, KWH, On hours & WITH RS 485 COMMUNICATION PORT) suitable for 415V, 50Hz AC Supply with Programable CT Ratio (Primary 30A to 2000A and Secondary 5A) with set of CTs (L&T MAKE WC4040210000 OR EQ)	100	EACH	5000	500000.00
	d	Digital MD controller (L&T MAKE WL6000310000 OR EQ)	1	EACH	25000	25000.00
237	NON SOR	Supply, installation, testing and commissioning of ANLOG TIME SWITCH (L&T OR EQ)	2	EACH	2500	5000.00
238	NON SOR	Supply, installation, testing and commissioning of 12 window Annuciation Panel for following indication / lamps :- (a) Set fails to start. (b) Engine overheat. (c) High Temperature. (d) Low lube oil pressure. (e) Over Speed (f) Low Fuel oil level. (g) Cooling water Flow failure. (h) Breaker Trip. (i) Generator fault. (j) DC control supply failure. (k) Spare. (l) Spare. (EAPL / MINILAC OR EQ)	3	EACH	10000	30000.00
239	NON SOR	Supply, installation, testing and commissioning of HOOTER	3	EACH	1200	3600.00
240	NON SOR	Supply, installation, testing and commissioning of Push Button (L&T OR EQ)	50	EACH	150	7500.00
241	NON SOR	Supply, installation, testing and commissioning of Auto Manual selector switch (L&T OR EQ)	30	EACH	400	12000.00
242	NON SOR	Supply, installation, testing and commissioning of TNC switch	5	EACH	1000	5000.00
243	NON SOR	Supply, installation, testing and commissioning of Speed Controller for VFD	4	EACH	1500	6000.00
244	NON SOR	Supply, installation, testing and commissioning of 22.5KW VFD (L&T OR EQ)	4	EACH	85000	340000.00
245	NON SOR	Supply, installation, testing and commissioning of following Relays :-				
	a	Hand Reset Master Trip Relay (C&S / ESSUN OR EQ)	3	EACH	8000	24000.00
	b	Directional Current Relay (C&S / ESSUN OR EQ)	3	EACH	10000	30000.00
	c	Trip Circuit Supervision Relay (C&S / ESSUN OR EQ)	3	EACH	7500	22500.00

	d	Voltage restrained O/C & E/F Relay, 2 O/C + 1 E/F Relay with high set instantaneous O/C & E/F with 3 Nos suitable CTs of CL-5P10. (C&S / ESSUN OR EQ)	3	EACH	17500	52500.00
	e	Over Voltage Relay & Under Voltage Relay with 415/110V, 100 VA / Phase PT & control MCB in incoming & outgoing side of PT (MINILAC / L&T OR EQ)	3	EACH	3000	9000.00
	f	Automatic DG controller, PLC, Battery Charger and other accesories for DG synchronizing	3	SET	400000	1200000.00
	g	Controller & accesories for interlocking and operations of EDO ACB's	8	SET	35000	280000.00
246	NON SOR	Supply, installation, testing and commissioning of 3200A FP MDO ACB, LSIG, Icu=lcs=lcw=50KA for 1 sec (L&T MAKE TYPE OMEGA OR EQ)	1	EACH	330000	330000.00
247	NON SOR	Supply, installation, testing and commissioning of Panel Cooling Fan with loovers & filters	20	EACH	4600	92000.00
248	NON SOR	Supply, installation, testing and commissioning of 7% tuned Harmonic block Reactors	1100	PER KVAR	400	440000.00
	NON SOR	TRANSFORMER & PANEL				
249	NON SOR	Supply, installing, testing & commissioning of 36 KV, 800 A, indoor type VCB complete with 3 Nos. 50/5/5 A CT's for metering and protection, suitable for 50 Hz, 3 Phase operation with Motor charged, stored energy, spring operated mechanism with closing coil, tripping coils, complete with control & relay panel for 33 KV VCB consisting of PVC circuit labels. Annunciator facia with test, accept, reset push buttons, cluster LED type indicating lamps, digital type ammeter with selector switch, test terminal blocks & protective relays such as IDMT o/c relay with inst. High set, instantaneous earth fault relay, over voltage relay, under voltage relay, trip circuit supervision relay, Auxilliary realy, Differential realy, High speed tripping relay, etc. complete as per specifications.	1	EACH	1100000	1100000
250	NON SOR	Supply, installation, testing and commissioning of 33 kV/ 415V, 3 phase, 50 Hz delta/star connected, indoor dry type air cooled transformer, complete with off circuit tap links with + 7.5 % to -10%, tapping at the step of 2.5% bi-directional roller, diagrams & rating plate & Winding temperature indicator, lifting lugs, H. T. cable box/ LT with bus duct termination etc. complete as per specification and relevant IS standards.				
	A	2000 KVA.	1	EACH	3400000	3400000
	NON SOR	DG SETS				

251	NON SOR	Supply, installation, testing and commissioning of 750 KVA diesel generator set with electronic governor completely compatible to run with AMF & autosynchronizing and auto load shearing operation complete with all accessories mentioned in "Specifications" with sound proof enclosures. Job shall include all accessories and equipments required to complete the job in all respects i.e. fuel piping, exhaust piping, insulation of exhaust piping etc.	2	EACH	6000000	12000000
	NON SOR	SOLAR POWER				
252	NON SOR	ON GRID SYSTEM 25 KWP [Required 2500 sqft space (shadowless) on terrace] (Solar System)	1	SET	2500000	2500000
		Supply Installation, testing & Commissioning of 25KW peak roof top grid synchronized solar system without battery bank.				
		250 wp solar modules x 100 Nos. (250 wp x 100 Nos. = 25 kwp)				
		3 Phase string inverter 25 KW - 1 No.				
		DC fuses, SPD and cabling from modules to string inverter - 1 Set.				
		Solar AC DB - 1 Set				
		Hot dipped GI Structure for mounting of Solar modules - 1 Set.				
		The system shall comply with Anti islanding requirement				
TOTAL ELECTRICAL WORK (B)						68210508
<u>SANITARY, PLUMBING, DRAINAGE AND STP WORK</u>						
253	17.5	Providing and fixing white vitreous china extended wall mounting water closet of size 780x370x690 mm of approved shape including providing and fixing white vitreous china cistern with dual flush fitting, of flushing capacity 3 litre/6 litre (adjustable to 4 litre/8 litres), including seat cover, and cistern fittings, nuts, bolts and gasket etc complete.	77	each	10761	828597
254	25.3	Providing and fixing white vitreous china extended Wall Mounted Anti germ Fluoro-Polymer Coated water closet Size 350 X 360 X 545mm of approved shape (Wall Hung W. C. pan size 350 X 360 X 545mm) with soft closing seat cover, and 7.2 litre Low level slim dual flushing, PP (Poly Propylene) made 80 mm thick consealed flushing cistern, flushing capacity 3 litre/6 litre, with all fittings and fixtures complete including cutting and making good the wall and floors wherever required :				
	25.3.1	Anti germ Fluoro-Polymer Coated (neno coating) Wall hung water closet Size 350 X 360 X 545mm with solid poly propelyne made soft closing seat cover.	19	each	21040	399760

255	25.7	Providing and fixing white vitreous china type Anti germ Fluoro-Polymer Coated Wash Basin size 160x580x450mm with C.I. Brackets, 15 mm C. P. wall mounted pressmatic pillar cock auto closing system (decol technology), 15mm quarter turn angular stop cock, 32 mm C.P. brass made waste coupling length 130mm and 32 mm C.P. Brass Made Bottle Trap size 200x300mm fittings and fixtures complete including Painting of fittings and cutting and making good the wall and floors wherever required :				
	25.7.1	White Vitreous China Anti germ Fluoro-Polymer Coated Wash Basin Size 160x580x450 mm with basin mounted pressmatic pillar cock auto closing system (decol technology).	6	each	13520	81120
256	25.8	Providing and fixing white vitreous china type Anti germ Fluoro-Polymer Coated Wash Basin size 190x600x435mm with C.I. Brackets, 15 mm C. P. wall mounted pressmatic pillar cock auto closing system (decol technology), 32 mm C.P. brass made waste coupling length 130mm and 32 mm C.P. Brass Made Bottle Trap size 200x300mm fittings and fixtures complete including Painting of fittings and cutting and making good the wall and floors wherever required :				
	25.8.1	White Vitreous China Anti germ Fluoro-Polymer Coated Wash Basin Size 190x600x435mm with wall mounted pressmatic pillar cock auto closing system (decol technology).	79	each	17314	1367806
257	25.11	Providing and fixing white vitreous china Flat Back Anti germ Fluoro-Polymer Coated urinal (Inbuilt spreaders, Inbuilt Bottle trap and inbuilt ceramic Waste coupling) Size 670 X 330 X325 mm with 15mm Brass made presmatic auto closing consealed urinal flush valve with wall flange (Decol technology, 400000 operation warranted) complete including painting of fittings and brackets, cutting and making good the wall and floors wherever required :				
	25.11.1	White Vitreous China Anti germ Fluoro-Polymer Coated Urinal Size 670 X 330 X325 mm with 15mm Brass made presmatic auto closing consealed urinal flush valve with wall flange (Decol technology, 400000 operation warranted)	89	each	13335	1186815
258	25.15	Providing & Fixing 8mm thick froasted Urinal glass partition size 900x450mm brass made bracket with chrome plating.	9	each	6900	62100
259	25.20	Providing and fixing in position best indian (bonut size 24mm, ceramic disc size 19mm and min. body thickness 2mm, nickel plating. 10 micron and chrome plating 0.3 micron, quarter turn)Angular stop cock.	85	each	1200	102000
260	25.28	Providing and fixing in position best indian C. P. brass made Spout (nickel plating 0.10 micron and chrome plating 0.3 micron) .	85	each	1200	102000

261	25.36	Providing and fixing in position best indian (bonut size 24mm, ceramic disc size 19mm and min. body thickness 2mm, nickel plating 0.10 micron and chrome plating 0.3 micron, quarter turn) 2-way Bib Cock .	96	each	2040	195840
262	25.37	Providing and fixing in position best indian Health Faucet with 8mm dai 1 meter long Flaxible Tube and wall bracket with N. R. V. (non-return wall).	96	each	1920	184320
263	25.53	Providing and fixing in position best indian C. P. Brass made (0.3 micron Chrom and 10 micron Nickel plated) Single Towel Ring Square .	85	each	1920	163200
264	25.54	Providing and fixing in position best indian C. P. Brass made (0.3 micron Chrom and 10 micron Nickel plated) Soap Dish Holder .	85	each	1050	89250
265	25.58	Providing and fixing in position best indian C. P. Brass made (0.3 micron Chrom and 10 micron Nickel plated) Toilet Roll Holder .	19	each	1140	21660
266	17.78	Providing and fixing C.P. brass grating of approved quality and make conforming to IS:specification.				
	17.78.1	100mm dia.	990	each	74	73260
267	17.14	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 :				
	17.14.1	Kitchen sink with drain board				
	17.14.1.3	510x1040 mm bowl depth 200mm.	1	each	7493	7493
268	17.64	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.				
	17.64.2	Flexible pipe				
	17.64.2.1	32 mm dia	1	each	87	87
269	17.72	Providing and fixing CP brass bottle trap of approved quality and make for sink and wash basin.	1	each	853	853
270	17.58	Providing and fixing unplasticised Rigid PVC soil and waste pipes conforming to IS: 13592 Type B including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion. Single socketed pipes for working pressure of 4 kg/sqcm.				
	17.58.1	75 mm diameter (minimum wall thickness 3.2mm)	1415	Metre	136	192440
	17.58.2	110 mm diameter (minimum wall thickness 3.2mm)	2660	Metre	238	633080
271	17.59	Providing and fixing unplasticised PVC moulded fittings/ accessories for unplasticised Rigid PVC soil and waste pipes conforming to IS: 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.				
	17.59.1	Coupler				
	17.59.1.1	75 mm	480	each	117	56160

	17.59.1.2	110 mm	680	each	154	104720
	17.59.3	Single tee with door				
	17.59.3.1	75x75x75 mm	700	each	219	153300
	17.59.3.2	110x110x110 mm	1300	each	346	449800
	17.59.4	Single tee without door				
	17.59.4.1	75x75x75 mm	850	each	201	170850
	17.59.4.2	110x110x110 mm	1280	each	266	340480
	17.59.5	Bend 87.50				
	17.59.5.1	75 mm bend	850	each	117	99450
	17.59.5.2	110 mm bend	1300	each	172	223600
272	18.7	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes and fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.				
		Internal work - Exposed on wall				
	18.7.1	15 mm nominal outer dia .Pipes.	20	metre	129	2580
	18.7.2	20 mm nominal outer dia .Pipes.	260	metre	153	39780
	18.7.3	25 mm nominal outer dia .Pipes.	520	metre	177	92040
	18.7.4	32 mm nominal outer dia .Pipes.	520	metre	254	132080
	18.7.5	40 mm nominal outer dia .Pipes.	520	metre	354	184080
	18.7.6	50 mm nominal outer dia .Pipes.	1637	metre	528	864336
273	18.8	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes and 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.,				
	18.8.1	15 mm nominal outer dia .Pipes.	800	metre	207	165600
	18.8.2	20 mm nominal outer dia .Pipes.	2250	metre	234	526500
	18.8.3	25 mm nominal outer dia .Pipes.	2250	metre	288	648000
	18.8.4	32 mm nominal outer dia .Pipes.	1250	metre	360	450000
274	18.34	Providing and fixing CPVC gate valve with knob of approved quality.				
	18.34.1	25 mm nominal bore	50	each	428	21400
	18.34.2	32 mm nominal bore.	50	each	500	25000
	18.34.3	40 mm nominal bore	50	each	584	29200
	18.34.4	50 mm nominal bore	65	each	584	37960
275	18.35	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :				

	18.35.1	15 mm nominal bore	40	each	316	12640
	18.35.2	20 mm nominal bore	40	each	431	17240
	18.35.3	25 mm nominal bore	40	each	499	19960
276	18.36	Providing and fixing gun metal non- return valve of approved quality (screwed end) :				
	18.36.4	50 mm nominal bore				
	18.36.4.1	Horizontal	24	each	1138	27312
	18.36.4.2	Vertical	10	each	1353	13530
	18.36.6	80 mm nominal bore				
	18.36.6.1	Horizontal	24	each	2886	69264
	18.36.6.2	Vertical	10	each	3699	36990
277	18.39	Constructing masonry Chamber 30x30x50 cm inside, in brick work in cement mortar 1:4 (1 cement :4 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 sand : 4 graded stone aggregate 20 mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1 cement :5 sand:10 graded stone aggregate 40mm nominal size) and inside plastering with cement mortar 1:3 (1 cement :3 sand) 12mm thick finished with a floating coat of neat cement complete as per standard design :				
	18.39.1	With common burnt clay bricks of 25 kg /sqcm compressive strength.	10	each	916	9160
278	18.75	Providing and fixing enclosed type water meter (bulk type) conforming to IS : 2373 and tested by Municipal Board complete with bolts, nuts, rubber insertions etc. (The tail pieces if required will be paid separately) :				
	18.75.2	100 mm dia nominal bore	1	each	5200	5200
279	18.76	Providing and fixing C.I. dirt box strainer for bulk type water meter with nuts, bolts, rubber insertions etc. complete conforming to IS : 2373 :				
	18.76.2	100 mm dia.	1	each	6562	6562
280	18.42	Constructing masonry Chamber 60x45x50 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 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 sand : 4 graded stone aggregate 20 mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 sand:10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :				
	18.42.1	With common burnt clay bricks of 25 kg /sqcm compressive strength.	1	each	4870	4870

281	18.78	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 sand : 4 graded stone aggregate 20 mm nominal size) including finishing complete so as to make it leak proof.	100	each	129	12900
282	DSR 2016/ 18.31	Providing and fixing C.I. sluice valves (with cap) complete with bolts, nuts, rubber insertions etc. (the tail pieces if required will be paid separately) :				
	18.31.1	100 mm diameter				
	18.31.1.1	Class I	1	each	3318	3318
283	18.40	Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 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 sand : 4 graded stone aggregate 20mm nominal size) , i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :				
	18.40.1	With common burnt clay bricks of 25 kg /sqcm compressive strength.	1.00	each	5416	5416
284	2.1	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m : (No extra lift is payable if work is done by mechanical means)				
	2.10.1	All kinds of soil				
	2.10.1.2	Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia.	442	meter	156	68952
	2.10.1.3	Pipes, cables etc. exceeding 300 mm dia but not exceeding 600 mm.	1368	meter	244	333792
285	19.4	Providing and laying below ground unplasticised PVC pipe to with stand working pressure of 4 kg/cm ² soild waste pipes confirming to IS:13592 and IS:4985 including jointing with seal ring confirming to IS :5282 leaving 10mm gap for thermal expansion all necessary fittings etc. complete. Excavation to be paid seperately.				
	19.4.1	110 mm diameter OD	20.00	RM	234	4680
	19.4.2	160 mm diameter OD	1216.10	RM	477	580080
	19.4.3	200 mm diameter OD	20.00	RM	751	15020
	19.4.4	250 mm diameter OD	20.00	RM	972	19440

	19.4.5	300 mm diameter OD	1036.10	RM	1232	1276475
286	19.5	Providing and laying cement concrete 1:3:6 (1 cement : 3 sand : 6 graded stone aggregate 20 mm nominal size) all-round PVC. pipes including bed concrete as per standard design:				
	19.5.1	110 mm diameter PVC. pipe	20.00	RM	576	11520
	19.5.2	160 mm diameter PVC. pipe	1216.10	RM	704	856134
	19.5.3	200 mm diameter PVC. pipe	20.00	RM	821	16420
	19.5.4	250 mm diameter PVC. pipe	20.00	RM	949	18980
	19.5.5	300 mm diameter PVC pipe	1036.10	RM	1078	1116916
287	19.9	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 sand) R.C.C. top slab with Cement Concrete 1:2:4 mix (1 cement : 2 sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design :				
	19.9.1	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) :				
	19.9.1.1	With well burnt bricks	26	each	7997	207922
	19.9.3	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) :				
	19.9.3.1	With well burnt bricks	56	each	21816	1221696
288	19.27	Constructing brick masonry road gully chamber 50x45x60 cm with bricks in cement mortar 1:4 (1 cement : 4 sand) including 500x450 mm precast R.C.C. horizontal grating with frame complete as per standard design :				
	19.27.1	With well burnt bricks	25	each	3941	98525
	19.28	Constructing brick masonry road gully chamber 45x45x77.5 cm with bricks in cement mortar 1:4 (1 cement : 4 sand) with precast R.C.C. vertical grating complete as per standard design :				
	19.28.1	With well burnt bricks	26	each	4910	127660
	19.29	Constructing brick masonry road gully chamber 110x50x77.5 cm with bricks in cement mortar 1:4 (1 cement : 4 sand) including 500x450 mm precast R.C.C. horizontal grating with frame and vertical grating complete as per standard design :				
	19.29.1	With well burnt bricks	56	each	6983	391048

289	19.23	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1 cement : 2 sand : 4 graded stone aggregate 20 mm nominal size) cement plastered on both sides with cement mortar 1:3 (1 cement : 3 sand) finished with a floating coat of neat cement and making necessary channels for the drain etc. complete :				
	19.23.2	For pipes 250 to 300 mm diameter	5	each	292	1460
290	19.38	Providing & Fixing of Precast RCC drain cover of size 900x450 x90mm (thickness) with 8 holes, manufactured by using M-30 grade of concrete reinforced with two layers of 8mm dia Tor Steel @100mm c/c both ways, manufactured by vibro compaction process using joint less FRP moulds, so as to achieve shuttering finish on five faces @top face will have broom finish etc complete.	56	each	900	50400
291	19.8	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 sand) including testing of joints etc. complete :				
	19.8.3	250 mm dia. R.C.C. pipe	20	metre	385.00	7700
	19.8.4	300 mm dia. R.C.C. pipe	30	metre	480.00	14400
	19.8.5	450 mm dia. R.C.C. pipe	30	metre	699.00	20970
	19.8.6	500 mm dia. R.C.C. pipe	20	metre	826.00	16520
	19.8.7	600 mm dia. R.C.C. pipe	20	metre	1278	25560
292	NON SOR	Providing and Fixing the Solenoid valve- electric Actuated in the . CPVC line in the over head water tank. Make :- Rhino Engineering Plastics /Supreme or Equivalent as directed by Engineer-in-Charge.	10	each	22000	220000
293	NON SOR	Providing, installing, testing & commissioning of non-clog self priming Submersible pumps with motors, suitable for following duty: Discharge : 450 LPM (For raw water supply to overhead tank) Head at above discharge : 28 Meter including strainer on suction side.				
	(a)	The pump set shall be duly mounted on common fabricated base frame, including air vent pressure gauge, mounted pads, etc. as required, and electric control panel (cubical type made out of 14 gauge MS sheet stove enameled) with liquid level controller between pump and undergrounding treated water tanks, complete with automatic switches, auxiliary switches, ammeters, voltmeters, phase indicators & cabling from panel to pumps for automatic operation of pumps including pump foundation complete in all respect.	2.00	Nos.	80000	160000

	(b)	Microprocessor based panel suitable for twin pump / single pump operation with liquid level controller on both lower tank empty trip and upper tank fill trip, complete with automatic pressure switches, auxiliary switches, ammeters, voltmeters, phase indicators & cabling from panel to pumps for automatic operation of pumps including pump foundation complete in all respect.	2.00	Nos.	35000	70000
		Make: Lubi, Grundfos, Kirlosker				
294	NON SOR	Providing, installing, testing and commissioning free standing vertical electrical submersible pump sets of following capacity capable of dewatering muddy water, with water cooled electric motor for effective cooling, the wearing parts such as Impeller, shaft sleeve, pump casing etc. shall be C.I. & Impeller bolt shall be AISI 316 and of adequate power for operation on 415±10% volts, 3 phase, 50 Hz AC electric supply including fixing of delivery pipe upto 1 metre above the sump with a flanged outlet. The cost will include providing and fixing 1 No. 150mm butterfly valve & 1 No. NRV on delivery line of each pump & a suitable standard electrical panel from the same manufacturer as the pump with suitable capacity/size/rating of switch gears as per site requirements, including float type level controller for level control and for cyclic operation of pumps, all electrical cables including submersible cables of required length and making all necessary electrical connections, terminations etc complete in all respects.				
		Make: Lubi, Grundfos, Kirlosker				
		2 Set of 3 pumps in each percolation pit	6.00	Nos.	150000	900000
295	NON SOR	SEWAGE TREATMENT PLANT, Capacity : 150 KLD.				
		Note : The Tender for this work is on the basis of Lump Sum Turnkey basis. Contractor must include all items that are necessary and essential to provide a complete working plant to the satisfaction of Engineer in charge. The BOQ given hereafter is only for the purpose assessing the overall costing of the Project and will be used for arriving at the payment schedule to the contractor.				5000000
	NON SOR	Preliminary Works				
	a	Shop Drawings.				
	b	Detailed GA drawing, flow diagram, equipment list, power load requirement	1		Job	
	c	Design, calculations of all elements of the plant, electrical and mechanical work to satisfy adequacy of design	1		Job	

	d	Submission of detailed GOOD FOR CONSTRUCTION' stage architectural, structural, construction, electrical, mechanical and piping drawing for approval.	1		Job
	e	Sewage Treatment Plant			
		Design, Supplying, Installing, Testing & Commissioning of Sewage Treatment Plant capacity 150 KLD. The plant proposed shall be 150 kld with a main pump room. The plant is proposed to be installed in the Basement along with the pump room for better maintenance. Adequate opening shall be provided for this purpose, following shall be considered as basis for the plant design:			
		Nature of effluent - Domestic Sewage from Toilet use and kitchen waste, laundry waste water.			
		Daily average flow - 150 Cum / Day			
		pH - 6.5 - 8.5			
		BOD5 - upto 250-450 Mg/L			
		S. Solids - 250 - 400 Mg/L			
		COD - upto 550-800 Mg/L			
		Oil & Grease - 80 Mg / L			
		Effluent discharge standard after treatment			
		pH - 7.0 - 8.0			
		BOD5 - Less than <5 Mg/L			
		S. Solids - Less than <5 Mg/L			
		COD - Less than 30 Mg/L			
		Oil & Grease - Nil			
		Sewage treatment plant shall include the following items:			
		Bar Screen Chamber			
		Sewage equalization tank/sump			
		MBBR Tanks			
		Settling/ Clarifier Tank			
		Clear Water tank			
		Softener Feed PUMPS (if required)			
		Recycled / Soft Water tank(if required)			
		Sludge Holding Tank			
		Plant Room Sump			
		Filtration through MGF & ACF, softener, Ultrafiltration plant			
		Air Blowers, Pumps & equipment			
		Piping, valves etc			
		Electrical Panel & Cabling			
		Common plant room adjacent to STP.			
		All piping, valves & level indicator/controller etc. within plant room.			

	NON SOR	Supply, installation, testing and commissioning of the UV unit shall have with reactor, cabinet housing, cabinet cooling, treatment chamber, electrical panel, temperature safety control, lamp-out alert, UV radiometer along with UV monitoring system and UV monitoring readout panel. The UV Dosage should be > 60,000 mW – Sec / sq.cm. The lamps should be selected based upon the flow requirement of respective unit. The unit shall be complete with temperature safety control, lamp out alert circuit & UV radiometer with 4 – 20 mA output. The treatment chamber shall be SS316.	1		Set
	a	Supply, installation, testing & commissioning of 2 Nos Stainless Steel Perforated Screen with suitable lifting arrangement (size 600 mm wide x 1200 mm high approx)	1		Set
	b	Supply, installation, testing & commissioning of electronic type level indicator and controller for automatic operation of the system with high/low level alarm complete with auxiliary NO/NC contacts.	1		Set
		Contractor/Vendor shall ensure submission of detailed GA drawings (Plan & Section), P & I diagram, schematic diagram for the above mentioned components and additional components such as inserts, puddle flanges, vent pipes etc. if so required for the complete work.			
	c	Supply, installation, testing & commissioning of non clogging type pumps, having C.I. casing & bronze impeller complete with all accessories, motor of required capacity. Delivery header with isolation valve, pressure gauge on delivery line with isolation cock level controller with wiring to control the level of sump automatically. Pump shall have following duty.			
	d	Submersible Transfer Pumps (2 Nos. - One working & one standby) (Solid handling Cap. 40 mm) Flow rate (each) = 12.5 m ³ / hr Head = 10-12 Mtr	2		Set
	e	Plant room sump pump 2 Nos (1 working + 1 standby). Flow rate = 5.0 cum/hr Head = 10-12 Mtr	2		Set
		(Solid handling size for this pump shall be 20 mm).			
	f	Mono block centrifugal Sludge Recirculation Pumps (2 Nos. - One working & one stand by) (Solid handling cap. 20 mm) Flow rate (each) = 18 m ³ / hr Head = 8-10 Mtr	2		Set
		Cost shall be inclusive of PVC flexible Hose pipe (for piping submerged in effluent) with M S epoxy piping (for piping non-submerged in effluent)			

		Provision of guide ropes to guide submersible pump from upper level to operational level in sump basin with channels / angle section of MSEP shall be made by the STP contractor.			
	g	Aeration system shall include the following:			
		Submersible aeration system Power - 1.5 HP	4		Nos.
	h	Air piping shall comprise of pipes droppers/ laterals with M S (epoxy coated) Header complete with all fittings such as tees, crosses, plugs, sockets, elbows, reducers, supports & clamps, puddle flanges etc cutting chases & making good.	1		Lot
	Note :	Aeration system shall be provided for Equalization Tank, and Reactor Tank.			
	i	Providing and fixing all piping (as described below) and isolation control valves for making the system complete.			
		SS 316L :Submerged air piping			
		MS Epoxy : Air piping			
		PVC piping :Pumped effluent & tank overflow pipe line	1		Job
	j				
	(i)	Supply, installation, testing and commissioning of Media for Aeration Tank (As Required)	1		Lot
	(ii)	Supply, installation, testing and commissioning of Tube Pac Media for Sludge Settling Tank	1		Lot
	k	Supply, installation, testing and commissioning of Motorized Filter Press of required capacity 12.5 m ³ /hr with 2 Nos. (1W + 1S) Filter Press Feed Screw Type Pumpset for required capacity. with interconnecting piping and air line connection complete.	1		Set
	l	Supplying, installing, testing & commissioning of centrifugal vertical inline filter feed water pumps SS-304 casing, S.S 304 impeller and SS-304 shaft, C.I. Base CED coating & head TEFC motor (with mechanical seal). Pressure gauge with isolation cock, NRV, Isolation valve on delivery line. Isolation valve, strainer at suction. The pump shall be suitable for 415 ± 10% volts, 3 phase, 50 cycles a/c supply.			
		Capacity :15 M ³ /hr.			
		Head : 30 M			
		No. of Pumps (1 working + 1 standby)	2		Set
	NON SOR	Supplying, installing, testing & commissioning of centrifugal vertical inline Softener Feed pumps SS-304 casing, S.S 304 impeller and SS-304 shaft, C.I. Base CED coating & head TEFC motor (with mechanical seal). Pressure gauge with isolation cock, NRV, Isolation valve on delivery line. Isolation valve, strainer at suction. The pump shall be suitable for 415 ± 10% volts, 3 phase, 50 cycles a/c supply.			
		Capacity :15 M ³ /hr.			
		Head : 30 M			
		No. of Pumps (1 working + 1 standby)	1		Set
	Note:	Operation of pump shall be based on level controller proposed to be installed in tank as per site location. The contractor to ascertain the Head required for pumps as per site conditions and provide accordingly.			

		Supplying, installing, testing and commissioning of FRP vessel filter with frontal piping and associated valves and accessories. Filter shall be suitable for a minimum working pressure of 6.0 kg / cm ² and shall include media, standard fittings like pressure tight manholes, initial charge of media, raw water distributor, under drain system, face piping, pressure gauges etc.,			
	a	The Multi-grad filter shall be constructed of FRP material with inner shell of integrated polyethylene, polypropylene and other material as per manufacturer's standard. The inter distribution system and the underbed draw off system shall be of Hub & Lateral type of polypropylene material. The filter shall be provide with manhole cover, hand hole, flanged outlet for piping/valve connection and adequate tripod with skid self supporting structure for making the installation completed. The filter shall also be provided with vacuums breaking connection / accessories to avoid any collapse of internal lining. All filters shall be provided with lifting lugs and making the installation completed as required.			
		Capacity - 15.00 m ³ /hour	1		Set
		Filtration rate (approx) - approx. 15.0 m ³ /hr/m ²)			
		Filter dia (approx.) - 1150 mm			
		Working pressure - 6.0 Kg/Sq.cm			
		Test pressure - 10.0 Kg/Sq.cm			
	b	The Activated Carbon filter shall be constructed of FRP material with inner shell of integrated polyethylene, polypropylene and other material as per manufacturer's standard. The inter distribution system and the underbed draw off system shall be of Hub & Lateral type of polypropylene material. The filter shall be provide with manhole cover, hand hole, flanged outlet for piping/valve connection and adequate tripod with skid self supporting structure for making the installation completed. The filter shall also be provided with vacuums breaking connection / accessories to avoid any collapse of internal lining. All filters shall be provided with lifting lugs and making the installation completed as required.			
		Capacity - 15.00 m ³ /hour	1		Set
		Filtration rate (approx) - approx. 15.0 m ³ /hr/m ²)			
		Filter dia (approx.) - 1150 mm			
		Working pressure - 6.0 Kg/Sq.cm			
		Test pressure - 10.0 Kg/Sq.cm			

		<p>The Softner shall be constructed of FRP material with inner shell of integrated polyethylene, polypropylene and other material as per manufacturer's standard.</p> <p>The inter distribution system and the underbed draw off system shall be of Hub & Lateral type of polypropylene material. The filter shall be provide with manhole cover, hand hole, flanged outlet for piping/valve connection and adequate tripod with skid self supporting structure for making the installation completed. The filter shall also be provided with vacuums breaking connection / accessories to avoid any collapse of internal lining. All filters shall be provided with lifting lugs and making the installation completed as required. With SS salt-saturator & Moter.</p>			
	c		1		Set
		<u>Hardness</u>			
		Inlet - 300 PPM (Approx.)			
		Outlet - <50 PPM)			
		Capacity - 15.0 m ³ /hour			
		OBR - 250 m ³			
		Reg.time - 16 hr.			
		Operating pressure - 6.0 kg/Sq.cm			
		Test pressure - 10.0 Kg/Sq.cm			
		Suggested Resin Quantity- 1600 Kg			
		Suggested dia - 1250 mm			
	d	Ultra filtration (UF) System			
		No of Pumps – 2 (1 working + 1 stand by)			
		Type of Pumps – Vertical inline multistage			
		Feed Flow rate of pumps – about 12.5 cum/hr			
		Head – 20 meters (2.0 bars)			
		MOC – CI with SS internals			
		Bag filter or Cartridge filter – 1 set			
		MOC of housing – PP			
		Type of Bag / Cartridge - PP 5 micron			
		Feed flow rate – about 12.5 cum/hr			
		Product flow rate – about 11.25 cum/hr			
		Recovery – around 90%			
		No of UF membrane – 2 nos (Outside In)			
		Type of UF membrane – Hollow fibre			
		Piping within the unit – UPVC / CPVC with the valves, solenoid valves for automation			
		Control Panel – MS powder coated			
		CIP system – HDPE tank @ 750 liters with electronic dosing pump (1 set)			
		CIP skid - MSEP with necessary connection and accessories			
		Air Scouring – Turbo Air Blower – 1 HP approx			
		MOC of Blower – MSEP / CI			
	e	Electrical Installation			

		Design, fabrication, assembling, wiring, supply, installation, testing and commissioning of motor control centre fabricated out of 14 gauge CRCA sheet steel. Cable gland plates shall be provided on top as well as at the bottom of the panels. Panels shall be treated with all anticorrosive process before painting as per specifications with 2 coats of red oxide primer and final approved shade of powder coated paint. 2 Nos. earthing terminals shall be provided for 3 phase, 4 wire, 50 Hz supply system. Lifting hooks shall also be provided in case of large panels. Approval shall be taken for each panel before fabrication. Quoted rates shall be inclusive of cables (in accordance to specification) with earthing from panel to each motor / equipment.			
		Motor Control Centre			
		Incoming			
		200 amps TPN MCCB with the following accessories:			
	(i)	0-500 volts 96 x 96 mm square electronic voltmeter with selector switch shall be protected by 2 amps TP MCB. 1 Set			
	(ii)	0-100 amps 96 x 96 mm square electronic ammeter with selector switch and 100/.5 amps 10 VA CL:1 CTs. 1 Set			
	(iii)	Phase indicating lamps shall be protected by 2 amp SP MCB 3 Sets			
		Bus Bar			
	NON SOR	200 amps TPN (15 KA) copper bus bar with heat shrinkable insulation sleeves.			
	(i)	a. Required Nos of required capacity TPN MCB for direct on line starter/star delta starters and outgoing feeders to all the pumps/blowers etc. (including standbys). Each compartment shall contain auto / manual selector switch and indicating lamp with MCB's for 'ON/OFF/TRIP' status of motor			
	(ii)	Spare MCB's of following capacities: 32 amps TPN MCB's 6Nos.			
	(iii)	Necessary cable alleys, internal / cabling, wiring, cabling from MCC to various pumps / equipment and interlocking, earthing for all equipment shall also included			
	Notes a)	All MCCBs / MCBs shall be of 15 KA breaking capacity and suitable for motor duty application.			
	b)	All motor starters shall be provided with Automatic level controller			
	c)	DOL starters shall be used for motors below 7.5 HP and Star-Delta Starters for other motors .			
	d)	Provision shall be made for providing potential free contacts to all pumps starters & shall be compatible to BMS with open protocol			
	NON SOR	MCC for all STP equipments/pumps as described in sub head II	1		Job

	NON SOR	Maintenance Contract				
		To operate the entire STP under available load conditions for further period of 30 days on round the clock basis.				
	NON SOR	To provide services of contractors expert operating personal comprising of :				
	a)	One Supervisor 4 hrs Three times a week.				
	b)	One Plant operator one per shift in three shifts.				
	c)	One helper for general maintenance and assistance. One per shift in three shifts.	1			Job
	NON SOR	Company's back up services of senior engineers and experts for any major problems, general check up and maintenance and advise. Once a week for 2 hours minimum more or more if required.	1			Job
	NON SOR	All tools, equipment and testing devices to be provided by the contractor.	1			Job
	NON SOR	Consumable including lubricants and chemicals will be provided by Owners.	1			Job
		TOTAL SANITARY, PLUMBING, DRAINAGE AND STP WORK [C]				23605229
<u>FIRE PROTECTION SYSTEM</u>						
I-PIPING & ACCESSORIES						
296	NON SOR	Providing, laying, jointing, testing and commissioning of Mild Steel Pipes of following of grade 'B' confirming to IS:1239 including with cost of transportation to site, welding, & with all accessories and fittings like tees, Elbows, Reducer, Union, Rubber gasket, Nut Bolts, washer etc and providing with a coat of steel primer then a coat of best make Red enamel Paint. Make -				
	a	M.S Pipe B class (100mm) (ISI Marked ,JINDAL)	Rmt.	1020	1050	1071000
	b	MS Pipe B class (80 mm) (ISI Marked ,JINDAL)	Rmt.	428	775	331700
	c	MS Pipe B class (65 mm) (ISI Marked ,JINDAL)	Rmt.	400	676	270400
	d	MS Pipe B class (50 mm) (ISI Marked, JINDAL)	Rmt.	400	510	204000
	e	MS Pipe B class (40 mm) (ISI Marked, JINDAL)	Rmt.	400	431	172400
	f	MS Pipe B class (32 mm) (ISI Marked, JINDAL)	Rmt.	986	375	369750
	g	MS Pipe B class (25 mm)	Rmt.	1800	270	486000
297	NON SOR	Providing, fabricating, erecting, and fixing in position of MS Structural Support including Welding, Painting, with a primary coat of Steel Primer then Red colour	Kgs.	3000	90	270000
					TOTAL - I	3175250
II-FIRE HYDRANT & EQUIPMENTS						
298	26.5	Supplying and fixing single headed external yard hydrant valve with 1 no. 63mm dia instantaneous FM Gun metal coupling and cast iron wheel, ISI marked confirming to IS 5290 (Type -A) with blank gunmetal cap and chain as required.	Nos.	50	8445	422250

299	26.11	Supplying and fixing 63mm dia, 15 mtr long RRL hose pipe with 63mm dia male and female gun metal couplings duly binded with GI wire, rivets etc. confirming to IS 636 (type-A)as required.	Nos.	65	7077	460005
300	26.12	Supplying and fixing first - Aid hose reel with MS construction spray painted in post office red, confirming to IS 884 with upto date amendments, complete with the following as required.	Nos.	50	6064	303200
		a) 20/30/40m long 20mm (nominal internal) dia water hose thermoplastic (textile reinforced) type - 2 as per IS 12585				
		b) 20mm (nominal internal) dia gun metal globe valve and nozzle.				
		c) Drum and brakets for fixing the equipments on wall.				
		d) Connections from riser with 40 mm dia stop valve (gun metal) and M.S. pipe				
301	26.13	Supplying and fixing hose cabinet of size 900mmx600mmx500mm made of 2 mm thick MS sheet with 6 mm thick glazed glass doors i/c necessary locking arrangement suitable to accommodate external hydrant with butterfly valve 2 nos. 15mtr. Long hose pipe, 1 no	Nos.	50	16173	808650
302	26.14	Supplying and fixing 63mm gun metal branch pipe with 20 mm (nominal internal diameter) size gun metal nozzle conforming to IS 903, suitable for instaneous connection to interconnect hose pipe coupling as required.	Nos.	50	2509	125450
303	26.16	Supplying and fixing 2 way Fire Brigade Connection of CI body with 2 nos. gun metal male instantaneous inlet couplings complete with cap and chain as required. For 150mm dia MS pipe connection, confirming to IS 904 as required.	Nos.	10	9485	94850
304	26.17	Supplying and fixing air vessel made of 250 mm dia, 8mm thick MS sheet, 1200 mm. in height with air release valve on top and flanged connection to riser, drain arrangement with 25mm dia gun metal wheel valve, with required accessories, pressure gauge.	Nos.	4	11744.7	46979
305	26.18	Providing fixing testing and commissioning of 15 mm size quartzoid bulb type sprinklers , of rating 68 degree C. pendent with required accessories.	Nos.	1050	515	540750
306	NON SOR	Stand Post : M.S. Stand post with 80 mm Extend piece 90 Deg. bend & flange to fix hydrant	Nos.	50	1300	65000
TOTAL - II						2867134
III- Fire Pump & Accessories						
307	NON SOR	Supplying, installing, testing and commissioning of 900 LPM @ 42 head(7.5 HP) Electric motor Driven Fire Fighting terrace Pumpset with Foundation bolts, Base Frame, Coupling, coupling guard and all require accessories.	Nos.	4	124000	496000

308	26.6	Supplying, fixing, testing and commissioning of butterfly valve PN 1.6, with Bronze/Gunmetal seat duly ISI marked complete with Nuts, Bolts, washers, gaskets, confirming to IS 13095, of following sizes as required. Make- Sant, Zoloto, Kartar, Vensson				
	26.6.2	150mm dia	Nos.	30	4516	135480
	26.6.3	80mm dia	Nos.	22	2511	55242
309	26.8	Providing, installation, testing and commissioning of dual plate non-return valve of following sizes confirming to IS 5312 complete with rubber gasket, GI bolts, nuts, washers etc. as required.				
	26.8.2	100 mm dia.	Nos.	17	7000	119000
	26.8.3	80 mm dia.	Nos.	15	5286	79290
310	NON SOR	Pressure gauge Burdon Type 4" Dial Size With 1/2" BSP End Connection, 0-15 Kgf/Cm.Sq. & Siphon Cock.	Nos.	10	1100	11000
311	NON SOR	Supply and installaton of Pump Starter for Fire Fighting Pump at required height	Nos.	30	6000	180000
312	NON SOR	Supply installation of ISI Marked best Indian make cable for Penal to Fire Pump Connection	Rmt.	750	95	71250
TOTAL - III						1147262
IV-First Aid Hand Appliances						
313	26.23	Providing and fixing of carbon-di-oxide type fire extinguishers consisting of welded M.S. cylindrical body, squeeze lever discharge valve fitted with pressure indicating guage internal discharge tube 30 cms long high pressure discharge hose, discharge no				
	26.23.1	Capacity 4.5 Kg.	Nos.	50	11351	567550
314	26.24	Providing and fixing of ABC Powder type fire extinguishers consisting of welded M.S. cylindrical body, squeeze lever discharge valve fitted with pressure indicating guage internal discharge tube 30 cms long high pressure discharge hose, discharge nozzle				
	26.24.1	Capacity 5.0 Kg.	Nos.	50	7301	365050
TOTAL - IV						932600
V- FIRE ALARM SYSTEM						
315	NON SOR	Providing, Fixing, Testing & Commiossioning of 08 Zones Mocrprocrss based Main Fire Alarm Control Penal having 02 nos. of Idicating Switch, Reset Button,Cable Open/Short Indication switches, Autoamtic Reset Switch & Specially with battery back up and complete as reuqired. Make-Agni Suraksha, Super Sensor	Nos.	15	18500	277500
316	NON SOR	Manual Brake Glass Push botton Call point Complete with Electric Circuit with auxillary contact lamp, Front Glass, Push Botton, Gland etc as per (IS:2189) (AGNI)	Nos.	50	400	20000
317	NON SOR	Analogue type Optical Smoke Detector complete with all accessories like base, base box, etc. to be installed under/above false ceiling, roof and concealed space, etc. interconnecting to loop	Nos.	1050	1150	1207500

318	NON SOR	Supply & Erection of Electronic Hooter with 4watt/80db output capable of public announcements as well as being used for fire fault in fire alarm panel suitable for wall/ceiling and surface/ recess mounting including making connection with wires and complete in all respect. Make-Agni Suraksha, Super Sensor	Nos.	50	550	27500
319	NON SOR	Providing and laying of following size PVC insulated FRLS copper wire through conduits / surface/ recess / above false ceiling /concealed space/wall concealed, etc. for control cabling of Fire detection and alarm devices and interconnecting them. Make- Any best Indian make				
		2 core X 1.5 Sq.mm	Rmt.	5700	55	313500
320	NON SOR	Providing and laying of PVC conduits of required size with all fittings and saddles for drawing detector control cables on surface/ recess / above false ceiling / concealed space / wall concealed, etc of following sizes :	Rmt.	650	50	32500
TOTAL - V						1878500
TOTAL FIRE PROTECTION SYSTEM (D = I + II + III + IV + V)						10000746
TOTAL ESTIMATED COST (A + B + C + D)						465511887
<u>As per P.W.D. P.I.U. M.P. Order No F-4-5/2016/NIVIDA/Nirdesh/samanya/PD/1665 Bhopal 11.08.2017 and Order no. F-64-10-2017/SOR ELECTRICAL/W/PD Date 24.08.2017 10% Rate</u>						418960698
<u>Reduced SOR 01.08.2014 UPTO DATE Ammendment,</u>						
SAY						Rs. 41.90 Cr.