



AN ISO 9001 & 14001 COMPANY

TENDER DOCUMENT

NIT No. SRO/CON/ETS/250 dated 09.09.2024.

FOR

Tender for “Construction of Girls Hostel Balance MEP work for Construction of New Technology Centre at Sriperumbudur, Tamil Nadu on Item Rate basis”

VOLUME – III

Price bid

TENDER INVITING AUTHORITY

Engineering Projects (India) Limited
(A GOVT. OF INDIA ENTERPRISE)
Southern Regional Office, Chennai,
3D, EC Chambers, 92 GN Chetty Road
T .Nagar, Chennai- 600 017

Name of the work : Construction of Girls Hostel Balance MEP work for Construction of New Technology Centre at Sriperumbudur, Tamil Nadu” on Item Rate basis.

NIT No. SRO/CON/ETS/250

Price Bid BOQ for Balance MEP work of Girls Hostel

Sr. No.	DESCRIPTION	item code	QTY	UNIT	Rate (In Rs.) excl GST	Amount (In Rs.) excl GST
3.000	3.0) PLUMBING WORKS					
3.001	3.1) SANITARY WARES, FIXTURES, FITTINGS AND ACCESSORIES					
3.002	Note: "All the Non DSR items should be as per technical specifications with all the necessary accessories as required for complete installation"					
3.003	3.1.1) Providing and fixing white vitreous china extended wall mounting water closet of size 780x370x690 mm of approved shape including providing & 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 including all necessary fittings and accessories, cutting and making good the walls and floors wherever required. Make:- Hindustan/ Hindware 20006 white or Hindware 21029 white or equivalent					
3.004	3.1.2.1) W.C. pan with ISI marked white solid plastic seat and lid Polytuf 5006 or equivalent	item1	36.00	each		
3.005	Providing and fixing white vitreous china extended wall mounting water closet of size 560x350x390 mm of approved shape including providing & fixing white vitreous china concealed 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 including all necessary fittings and accessories, cutting and making good the walls and floors wherever required. Make:- Hindustan/ Hindware Dove 20080 (P 23.5) white & Hindware Concealo 80 or equivalent					
3.006	W.C. pan with ISI marked white solid plastic seat and lid Polytuf 5006 or equivalent	item 2	2.00	each		
3.010	3.1.3) Providing and fixing of Oval Wash Basin Over Counter Basin Round (41.5 cm dia.), union & extension piece of required length and CP wall flange complete including all fittings and accessories, cutting and making good the walls/floors wherever required and as directed by the Engineer. All junctions shall be sealed with silicon sealant. Make Hindware 10102 or equivalent	item3	36.00	each		
3.011	3.1.4) Providing and fixing of 15 mm C.P brass pillar tap including 450mm long braided hose of approved make and quality, and as approved and directed by the Engineer, including all necessary fittings ,accessories & materials required for fixing. Make Hindware F100001 or equivalent	item4	36.00	each		
3.017	3.1.7) Providing and fixing CP Bottle Trap for Wash basin and sink.					
3.018	3.1.7.1) Bottle trap 31 mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the centre of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 260 gms Make :- Hindware F850072 or equivalent	item5	12.00	each		
3.019	3.1.7.2) Bottle trap 38 mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the centre of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 263 gms Make Hindware F850073 or equivalent	item6	12.00	each		
3.020	3.1.8) Providing and Fixing 15 mm dia. two way CP brass bib cock with wall flange and ceramic disc cartridge complete , including cutting and making good the walls wherever required, making all necessary connections etc. All complete as directed by the Engineer. Make :- Hindware F100004QT or equivalent	item7	36.00	each		
3.021	3.1.9) Supplying, Installing, Testing and Commissioning Health Faucet with 1200 mm Long CP Braided Hoses including connectors/wall hooks, adapters, GI nuts, bolts, washers, check nuts,C.P. brass two in one bib tap including necessary sleeve flanges, cock , angle valves and all other fittings/ accessories required for satisfactory installation complete. Make Hindware F160013 or equivalent	item8	36.00	each		
3.022	3.1.10) Providing and fixing of 15mm nominal bore CP Brass Angle valve confirming to IS: 8931, for wash basins, water coolers, geyser points, etc of approved quality and as approved by and directed by the Engineer. Make Hindware F850030 or equivalent					
3.023	3.1.10.1) 15 mm nominal bore	item9	50.00	each		
3.024	3.1.11) Providing and fixing PVC Flexible Pipe connector with check nut and washer rubber ring for wash basin and sink and EWC cistern connection. Make Hindware or equivalent	item10	50.00	each		
3.025	3.1.12) Providing and Fixing Chrome plated brass Liquid Soap Dispenser of approved make and quality, and as approved by the Engineer, including all necessary materials required for fixing. All complete as per directions of the Engineer. Make Hindware or equivalent.	item11	36.00	each		
3.026	3.1.13) Providing and fixing toilet paper holder Make Hindware F880003 or equivalent					
3.027	3.1.13.1) C.P. brass	item12	36.00	each		
3.028	3.1.14) Providing & fixing of C.P. brass twin coat hook. fixed to PVC cleats with C.P. brass screws etc inclusive of all fittings for installation as complete Make Hindware (F880004)or equivalent	item13	36.00	each		
3.029	3.1.15) Providing and fixing towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour.					

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3.030	3.1.15.1) 450 mm long towel rail with total length of 495 mm, 78 mm wide and effective height of 88 mm, weighing not less than 170 gms Make Hindware-F880005 or equivalent	item14	36.00	each		
3.031	3.1.16) Supplying and fixing of 110mm dia straight type syphon uPVC WC pan connector with neoprene rubber ring and necessary accessories etc., complete	item15	36.00	each		
3.032	3.1.17) Supply, erection & Commissioning in place of,Storage type WATER COOLER,with Purifier Capacity :120 Litres per hour inclusive of all fittings for installation as complete All complete as per directions of the Engineer-in-charge.	item16	2.00	each		
3.033	3.1.18) Providing and fixing of RO Unit inclusive of all fittings for installation as complete All complete as per directions of the Engineer-in-charge.	item17	1.00	each		
3.034	3.1.19) 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: Make:- Nirali elegance or Apollo AS28, AS5 or equivalent					
3.035	3.1.19.1) Kitchen sink without drain board					
3.036	610x510 mm bowl depth 200 mm	item18	1.00	each		
3.037	3.1.19.2) Kitchen sink with drain board					
3.038	510x1040 mm bowl depth 250 mm	item19	9.00	each		
3.039	3.1.20) Providing and fixing towel ring trapezoidal shape 215 mm long, 200 mm wide with minimum distances of 37 mm from wall face with concealed fittings arrangement of approved quality and colour, weighing not less than 88 gms. Make :- Hindware F880007 or equivalent	item20	16.00	each		
3.040	3.1.21) Providing and fixing Soap Dish Holder having length of 138 mm, breadth 102 mm, height of 75 mm with concealed fitting arrangements, weighing not less than 106 gms. Make:- Hindware -F880011 or equivalent	item21	20.00	each		
3.041	3.1.22) Providing, fixing SS 20mm dia 1000 - 1200 mm long straight grab bar with flanges, fixed with SS screws complete for handicap toilet inclusive of all fittings for installation as complete Make:- Hindware F880005 or equivalent	item22	8.00	each		
3.042	3.1.23) Providing and fixing of 15 mm dia wall mounted sink cock with mixer swivel spout inclusive of all fittings for installation as complete Make -Hindware F100023QT or equivalent	item23	1.00	each		
3.043	3.1.24) Providing and fixing of 15 mm dia wall mounted sink cock with swivel spout inclusive of all fittings for installation as complete All complete as per directions of the Engineer-in-charge. Make :- Hindware F100024 or equivalent	item24	8.00	each		
3.044	Providing and fixing of 15 mm dia wall mounted sink cock with Normal swinging spout inclusive of all fittings for installation as complete All complete as per directions of the Engineer-in-charge. Make :- Hindware F120021 or equivalent	item25	1.00	each		
3.045	3.1.25) Providing and fixing Waste Coupling for wash basin and sink, of approved quality and colour Make : Hindware- F850023 or equivalent	item26				
3.046	3.1.25.1) Waste coupling 31 mm dia of 79 mm length and 62 mm breadth weighing not less than 45 gms		18.00	each		
3.047	3.1.25.2) Waste coupling 38 mm dia of 79 mm length and 62 mm breadth weighing not less than 45 gms	item27	16.00	each		
3.048	3.1.26) Supplying, installing, testing and commissioning of CP single lever mixer unit comprising of shower arm , exposed kit, diverter, spout, complete with necessary wall flanges, etc., complete All complete as per directions of the Engineer-in-charge. (Make :- Hindware Water Mixer F210012CP, Hindware F200028CP or equivalent)	item28	35.00	each		
3.049	Providing and fixing C.P. brass Single lever Divertor with Hot and cold inlets and outlets for spout and overhead shower with cast brass concealed part for the divertor unit of approved quality conforming to Manufacturers standards. Work to be completed as approved and directed by the Engineer. Make-Hindware F440015 or equivalent	item29	1.00	each		
3.050	Providing & fixing C.P. Bath Spout with washer conforming to Manufacturers Standards. Work to be completed as per of approved Quality and as directed by the Engineer. Make-Hindware - F440006 or equivalent	item30	1.00	each		
3.051	3.1.27) Providing and fixing C.P. brass shower rose with 15 or 20 mm inlet inclusive of all fittings for installation as complete: Make Hindware - F160004 or equivalent.					
3.052	3.1.27.1) 100 mm diameter	item31	36.00	each		
3.053	Providing and fixing C.P. brass shower rose with 15 or 20 mm inlet inclusive of all fittings for installation as complete: Make Hindware F160041 or equivalent.					
3.054	200mm	item32	1.00	each		
3.055	3.1.28) Providing and fixing of Instant Electric Geyser 3 L inclusive of all fittings for installation as complete. All complete as per directions of the Engineer-in-charge.	item33	36.00	each		
3.056	3.1.29) Providing and fixing of Instant/storage Electric Geyser 10 L for Kitchen inclusive of all fittings for installation as complete. All complete as per directions of the Engineer-in-charge.	item34	1.00	each		

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3.058	3.1.31) Providing and fixing white vitreous China water closet squatting pan (Indian type W.C. pan) of approved make and quality with integral foot rests setting in cement concrete 1:2:4 mix (1 cement: 2 coarse sand : 4 stone aggregate 20 mm nominal size), including providing and fixing of 100 mm ceramic deep seal/ sand cast Iron P or S trap,with 100 mm Sand Cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required: Make Hindware 20070 or equivalent					
3.059	3.1.31.1) White Vitreous china Orissa pattern W.C. pan of size 580x440 mm with integral type foot rests	item35	1.00	each		
3.061	3.2) SOIL, WASTE, VENT AND RAIN WATER PIPES					
3.062	Note: "All the Non DSR items should be as per technical specifications with all the necessary accessories as required for complete installation"					
3.063	Building Internal Drainage System					
3.064	3.2.1) Supplying, Fixing and Testing uPVC pressure pipes (6 Kg/cm2) confirming to IS: 4985 for waste connection from wash basins and pantry sinks to floor trap/ anti syphonage pipe with solvent cement joints, including all the fittings, laid above false ceiling concealed in wall, etc., the work shall include wall chases and making good the same in cement mortar, etc., complete. The quoted rate should include necessary supports like GI hanger supports, GI grip bolts and GI clamps, etc., in false ceiling area as well as supplying and fixing GI slotted angle iron brackets, hangers, supports with necessary drilling holes to suit the insertion of pipe clamps, deburring, brickwork/ concrete supports etc., as per detailed drawing for supporting soil, waste and rain water pipes and water supply pipes in shafts with suitable GI clamps, GI bolts, anchor bolts, nuts and washers fixed on shaft walls outer walls, etc. The quoted rate shall include the cost of brackets galvanised with zinc alloy of 0.08 mm thick conforming to IS: 1239, etc., complete. The Rate shall also be inclusive of two coats of painting synthetic enamel paint of approved colour over one coat of primer and pipe identification labels and technical specification.					
3.065	3.2.1.1) 50 mm dia ID	item36	53.00	metre		
3.066	3.2.1.2) 40 mm dia ID	item37	89.00	metre		
3.067	3.2.2) Supplying, Fixing and Testing uPVC soil, waste and vent pipes (SWR) confirming to IS: 13592 - 2013, and IS: 14735 Type B with rubber ring (confirming to IS: 5382) joint inclusive of all necessary specials like bends, tees, offsets, doorbends, junctions, cowls, etc., laid under floor/ fixed on walls, hung under the ceiling, and in pipe shafts, etc., complete. The quoted rate should include lead and lifting charges to all levels, necessary scaffolding and supports like hanger supports, grip bolts and clamps and making good the openings, etc. The rate should include supplying and fixing GI slotted angle iron brackets, hangers, supports with necessary drilling holes to suit the insertion of pipe clamps, deburring etc., as per detailed drawing for supporting soil, waste and rain water pipes and water supply pipes in shafts with suitable fabricated GI clamps, GI bolts, GI anchor bolts, GI nuts and GI washers fixed on shaft walls outer walls, brick work/ concrete supports, etc. The quoted rate shall include the cost of brackets galvanised with zinc alloy of 0.08 mm thick conforming to IS: 1239, etc. complete. The Rate shall also be inclusive of 2 coats of painting synthetic enamel paint of approved colour over one coat of primer and pipe identification labels and technical specification.					
3.068	3.2.2.1) 75 mm dia.	item38	300.00	metre		
3.069	3.2.2.2) 110 mm dia.	item39	689.00	metre		
3.070	3.2.3) Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, The Rate shall also be inclusive of two coats of painting synthetic enamel paint of approved colour over one coat of primer and pipe identification labels and technical specification (i) Single socketed pipes					
3.071	3.2.3.1) 75 mm diameter	item40	98.00	metre		
3.072	3.2.3.2) 110 mm diameter	item41	81.00	metre		
3.073	3.2.3.3) 160 mm diameter	item42	125.00	metre		
3.074	3.2.4) Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams.	item43	20.00	each		
3.075	3.2.5) Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1 mx1 mx400 micron, finished with 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement, rounding the edges, making and finishing the outlet complete.	item44	20.00	each		
3.076	Providing and fixing unplasticised-PVC pipe clips of approved design to unplasticised-PVC rain water pipes by means of 50x50x50 mm hard wood plugs, screwed with M.S. screws of required length,including cutting brick work 160 mm Pipe	item45	42.00	each		
3.077	3.2.6) Providing and fixing unplasticised-PVC pipe clips of approved design to unplasticised-PVC rain water pipes by means of 50x50x50 mm hard wood plugs, screwed with M.S. screws of required length,including cutting brick work 100 mm Pipe	item46	27.00	each		

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3.078	3.2.7) Providing and fixing unplasticised-PVC pipe clips of approved design to unplasticised-PVC rain water pipes by means of 50x50x50 mm hard wood plugs, screwed with M.S. screws of required length, including cutting brick work 75 mm Pipe	item47	31.00	each		
3.079	3.2.8) Providing and fixing of CI parapet drain for balcony rain water disposal. The CI parapet hopper shall be provided with galvanized grating and SS screws Size 100 x 280 mm	item48	22.00	each		
3.080	3.2.9) Supplying, Fixing and Testing uPVC Multi Floor Trap/ 'P' trap with SS grating with SS screw of size 125 mm x 125 mm, inlet 75 mm and outlet of 75 mm dia. bronze. Quoted rate shall include necessary uPVC pipe connector, extension pipe and reducing tee for waste pipe connections from wash and Kitchen area, etc. complete.	item49	92.00	each		
3.081	3.2.10) Supplying, Fixing and Testing SS Floor Cleanout cover with SS ring and SS screws with SS screws of size 125 mm x 125 mm for 82 mm diameter uPVC. Quoted rate shall include necessary connector/ adapters for Soil/ Waste Pipe connections complete.	item50	27.00	each		
3.082	3.2.11) Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors:					
3.083	3.2.11.1) 100 mm inlet and 100 mm outlet					
3.084	3.2.11.1.1) Sand cast iron S&S as per IS: 3989	item51	3.00	each		
3.085	3.2.11.2) 100 mm inlet and 75 mm outlet					
3.086	3.2.11.2.1) Sand cast iron S&S as per IS - 3989	item52	3.00	each		
3.087	3.2.12) Supplying, fixing and testing CI 'P' trap with stainless steel floor grating 125 x 125 mm size, inlet and outlet of 100 mm dia.. Quoted rate shall include necessary GI pipe hopper for waste Pipe connections from wash and Kitchen Areas etc., including necessary fittings complete.	item53	2.00	each		
3.088	3.2.13) Supplying, fixing and testing uPVC floor trap (heavy duty hinged type) with brass CP frame & cover (150mm x 150mm). Trap of 100 mm dia. Inlet and 75 mm dia outlet with a seal of at least 23 mm for waste from wash basins and shower fixed on a bed of cement concrete etc.,	item54	36.00	each		
3.089	3.2.14) Supplying, Installing, testing & Commissioning UPVC Vent cowl as per IS 14735.					
3.090	3.2.14.1) 75 mm Diameter	item55	5.00	each		
3.091	3.2.14.2) 100 mm Diameter	item56	17.00	each		
3.092	3.2.15) Providing and fixing jointing with lead free sealant for soil, waste and vent pipes including fittings etc for canteen kitchen drainage only :					
3.093	3.2.15.1) Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989					
3.094	100 mm dia	item57	5.00	metre		
3.095	3.2.15.2) Centrifugally cast (spun) iron socketed pipe as per IS: 3989					
3.096	75 mm diameter	item58	10.00	metre		
3.097	3.3) INTERNAL BUILDING WATER SUPPLY SYSTEM					
3.098	Note: "All the Non DSR items should be as per technical specifications with all the necessary accessories as required for complete installation"					
3.099	3.3.1) Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings, with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer-in-Charge.					
3.100	Concealed work, including cutting chases and making good the walls, etc					
3.101	NOTE: The pipe of sizes 50mm & below shall be of SDR-11 Class and pipe of sizes 65mm & above shall be of Sch-40.					
3.102	3.3.1.1) 15 mm nominal outer dia pipes	item59	200.00	metre		
3.103	3.3.1.2) 20 mm nominal outer dia pipes	item60	175.00	metre		
3.104	3.3.1.3) 25 mm nominal outer dia pipes	item61	95.00	metre		
3.105	3.3.1.4) 32 mm nominal outer dia pipes	item62	18.00	metre		
3.106	3.3.1.5) 40 mm nominal outer dia pipes	item63	3.00	metre		
3.107	3.3.2) Providing and Fixing Chlorinated Polyvinyl Chloride (CPVC) Pipes, having thermal stability for hot & cold water supply, including all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer. The Rate shall also be inclusive of two coats of painting synthetic enamel paint of approved colour over one coat of primer and pipe identification labels and technical specification.					
3.108	Internal Work - Exposed on wall					
3.109	NOTE: The pipe of sizes 50mm & below shall be of SDR-11 Class and pipe of sizes 65mm & above shall be of Sch-40.					
3.110	3.3.2.1) 15 mm nominal outer dia pipes	item64	88.00	metre		
3.111	3.3.2.2) 20 mm nominal outer dia pipes	item65	215.00	metre		
3.112	3.3.2.3) 25 mm nominal outer dia pipes	item66	180.00	metre		
3.113	3.3.2.4) 32 mm nominal outer dia pipes	item67	125.00	metre		
3.114	3.3.2.5) 40 mm nominal outer dia pipes	item68	104.00	metre		
3.115	3.3.2.6) 50 mm nominal outer dia pipes	item69	68.00	metre		
3.116	3.3.2.7) 65 mm nominal outer dia pipes	item70	155.00	metre		
3.117	3.3.2.8) 80 mm nominal outer dia pipes	item71	10.00	metre		

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3.118	3.3.3) Supplying and wrapping closed cell nitrile rubber armaflex 6mm thick tape for concealed piping & 19 mm thick tube for exposed piping for hot water pipes thermal insulation for toilet internals / roof as per manufacturer's instruction. The exposed pipes on roof shall be protected with aluminium cladding of 24 gauge sheet.					
3.119	3.3.3.1) 15 mm dia	item72	26.00	metre		
3.120	3.3.3.2) 20 mm dia	item73	16.00	metre		
3.121	3.3.3.3) 25 mm dia	item74	35.00	metre		
3.122	3.3.3.4) 32 mm dia	item75	25.00	metre		
3.123	3.3.3.5) 40 mm dia	item76	6.00	metre		
3.124	3.3.4) Supplying, Installing and Testing approved make forged brass ball valves full bore, threadconforming to IS: 1703 with all necessary fittings & accessories i.e, unions, connectors, adapters, PTFE tape etc., complete as directed & specified.					
3.125	3.3.4.1) 15 mm nominal bore	item77	0.50	each		
3.126	3.3.4.2) 20 mm nominal bore	item78	52.25	each		
3.127	3.3.4.3) 25 mm nominal bore	item79	39.25	each		
3.128	3.3.4.4) 32 mm nominal bore	item80	16.25	each		
3.129	3.3.4.5) 40 mm nominal bore	item81	12.50	each		
3.130	3.3.4.6) 50 mm nominal bore	item82	13.25	each		
3.131	3.3.7) Providing and fixing C.I. butterfly valves , water end type class PN 1.6 as per IS:13095 or BS:5155 with integrally moulded linear of nitrile or EPDM, SS Disc and lever operated including necessary nuts, bolts, gaskets, flanges etc. All complete and as per the directions of the Engineer					
3.132	3.3.7.1) 80 mm dia	item83	2.25	each		
3.133	3.3.7.2) 65 mm dia	item84	9.25	each		
3.134	3.3.8) Providing & fixing Auto Air vent for cold water supply risers, suitable for pressure not less than 15 Kg/Sq.cm. including all accessories for satisfactory installation with necessary connecting 'fittngs like valves, flanges, nuts and bolts etc., complete.					
3.135	3.3.8.1) 20 mm dia	item85	19.00	each		
3.136	3.3.9) Providing, fixing , testing and commissioning Digital Water Meter with all necessary fitting such as communication cable , threaded pieces, unions pressure gauge, isolation cock, flanges piece for future removal, flanges / unions complete with all necessary testing charges and obtaining test certificates from municipal authorities, on following size pipe lines (1 each strainer shall be provided at inlet, 2 nos isolation valves at inlet & outlet, 1 no NRV on outlet including concrete meter chamber with frames & cover / aluminium 22 gauges housing with cover & lock for internal meters. The meter shall comply to ISO 4064 standard, feasible for class B or Class A installation. Water meter shall communicate with DDC or PLC through open communication protocol such as RS-485, MODBUS, BACnet etc. Item including all accessories for satisfactory installation complete					
3.137	3.3.9.1) 25mm dia	item86	4.00	each		
3.138	3.3.9.2) 40mm dia	item87	2.00	each		
3.139	3.3.9.3) 50 mm dia	item88	1.00	each		
3.140	3.3.9.4) 65 mm dia	item89	1.00	each		
3.141	3.3.10) Constructing masonry chamber 60x45x50 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for water meter complete with C.I. double flap surface box 400x200x200 mm (inside) with locking arrangement and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design:					
3.142	3.3.10.1) With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	item90	6.50	each		
3.143	3.3.11) Supplying, Installing, testing & Commissioning pressure reducing station for cold water supply comprising of 2 Nos Gun Metal ball valves on inlet & outlet, 1 No pressure reducing valve with flanged connection, 1 No. 'Y' strainer, 2 Nos Pressure gauge on inlet & outlet, and 1 No. 15 mm dia safety valve. The complete system is tested to a pressure not less than 15 Kg/Sq.cm and suitable to reduce the pressure upto 3 Kg/Sq.cm) Including flanges/ unions, nuts, bolts and washers complete as required.					
3.144	3.3.11.1) 25 mm dia (Brass Housing - PRV)	item91	1.00	each		
3.145	32 mm dia (Brass Housing - PRV)	item92	0.50	each		
3.146	40 mm dia (Brass Housing - PRV)	item93	0.50	each		
3.147	3.3.11.2) 50 mm dia (CI Housing - PRV)	item94	1.00	each		
3.148	3.3.12) Supplying, Installing, testing & Commissioning in position electrically operated level sensor based solenoid valve with level electroeds for water tank inlet as shown in drawing & specified in specifiaction including weather proof housing, control panel, isolator, cables, accessories etc complete. Item including all accessories for satisfactory installation complete					
3.149	3.3.12.1) 25mm dia	item95	4.00	each		
3.150	3.3.12.2) 40mm dia	item96	3.00	each		
3.151	3.3.12.3) 50 mm dia	item97	2.00	each		
3.152	3.3.12.4) 65 mm dia	item98	1.00	each		
3.262	3.5) CIVIL WORK (PHE Works)					

Sr. No.	DESCRIPTION	item code	QTY	UNIT	Rate (In Rs.) excl GST	Amount (In Rs.) excl GST
3.284	3.5.9) Providing and fixing 600 mm long MS hot dip galvanized Puddle Flange ANSI B 16.5, 150# fabricated out of 6 mm thick MS plates of suitable size and pipe shall be confirming to IS:1239 heavy class pipes properly fixed in walls / top slab of tanks. The entire fittings shall be hot dipped galvanized after fabrication. Length shall be minimum 600 mm or wall thickness plus 200 mm on either side (which ever is more). Inclusive of all blank flanges as per detail design .Each Puddle shall be flanged on outer side for connection of pipe / fittings all complete as per directions of Engineer-In-Charge.					
3.285	3.5.9.1) 250mm dia.	item99	2.00	each		
3.286	3.5.9.2) 200mm dia.	item100	1.00	each		
3.287	3.5.9.3) 150mm dia.	item101	5.00	each		
3.288	3.5.9.4) 100mm dia.	item102	11.00	each		
3.289	3.5.9.5) 80mm dia.	item103	5.00	each		
3.290	3.5.9.6) 65mm dia.	item104	9.00	each		
3.291	3.5.9.7) 50mm dia.	item105	14.00	each		
3.292	3.5.9.8) 40mm dia.	item106	4.00	each		
3.293	3.5.9.9) 25mm dia.	item107	10.00	each		
3.299	3.6) ELECTRICAL INSTALLATION FOR WATER SUPPLY SYSTEM					
3.323	3.6.5) CABLE TRAYS AND COVERS					
3.324	3.6.5.1) Readymade 2500mm standard length, prefabricated , Ladder/perforated cable tray from 14 SWG MS sheet and then hot dip galvanised (with minimum thickness of 70 microns), of following sizes and associated accessories such as coupler plates, tees, elbow etc.50mm side flanges for perforated tray & 75mm side flanges for ladder type cable trays shall be provided on both sides of the tray. Sizes of cable trays to be decided by Bidder. Support for cable trays , Panel/DBs included in scope. NOTE: The rates shall be inclusive of bends / tees / cable markers etc.					
3.327	3.6.5.1.3) 150mm width Perforated tray	item108	25.00	metre		
3.328	3.6.5.1.4) 75mm width Perforated tray	item109	6.00	metre		
3.329	3.6.5.2) Readymade 2500mm standard length, prefabricated G. I. Cover (suitable for both ladder and perforated cable trays) from 14 SWG MS sheet and then hot dip galvanized for the following tray size & associated accessories such as coupler plates, tees, elbows etc. 25mm side flange shall be provided.					
3.332	3.6.5.2.3) 150mm width Perforated tray	item110	25.00	metre		
3.333	3.6.5.2.4) 75mm width Perforated tray	item111	6.00	metre		
3.334	3.6.5.3) Cable tray supports, supporting frame for mounting of Swgr. Pnl. / control panels, etc. The supports shall be painted with 2 coats of red oxide primer and 2 coats of aluminium paint.Type of structural items required shall be ISMC 100, ISMC 75,ISA 50x50x6mm, ISA 65x65x6,ISA 40x40x3, MS plate 6mm, MS plate 10 mm or any other size as per requirement	item112	0.25	tonne		
3.335	3.6.6) EARTHING SYSTEM					
3.336	Earthing system including supply, installation, testing and commissioning of G.I earthing strips/wires of following sizes to be laid in cable trays/on wall including jointing by welding, connecting to equipment, painting to welded portions by black bitumen paint .Necessary hardware is included in the scope. This includes earthing for Plumbing system equipments as per latest version of IS 3043. For outdoor areas excavation, backfilling and removal of excess soil etc. is included in scope.					
3.337	3.6.6.1) 50 X 6 mm G.I. STRIP	item113	8.00	metre		
3.338	3.6.6.2) 25 X 6 mm G.I. STRIP	item114	8.00	metre		
3.339	3.6.6.3) 8 SWG GI WIRE	item115	8.00	metre		
3.340	3.7) HOT WATER SYSTEM					
3.341	3.7.1) Solar Hot Water System Design, supply, installation, testing & commissioning solar hot water system in position, Aligning to correct position as per drawing, finishing, sealing, testing and commissioning of the approved make Solar Hot Water System confirming to IS 12933.					
3.342	The scope for Solar system (Evacuated Tube Collector type) with ISI marked includes 125 Litre each thermosyphon/Forced flow system Collectors having insolation surface area 2.2 Sq. Mtrs., as per IS: 12933 of Bureau of Indian Standards, all gaskets and gromets, M.S. vertical stand and base plate with two coats of primer and two coats of rubber paint, bolts and nuts for fastening with the Cement Concrete Base blocks, interconnecting medium Duty G.I. pipes with nitrile rubber insulation and 22 gauge Aluminum Sheet Cladding, pipe supports and clamps, gate valves, check valves, thermister valves, steam release valves, including temperature sensors and timer and wiring,flange blanks / plugs, etc complete as per direction of the Engineer-in- charge. Including Hot Water re-circulation Pump (1working+1standby), electrical pannel, control panel.					

Sr. No.	DESCRIPTION	item code	QTY	UNIT	Rate (In Rs.) excl GST	Amount (In Rs.) excl GST
3.343	The scope also includes numbers of insulated stainless steel storage tanks (SS304) of capacity as mentioned in Schedule of quantity, including making inlet, outlet heavy gauge C.P. connection, temperature gauges (at inlet and outlet of storage tank). The Storage Tanks duly painted with two coats of Red-Oxide and having Mineral Wool insulation, outer cladding of 22 gauge Aluminum Sheet, control valves at inlet and outlet of Water tank, M.S. supports for the tanks with M.S. base plate, bolts and nuts for fastening the stands and support to Cement concrete blocks, testing the tanks and the entire hot water system at a constant water pressure of 5.0 Bar (50 Mtrs) each, testing of the entire system for a constant flow of hot water at 55 degree Celcius during peak winter when the Wet Bulb Temperature is 17.7 degree Celcius. All work complete as per direction of the Engineer-in- Charge.Item including all accessories for satisfactory installation complete. For capacities as follows.					
3.345	3.7.1.2) 500 liters per day	item116	1.00	Set		
3.346	200 liters per day	item117	1.00	Set		
4.000	4.0) FIRE FIGHTING WORKS					
4.021	4.2) HYDRANT SYSTEM & ACCESSORIES					
4.022	4.2.1) Supply & installation of ERW black pipes (Piping as per Grade CT of Specification) comply to IS: 1239 (Class HVY upto 150 NB) & IS: 3589 Gr 410 for 200NB & Above (from minimum 6mm thick for pipes upto 350 mm dia. and from minimum 8mm thick for pipes of 400 mm dia and above.) .Fittings shall comply to ASTM A105 & ASTM A234 Gr. WPB.Flanges shall be as per ASTM A105 & IS: 2062. Flanges shall be dimensionally as per ANSI B16.5, 150#. All other fittings ≤50NB shall be dimensionally as per ANSI B16.11, 3000# and >65 NB as per ANSI B16.9.Piping joints shall be socket welded to ANSI B16.11 for sizes ≤50NB and butt welded to ANSI B16.25 for >50NB.Welded joints shall be radiographed etc as per specification.					
4.023	Above ground pipes shall be coated with 2 coats of red- oxide primer followed by 2 coats of post office red colour. After erection the entire piping system shall be hydro tested at 1.5 times the working pressure for 2 hours. At least 10% of all the welded joints shall be radiographically tested and half of the joints radiographed shall be field joints.Cost should be inclusive of all structural steel supports/clamps/brackets, anchor fastner etc as per /IS/TAC.					
4.024	4.2.1.1) 15 NB	item118	6.00	metre		
4.025	4.2.1.2) 25 NB	item119	7.00	metre		
4.026	4.2.1.3) 50 NB	item120	2.00	metre		
4.027	4.2.1.4) 80 NB	item121	16.00	metre		
4.028	4.2.1.5) 100 NB	item122	55.00	metre		
4.029	4.2.1.6) 150 NB	item123	300.00	metre		
4.030	4.2.1.7) 200 NB	item124	4.00	metre		
4.031	4.2.1.8) 250 NB	item125	4.00	metre		
4.032	4.2.2) Underground pipes shall be laid 1 m below ground level and wrapped and coated as per IS: 10221.On completion of wrapping and coating 4 mm thk (1 coat) it shall be tested by holiday testing. After erection the entire piping system shall be hydro tested at 1.5 times the working pressure for 2 hours. At least 10% of all the welded joints shall be radiographically tested and half of the joints radiographed shall be field jointsincluding excavation in all kind of soil, dewatering, making sand bed as per specification , backfilling, dewatering, ramming & removing the surplus excavated material and making good the same complete as required.					
4.036	4.2.2.4) 150 NB	item126	10.00	metre		
4.037	4.2.2.5) 200 NB	item127	10.00	metre		
4.038	4.2.3) Supply & installation of S.S. Internal Hydrants conforming to IS 5290 (Type "A") Hydrant valve shall have single outlet having 80 NB flanged inlet ,ss spindle controlled 63 NB female instantaneous outlet type coupling having twist release type lug; internal parts shall be of S.S. Including fixing with SS nut-bolt & washers flanged tappin. A cap with chain shall be provided on the outlet of the valve as per specification. (Location : Internal fire hydrant)	item128	9.00	each		
4.039	4.2.4) Supply & installation of S.S External Hydrants conforming to IS 5290 (Type "A") Hydrant valve shall have single outlet having 80 NB flanged inlet ,SS spindle controlled 63 NB female instantaneous outlet type coupling having twist release type lug; internal parts shall be of SS. Including fixing with SS nut-bolt & washers flanged tappin .A cap with chain shall be provided on the outlet of the valve as per specification. (Location : External fire hydrant)	item129	4.00	each		
4.040	4.2.5) Supply & installation Fire hose cabinets , these cabinets shall be fabricated from 2.00 mm thick CRCA sheet with locking arrangement of size of hose cabinet shall be 750 mm x 600 mm x 250 mm the painting of the hose cabinet shall be post office red colour paint. Each hose cabinet shall accommodate two nos. of 15 Mt. Long hose-pipes and one no. of branch pipe with nozzle. The fire hose cabinet will have the legend "FIRE HOSE" painted prominently in the graphic style as per specification.	item130	10.00	each		
4.041	4.2.6) Supply & installation controlled percolating fire hose pipe (as per IS:8423) of 63 mm dia and 15 meter length rated for burst pressure of 35.7 Kg/sqcm. The hose shall be tested for flame resistance test in accordance to IS:8423. Hose shall be complete with ISI marked SS male & female coupling (IS:903) as per specification.	item131	25.00	each		

Sr. No.	DESCRIPTION	item code	QTY	UNIT	Rate (In Rs.) excl GST	Amount (In Rs.) excl GST
4.042	4.2.7) Supply & installation of swinging type First Aid hose reel (IS 884) in post office red colour drum with 30 mts long and 19 mm dia REINFORCED RUBBER , 20 mm dia gate valve stop cock, (IS:778, class - II) terminating with G.M Coupling & nozzle of 6mm outlet with shut off valve confirming to IS 8090 - 1976 complete with socket for tap-off, drum and brackets (including painting) for installation on wall with anchor fastner, bolts & nuts as per specification.	item132	12.00	each		
4.043	4.2.8) Supply & installation of 63 mm dia instantaneous pattern branch short SS pipe, 20 mm dia nozzle conforming to IS 903, suitable for inter connection to hose pipe coupling complete as per specification.	item133	15.00	each		
4.044	4.2.9) Supply & installation of S.S 4 way fire water tank inlet connection with 4 Nos 63 mm dia. built - in Non- return valves instantaneous coupling type arranged on 150 mm dia. Pipe manifold and connected to Fire water tank as per specification.	item134	1.00	each		
4.045	4.2.10) Designing, Supply and installation Orifice plate made out of stainless stand plate (thickness as per specification) for following size of pipe to reduce pressure upto 3.5 Kg/sqcm complete in all respects	item135	15.00	each		
4.046	4.2.11) Constructing masonry Chamber 90x90x100 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), i/c necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand: 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design With common burnt clay F.P.S.(non modular) bricks of class designation 7.5	item136	3.00	each		
4.047	4.2.12) Providing & fixing of FRP 150kg duty manhole cover with frame of 900 x 900 mm internal dia for valve chamber.	item137	3.00	each		
4.048	4.2.13) Supply & installation of lockable indoor type fire hose cabinet frames fabricated from 40 x 40 x 5 angle iron sections and 16 gauge MS sheet with full front glass door and locking arrangement, suitable to accommodate landing valve, 2 nos. 15 m long hoses, first-aid hose reel drum and branch pipe nozzle . The cabinet frame shall be painted with two coats of primer and two coats of post office red colour of approved Make and shade as per specifications (Approx 1.5 m (high) x 0.9 m (wide) X 0.2 m (width). The item shall be complete of MS housing with front door. (Cost shall be inclusive of providing break glass box containing key for the cabinet along with hammer).	item138	6.00	each		
4.049	4.2.14) Supply & Fixing of " J "type hooks supports made of 25 mm dia pipe to support 2 nos. 15 m long hoses and 01 No short branch pipe. Cost should be inclusive of required anchor fastner, nuts, etc.	item139	12.00	each		
4.051	4.3) VALVES					
4.052	4.3.1) Supply & installation of Gate valve (of sizes 50NB & above) conform to IS 14846 and shall be of C.I to IS: 210 GR. FG 260 & flanged Ends shall be drilled to ANSI B16.5.Gate valve, in smaller sizes (\leq 50NB), shall be all bronze and confirming to IS:778 with screwed ends as per specification.					
4.053	4.3.1.1) 50 NB	item140	1.00	each		
4.054	4.3.1.2) 80 NB	item141	2.00	each		
4.055	4.3.1.3) 100 NB	item142	4.00	each		
4.056	4.3.1.4) 150 NB	item143	2.00	each		
4.059	4.3.2) Supply & installation of Wafer Check Valves with cast iron body conforming to API 594 including rubber gasket, union, etc. complete as per specification.					
4.061	4.3.2.1) 100 NB	item144	2.00	each		
4.063	4.3.3) Supply & installation of Air Release Valve for risers, suitable for pressure not less than 15 Kg/Sq.cm. as per specification	item145	3.00	each		
4.064	4.3.4) Supply & installation of globe valve confirming to IS: 778 with screwed ends.Valve body shall be hydro tested at 24 kg/sq.cm (g) and seat and back seat at 16 kg/sq.cm. (g). 15mm dia.	item146	1.00	each		
4.067	4.3.6) Supply, Installation, Testing & commissioning of C.I.flanged "Y" type Strainer (PN 1.6) with SS mesh, suitable flanges, nuts, bolts, washer, asbestos free gaskets etc. as per specification.					
4.068	4.3.6.1) 100NB	item147	2.00	each		
4.071	4.4) INSTRUMENTS					
4.072	4.4.1) Supply & installation of pressure gauge(suitable for working pressure of (0-16 Kg/cm2(g)) of Stainless Steel with 6 inch phenolic dial (white dial with black numerals), 316 SS Bourdon tube, nylon movements and micrometer type adjustable aluminium pointer with accuracy of +/- 0.1% of span including accessories like siphons for steam services, snubbers for pump discharge applications and chemical diaphragm for corrosive and oil services and name plate, etc. Material of accessories shall be SS. IP65 degree of protection for enclosure. Over range protection shall be 50% above maximum pressure. Armoured capillary of 15 M shall be provided as per specification.	item148	1.00	each		
4.073	4.4.2) Providing, fixing, testing and commissioning adjustable type pressures switches suitable for operating with hydrant and sprinkler systems for working pressure of 11Kg/cm ² pressure including electrical wiring complete as required. The cost of electrical wiring will be included in this item. Vendor also need to submit the calibration certificate of Pressure switch as per specification.	item149	2.00	each		

Sr. No.	DESCRIPTION	item code	QTY	UNIT	Rate (In Rs.) excl GST	Amount (In Rs.) excl GST
4.075	4.4.4) Supply & installation of Float Switch switch as per specification.	item150	1.00	each		
4.076	4.5) SPRINKLER SYSTEM					
4.077	4.5.1) Supply & installation of ERW black pipes(Piping as per Grade CT of Specification) comply to IS: 1239 (Class HVY upto 150 NB) & IS: 3589 Gr 410 for 200NB & Above (from minimum 6mm thick for pipes upto 350 mm dia. and from minimum 8mm thick for pipes of 400 mm dia and above.) .Fittings shall comply to ASTM A105 & ASTM A234 Gr. WPB.Flanges shall be as per ASTM A105 & IS: 2062. Flanges shall be dimensionally as per ANSI B16.5, 150#. All other fittings ≤50NB shall be dimensionally as per ANSI B16.11, 3000# and >65 NB as per ANSI B16.9.Piping joints shall be socket welded to ANSI B16.11 for sizes ≤50NB and butt welded to ANSI B16.25 for >50NB.Welded joints shall be radiographed etc as per specification.					
4.078	Above ground pipes shall be coated with 2 coats of red- oxide primer followed by 2 coats of post office red colour. After erection the entire piping system shall be hydro tested at 1.5 times the working pressure for 2 hours. At least 10% of all the welded joints shall be radiographically tested and half of the joints radiographed shall be field joints.Cost should be inclusive of all structural steel supports/clamps/brackets, anchor fastner etc as required.					
4.079	4.5.1.1) 25 NB	item151	400.00	metre		
4.080	4.5.1.2) 32NB	item152	150.00	metre		
4.081	4.5.1.3) 40 NB	item153	125.00	metre		
4.082	4.5.1.4) 50 NB	item154	35.00	metre		
4.083	4.5.1.5) 65 NB	item155	6.00	metre		
4.084	4.5.1.6) 80 NB	item156	22.00	metre		
4.085	4.5.1.7) 100 NB	item157	130.00	metre		
4.086	4.5.1.8) 125 NB	item158	4.00	metre		
4.087	4.5.1.9) 150 NB	item159	40.00	metre		
4.088	4.5.2) Supply Installation testing & commissioning of Pendant type sprinkler of 15 NB, Quartzoid bulb type 68 deg.standard Response, with adjustable escutcheon plate in SS 304 as per UL/FM Approved.	item160	280.00	each		
4.089	4.5.3) Supply Installation testing & commissioning of Side Wall sprinkler of 15 NB, Quartzoid bulb type 68 deg.standard Response, with adjustable escutcheon plate in SS 304 as per UL/FM Approved.	item161	2.00	each		
4.090	4.5.4) Supply & installation of Corrugated SS-304 flexible sprinkler pipe droplet for 12 kg/ sq. cm. working pressure with 1/2" BSP threaded outlet & 1" BSP threaded inlet with reducer nipple, snap, clamp, T-bar bracket/all types of couplings etc. with necessary fitting complete as required as per UL/FM approved					
4.091	4.5.4.1) 1500 mm length	item162	280.00	each		
4.094	4.5.6) Supply, Installation, Testing & commissioning of flow switch on sprinkler distribution header on each floor to be installed as per manufacturer specifications in an accessible location as per site, complete including wiring to monitor modules with potential free contact with 2 No. NONC as per the specification.Add following in description 1. The flow switches work at a triggering threshold bandwidth (flow rate) of 4 to 10 GPM. 2. The switch shall be able to trip and make / break contact on the operation of a single sprinkler head. 3. Flow switch shall have a paddle made of flexible and sturdy material of the width to fit within the pipe bore.					
4.095	4.5.6.1) 150 NB	item163	1.00	each		
4.096	4.5.7) Supply, Installation, Testing & commissioning of CI butterfly valves as per BS5155/IS 13095 Hand lever operated type with required flanges, nuts, bolts,washer, asbestos free gaskets etc. complete					
4.097	4.5.7.1) 50 NB	item164	1.00	each		
4.098	4.5.7.2) 80 NB	item165	1.00	each		
4.101	4.5.8) Supply Installation testing & commissioning of Upright type sprinkler of 15 NB, Quartzoid bulb type 68 deg.standard Response as per UL/FM Approved.	item166	250.00	each		
4.102	4.9) Providing, fixing including testing and commissioning of Drain valve & assembly with 2 nos. of ball valve, sight glass, 2" pipe & required fittings. a) 50mm dia	item167	2.00	each		
4.103	4.6) FIRE EXTINGUISHERS					
4.104	4.6.1) Supply, Installation, Testing & commissioning of Portable Fire extinguishers ((As per IS : 15683:2006) of following type & capacity complete.					
4.107	4.6.1.3) 6 Kg Capacity Dry Chemical Powder(DCP) type	item168	20.00	each		
4.108	4.6.1.4) 4.5 Kg. CO2 Type	item169	25.00	each		
4.109	4.6.2) Supplying and Installation of sand filled fire buckets of 24 gauge galvanized steel sheet, standard 9 litre capacity and of round bottom shape, red outside and black on the bottom ,in scribed with letters "FIRE" in black and gold. Cost shall be inclusive of providing MS stand duly painted over a coat of primer	item170	1.00	each		
4.110	4.7) ELECTRICAL PANELS					
4.129	4.7.2) LOCAL STARTER PANEL for Terrace Booster Pump: 1 each	item171	1.00	each		

Sr. No.	DESCRIPTION	item code	QTY	UNIT	Rate (In Rs.) excl GST	Amount (In Rs.) excl GST
4.130	415V, 50Hz, Short circuit rating minimum 10kA/1Sec, Outdoor type with additional rain canopy, mounted on steel structural support stand/Wall mounted, IP-55, Bottom cable entry, With TP MPCB feeders, With DOL Starter, Associated indications/push buttons & other components/accessories as applicable. TYPE-2 Coordination shall be ensured for all motor feeders.					
4.131	4.7.3) LOCAL PUSH BUTTON STATION (LPBS) for Terrace booster pumps: 1 each	item172	1.00	each		
4.132	with On, Off, & Emergency Trip (LOCKABLE) Push button, IP55 protection					
5.000	5.0) HVAC SYSTEM					
5.045	5.2) D X SPLIT UNITS					
5.046	5.2.1) Split type Air-conditioners: Supplying, Installing, testing and commissioning of minimum 5 Star, BEE rating (nominal capacity) Air-cooled split AC unit along with painted MS Stands for ODU & necessary support for IDU, cordless remote ,3- pin top with @ 2 RMT suitable size FRLS PVC power cable . The unit shall also be supplied with required voltage stabiliser of suitable rating to give constant output of 230V for input range of 180 V to 260 V with time delay, high/low cut off, meter to read input and output voltages, ON/OFF switches etc. as required and earthing etc. Unit shall be provided with auto timer setting, complete in all respect. Unit should be compatible with MODBUS system complete in all respect to operate the unit via BMS for normal as well as in standby mode.					
5.048	5.2.1.2) High Wall Type : 1.5 TR	item173	2.00	each		
5.049	5.2.1.3) High Wall Type : 2.0 TR	item174	7.00	each		
5.050	5.2.1.3) Supplying, Installing, testing and commissioning of voltage stabilizer. The unit shall be suitable rating to give constant output of 230V for input range of 180 V to 260 V with time delay, high/low cut off, meter to read input and output voltages, ON/OFF switches etc. as required and earthing etc.	item175	9.00	each		
5.051	5.2.2) Copper Piping					
5.052	5.2.2.1) Supply, fabrication, installation, testing of copper piping for above split unit with 13 mm thick nitrile rubber/ sleeve insulated. insulation shall be of Class "O" std. The piping shall be measured as a Pair RMT for both liquid & Gas line.	item176	35.00	Metre		
5.069	5.3) VENTILATION SYSTEM					
5.113	5.3.4) DUCT WORK					
5.122	5.3.4.3) KITCHEN EXHAUST DUCT- Supply, Fabrication, installation and testing of GI ducts - 18G thick including angle supports, channels, rods, anchor fasteners, Primary MS Painted Supports nuts- bolts-screws-rivets, gaskets, stiffeners, turning vanes etc. in accordance with IS655 & approved shop drawings. Entire duct shall be fabricated at factory. Entire ducting shall be insulated from out side using Rockwell insulation with density of 80 kg/Cum & thickness 50mm. Insulation material shall be inline with BS 476 part 4, 6 & 7. Entire Ducting shall be pressure tested. Ducting shall be provided with internal fire rated paint for 250deg c for 2 hours. all ancillary works shall be fire rated. The optimum paint thickness shall be applied to achieve desired fire rating.	item177	25.00	sqm		
5.123	5.3.5) Supply, installation, testing and commissioning of G.I volume control duct damper complete with neoprene rubber gaskets, Nylon Gear ,nuts, bolts, screws, linkages, flanges etc, as per specifications	item178	2.00	sqm		
7.000	7.0) ELECTRICAL WORKS					
7.001	7.1) RMU, HT PANELS, TRF, 4 POLE STRUCTURE FOR 33 KV SYSTEM and BUS DUCTS					
7.002	7.1.1) RMU					
7.005	7.1.1.3) 4 POLE STRUCTURE					
7.028	7.1.3.2) Laying of one number XLPE power cable of 33 KV grade of following size direct in ground through hume pipes including excavation and refilling the trench etc. as required.					
7.029	7.1.3.2.1) Above 120 sqmm and upto 400 sqmm	item179	120.00	Metre		
7.041	7.2) UPS SYSTEM & INVERTER					
7.042	7.2.1) Supply,Transportation, storing at site, shifting at work place, installation, Testing and commissioning of the following rating Modular type UPS/Inverter as per specifications and complete in all respects. The scope also includes supply, Installation, Testing and Commissioning of Sealed Maintenance Free lead acid Batteries complete with intercell connectors & copper cables, battery stand made out of Powder Coated MS Angles with adequate supports to carry the load of the batteries & also TVSS at the input of each UPS to protect against transients, surges & Noise as per the tender specifications.					
7.046	7.2.1.4) 2 KVA Digital True Sine wave inverter , Offline, 15 Min battery back, Input Voltage : 1 Ph 230 Volts, ±10% , Output : 1-Phase-230Volts, 50 Hz ± 2%	item180	1.00	Set		
7.047	7.2.1.5) 1 KVA Digital True Sine wave inverter , Offline, 15 Min battery back, Input Voltage : 1 Ph 230 Volts, ±10% , Output : 1-Phase-230Volts, 50 Hz ± 2%	item181	1.00	Set		

Sr. No.	DESCRIPTION	item code	QTY	UNIT	Rate (In Rs.) excl GST	Amount (In Rs.) excl GST
7.056	7.4) LT PANELS					
7.057	7.4.1) Supplying, Installation, testing and commissioning of cubical type LT panel suitable for 415V, 3 Phase, 4 wire 50 Hz AC supply system fabricated in compartmentalized design from CRCA sheet steel of 2mm thick for frame work and covers (Panels having ACB as Incomer – FORM 4A and other Panels – FORM 3B), 3mm thick for gland plates i/c cleaning & finishing completed 7 tank process of powder coating in approved shade, having 60Amp capacity extensible type TPN Aluminium alloy bus bars of high conductivity, DMC/SMC bus bar supports, with short circuit withstand capacity for 1 sec, bottom base channel of MS section not less than 100 mm x 50mm x 5mm thick, fabrication shall be done transportable sections, entire panel shall have a common copper earth bar of size 50mmx6mm at the rear with 2 no's earth stud, solid connections from main bus bar to switchgears with required size of aluminium bus bars and control wiring FRLS PVC insulated copper conductor S/C cable alleys, cable gland plates in two half, i/c providing following switch gears: (with all necessary hardware, accessories as required for complete installation as per specifications and DWG:TCE.10106D-4000-AU-41901).					
7.080	7.4.1.23) Girls Hostel+ staff accomodation Sub Panel	item182	1.00	Each		
7.089	7.4.1.32) Residential Energy meters having class 0.1 accuracy of measurement inline with the electricity distribution company specifications and approvals for loads less than 10 kw	item183	3.00	Each		
7.093	7.5) MV / LV CABLING SYSTEM & ITS TERMINATIONS, CABLE TRAYS AND RACEWAYS					
7.094	The cabling work includes Supply, handling (shifting from place of unloading to place of storage & shifting from place of storage to place of installation including insurance), installation, testing, commissioning & performance demonstration of LV Cables of following sizes to be laid buried in ground / through hume pipes or ready made RCC trenches/ laid on cable trays or pipe rack. Civil work such as excavation and back filling with sand & brick/ RCC tile/ semi-circle hume pipe protection etc., Cable trays with supports are measured separately. Miscellaneous items such as cable dressing accessories like nylon tie, Aluminium clamps, GI cleats, cable tags, etc. are included in the scope. Removal of empty drums, cartons and making the site normal as instructed by Employer/ client is included in scope. Installation of cables involves working at heights in the range of 8 to 12 meters. Use of Cherry piker/Scissor Lift & other necessary safety gears arrangements for working at this height shall be included in the scope of installation contractor.					
7.096	7.5.2) Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.					
7.097	7.5.2.1) 3.5 C x 70 Sqmm(38mm)	item184	8.00	Each		
7.098	7.5.2.2) 3.5 C x 120 Sqmm(45mm)	item185	8.00	Each		
7.101	7.5.2.5) 4 C x 16 Sqmm(28mm)	item186	70.00	Each		
7.102	7.5.2.6) 4 C x 25 Sqmm(28mm)	item187	75.00	Each		
7.103	7.5.3) Supply, loading, transportation unloading at site, storages at site, shifting from storage place to site and laying of following sizes of XLPE insulated PVC(Type ST-2) inner sheathed & FRLS outer sheathed, Aluminium conductor galvanized steel round wire/ flat strip armoured power cable of 1.1 KV grade conforming to IS amended upto date and as per specifications.					
7.104	7.5.3.1) 3.5 C x 70 Sqmm	item188	350.00	Metre		
7.105	7.5.3.2) 3.5 C x 120 Sqmm	item190	380.00	Metre		
7.108	7.5.2.5) 4 C x 16 Sqmm	item191	1,500.00	Metre		
7.109	7.5.2.6) 4 C x 25 Sqmm	item192	3,200.00	Metre		
7.110	7.5.4) Supply, loading, transportation unloading at site, storages at site, shifting from storage place to site of following sizes of XLPE insulated PVC(Type ST-2) inner sheathed & FRLS outer sheathed, Copper conductor galvanized steel round wire/ flat strip armoured power Cable of 1.1 KV grade conforming to IS amended upto date and as per specifications.					
7.111	7.5.4.1) 3C x 2.5 Sqmm	item193	300.00	Metre		
7.112	7.5.4.2) 4 C x 10 Sqmm	item194	2,500.00	Metre		
7.113	7.5.4.3) 4 C x 4 Sqmm	item195	275.00	Metre		
7.114	7.5.5) Cable end termination with brass double compression gland and Copper lugs for following size of XLPE insulated and PVC sheathed copper conductor cable of 1.1kV grade as required with earthing. Miscellaneous items like cable lugs, G.I nut - bolts and G.I washers, consumables and other hardware materials as required to make the installation complete, are in the scope. All G.I Nut, bolt and washers shall be HDGI with 80 micron.					
7.115	7.5.5.1) 3C x 2.5 Sqmm	item196	50.00	Each		
7.116	7.5.5.2) 2C x 4 Sqmm	item197	2.00	Each		
7.119	7.5.5.5) 4 C x 10 Sqmm (25mm)	item198	55.00	Each		
7.120	7.5.5.6) 4 X 4 sq. mm	item199	25.00	Each		
7.121	7.5.6) Supply, loading, transportation unloading at site, storages at site, shifting from storage place to site of following sizes of XLPE insulated PVC(Type ST-2) inner sheathed & FRLS outer sheathed, Copper conductor unarmoured power Cable of 1.1 KV grade conforming to IS amended upto date and as per specifications.					
7.124	7.5.6.3) 2C x 4 Sqmm	item200	50.00	Metre		

Sr. No.	DESCRIPTION	item code	QTY	UNIT	Rate (In Rs.) excl GST	Amount (In Rs.) excl GST
7.133	7.6) DISTRIBUTION BOARDS					
7.134	7.6.1) Supplying and fixing prewired SP MCB DB : Supplying and fixing following way single pole and neutral, sheet steel MCB distribution board 240 volts on surface/recess, complete with tinned copper bus bar, neutral bus bar , earth bar , din bar , interconnections , power painted including earthing etc. as required. (But without MCB / RCCB / Isolator).					
7.135	7.6.1.1) 8 Way ,Double Door	item201	1.00	Each		
7.137	7.6.2) Supplying and fixing following way,horizontal type three pole and neutral,sheet steel,MCB distribution board, 415 Volts, on surface/recess,complete with tinned copper busbar,neutral busbar,earth bar,din bar,interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator)					
7.138	7.6.2.1) 4 way (4+12), Double door	item202	1.00	Each		
7.139	7.6.2.2) 6 way (4+18), Double door	item203	1.00	Each		
7.140	7.6.2.3) 8 way (4+24), Double door	item204	2.00	Each		
7.150	7.6.7) Providing and fixing following rating and breaking capacity MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, etc. as required.					
7.151	7.6.7.2) 125 Amp, 16 KA	item205	1.00	Each		
7.154	7.6.8) S/F 'C' Curve , SP MCB : Supplying and fixing 5 amps to 32 amps, rating, 240/415 volts, 'C' Curve , miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.					
7.155	7.6.8.1) Single Pole	item206	350.00	Each		
7.156	7.6.8.2) Double pole	item207	4.00	Each		
7.157	7.6.8.3) Triple pole	item208	250.00	Each		
7.158	7.6.8.4) Triple pole and neutral	item209	10.00	Each		
7.159	7.6.9) S/F SP MCB blanking plate : Supplying and fixing single pole blanking plate in the existing MCB DB complete etc.as required.	item210	8.00	Each		
7.160	7.6.10) S/F SPN RCCB :Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.					
7.161	7.6.10.2) 40 amps	item211	2.00	Each		
7.162	7.6.11) Supplying and fixing following rating, four pole, (three phase and neutral), 415 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.					
7.163	7.6.11.2) 40 amps	item212	5.00	Each		
7.165	7.6.12) Supplying and fixing 63 A rating, 240/415 V, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.					
7.166	7.6.12.1) Single Pole and Neutral	item213	1.00	Each		
7.167	7.6.12.2) Double pole	item214	1.00	Each		
7.168	7.6.12.3) Triple pole	item215	1.00	Each		
7.169	7.6.12.4) Triple pole and neutral	item216	5.00	Each		
7.170	7.6.13) Supply & installation of wall/Column/Structure mounted MCB / MCCBs/ ISOLATOR with Rittal make enclosure with IP20/IP65 protection for incoming and outgoing power cable of suitable ratings					
7.171	7.6.13.1) 6A SPN,10 kA, "C" curve, miniature circuit breaker, IP20	item217	1.00	Each		
7.172	7.6.13.2) 6A SPN,1,10 kA, "C" curve, miniature circuit breaker, IP65	item218	1.00	Each		
7.173	7.6.13.3) 16A SPN,10 kA, "C" curve, miniature circuit breaker, IP20	item219	5.00	Each		
7.174	7.6.13.4) 16A SPN,10 kA, "C" curve, miniature circuit breaker, IP65	item220	9.00	Each		
7.175	7.6.13.5) 63A TPN,16 kA, MCB, IP20	item221	20.00	Each		
7.176	7.6.13.6) 63A TPN,16 kA, MCB, IP65	item222	8.00	Each		
7.177	7.6.14) LOCAL DOL STARTER PANEL					
7.187	7.7) POINT WIRING AND ACCESSORIES					
7.188	7.7.1) Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FR PVC insulated copper conductor single core cable in surface / recessed steel conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FR PVC insulated copper conductor single core cable etc. as required.					
7.189	7.7.1.1) Group B	item223	175.00	Point		
7.190	7.7.2) Wiring for twin control light point with 1.5 sq.mm FR PVC insulated copper conductor single core cable in surface / recessed steel conduit, 2 way modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FR PVC insulated copper conductor single core cable etc. as required.	item224	8.00	Point		

Sr. No.	DESCRIPTION	item code	QTY	UNIT	Rate (In Rs.) excl GST	Amount (In Rs.) excl GST
7.191	7.7.3) Wiring for light/ power plug with 2X4 sq. mm FR PVC insulated copper conductor single core cable in surface/ recessed steel conduit along with 1 No 4 sq. mm FR PVC insulated copper conductor single core cable for loop earthing as required.	item225	70.00	Metre		
7.192	7.7.4) Wiring for light/ power plug with 4X4 sq. mm FR PVC insulated copper conductor single core cable in surface/ recessed steel conduit along with 2 Nos 4 sq. mm FR PVC insulated copper conductor single core cable for loop earthing as required.	item226	45.00	Metre		
7.193	7.7.5) Wiring for circuit/ submain wiring along with earth wire with the following sizes of FR PVC insulated copper conductor, single core cable in surface/ recessed steel conduit as required					
7.194	7.7.5.1) 2 X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	item227	35.00	Metre		
7.195	7.7.5.2) 2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire	item228	450.00	Metre		
7.196	7.7.5.3) 2 X 4 sq. mm + 1 X 4 sq. mm earth wire	item229	1,250.00	Metre		
7.199	7.7.7) Wiring for twin control light point with 1.5 sq.mm FR PVC insulated copper conductor single core cable in surface/recessed medium class PVC conduit, 2 way modular switch,modular plate,suitable GI box and earthing the point with 1.5 sq.mm. FR PVC insulated copper conductor single core cable etc as required.	item230	50.00	Metre		
7.200	7.7.8) Wiring for light/power plug with 2X4 sq. mm., FR PVC insulated, copper conductor, single core cable in surface/recessed medium class PVC conduit, along with 1 no. 4sq.mm., FR PVC insulated, copper conductor single core cable for loop earthing as required.	item231	380.00	Metre		
7.201	7.7.9) Wiring for Circuit/Submain Wiring alongwith earth wire with the following sizes of FR PVC insulated, copper conductor,single core cable in surface/recessed medium class PVC conduit, as required.					
7.202	7.7.9.1) 2 x 1.5 sq. mm + 1 x 1.5 sq. mm earth wire	item232	400.00	Metre		
7.203	7.7.9.2) 2 x 2.5 sq. mm + 1 x 2.5 sq. mm earth wire	item233	950.00	Metre		
7.204	7.7.10) Rewiring for light point/ fan point/ exhaust fan point/ call bell point with 1 .5 sq.mm FR PVC insulated copper conductor single core cable and 1.5 sq.mm. FR PVC insulated copper conductor single core cable as earth wire in existing surface/ recessed steel conduit including dismantling as required. (Group C)	item234	10.00	Point		
7.205	7.7.11) Supplying and fixing of following sizes of steel conduit along with accessories in surface/recess including painting in case of surface conduit, or cutting the wall and making good the same in case of recessed conduit as required.					
7.206	7.7.11.1) 32 mm	item235	10.00	Metre		
7.207	7.7.12) Supplying and fixing of following sizes of Heavy duty PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.					
7.208	7.7.12.1) 32 mm	item236	10.00	Metre		
7.209	7.7.13) Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required.					
7.210	7.7.13.1) 5/6 amps switch	item237	150.00	Each		
7.211	7.7.13.2) 2 way 5/6 amps switch	item238	10.00	Each		
7.212	7.7.13.3) 15/16 amp switch	item239	15.00	Each		
7.213	7.7.13.4) 20 amp switch	item240	7.00	Each		
7.214	7.7.13.5) 3 pin 5/6 amp socket outlet	item241	150.00	Each		
7.215	7.7.13.6) 6 pin 15/16 amp socket outlet	item242	15.00	Each		
7.216	7.7.13.7) 20/25A Socket outlet for Split AC	item243	5.00	Each		
7.217	7.7.13.8) Bell push	item244	5.00	Each		
7.218	7.7.13.9) 2 Nos of 6A sockets controlled by 1 No of 16A switch for Workstations	item245	55.00	Each		
7.219	7.7.13.10) Supply and Installation of Reputed make Door bell	item246	5.00	Each		
7.220	7.7.13.11) Supplying and fixing PVC batten/ angle holder including connections etc. as required.	item247	10.00	Each		
7.221	7.7.14) S/F Modular Type Blanking Plate : Supplying and fixing modular blanking plate ,on the existing modular plate & switch box excluding modular plate etc. as required.	item248	12.00	Each		
7.222	7.7.15) S/F GI Box along with modular plate: Supplying and fixing following size /modules, GI box along with modular base & cover plate for modular switches in recess etc as required.					
7.223	7.7.15.1) 1 or 2 Module(75mmx75mm)	item249	20.00	Each		
7.224	7.7.15.2) 3 Module (100mmX75mm)	item250	250.00	Each		
7.225	7.7.15.3) 4 Module (125mmX75mm)	item251	7.00	Each		
7.226	7.7.15.4) 6 Module (200mmX75mm)	item252	2.00	Each		
7.227	7.7.15.5) 8 Module (125mmX125mm)	item253	15.00	Each		
7.228	7.7.16) Supply & fixing following modular base and cover plate for modular switches in recess etc as required.					
7.229	7.7.16.1) 1 or 2 Module	item254	20.00	Each		
7.230	7.7.16.2) 3 Module	item255	250.00	Each		
7.231	7.7.16.3) 4 Module	item256	7.00	Each		

Sr. No.	DESCRIPTION	item code	QTY	UNIT	Rate (In Rs.) excl GST	Amount (In Rs.) excl GST
7.232	7.7.16.4) 6 Module	item257	2.00	Each		
7.233	7.7.16.5) 8 Module	item258	15.00	Each		
7.234	7.7.17) Supply and fixing suitable size GI box with modular plate and cover in front on surface or in recess including providing and fixing 3 pin , 5/6 Amps modular socket outlet and 5/6 Amps modular switch , connection etc . as required .	item259	150.00	Each		
7.235	7.7.18) Supply and fixing suitable size GI box with modular plate and cover in front on surface or in recess including providing and fixing 6 pin , 15/16 Amps modular socket outlet and 15/16 Amps modular switch , connection etc . as required .	item260	15.00	Each		
7.236	7.7.19) Supplying and fixing call bell/ buzzer suitable for single phase,230 Volts, complete as required.	item261	4.00	Each		
7.237	7.7.20) Wiring for group controlled (looped) light point/fan point/exhaust fan point/ call bell point (without independent switch etc.) with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed steel conduit, and earthing the point with 1.5 sq. mm FRLS PVC insulated copper conductor single core cable etc. as required.					
7.238	7.7.20.1) Group B	item262	35.00	Each		
7.239	7.7.21) Supplying and fixing TP sheet steel enclosure on surface/ recess along with 16/25/32amps 415 volts "C" curve TP MCB complete with connections, testing and commissioning etc. as required.	item263	1.00	Each		
7.240	7.7.22) S/F 20 A SPN MCB industrial socket outlet : Supplying and fixing 20 Amps, 240 Volts, SPN, industrial type socket outlet, with 2 pole and earth metal enclosed plug top along with 20 Amps, C-Curve, SP MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket outlet, and complete with connections, testing and commissioning etc. as required.	item264	25.00	Each		
7.245	7.7.27) S/F 20 A TPN MCB socket outlet : Supplying and fixing 20 Amps, 415 Volts, TPN, industrial type socket outlet, with 4 pole and earth along with 20 Amps, C- Curve, TPN MCB, in weather proof enclosure/Floor Junction Box, on surface or in recess, and complete with connections, testing and commissioning etc. as required. (Weather Proof Type)	item265	1.00	Each		
7.246	7.7.28) S/F 30 A TPN MCB socket outlet : Supplying and fixing 30 Amps, 415 Volts, TPN, industrial type socket outlet, with 4 pole and earth along with 30 Amps, C- Curve, TPN MCB, in weather proof enclosure/Floor Junction Box, on surface or in recess, complete with connections, testing and commissioning etc. as required. (Weather Proof Type)	item266	1.00	Each		
7.247	7.8) CABLE TRAYS AND RACEWAYS					
7.248	7.8.1) Supply, Installation, testing and commissioning of hot dip GI PERFORATED TYPE Cable Trays with accessories such as coupling plates, bends, tees, reducers, coupling nut-bolts etc. along with necessary supporting frame, members, angles, clamps etc. of following width. The cost of installation shall include connection, bolting, cutting, finishing etc.					
7.251	7.8.1.3) 300 mm width x50 mm depth x 1.6 mm thick	item267	7.00	Metre		
7.252	7.8.1.4) 150 mm width x50 mm depth x 1.6 mm thick	item268	7.00	Metre		
7.253	7.8.1.5) 100 mm width x50 mm depth x 1.6mm thick	item269	7.00	Metre		
7.254	7.8.1.6) 75 mm width x50 mm depth x 2 mm thick	item270	15.00	Metre		
7.255	7.8.2) Supply, Installation, testing and commissioning of white colour powder coated PERFORATED TYPE Cable Trays with accessories such as coupling plates, bends, tees, reducers, coupling nut-bolts etc. along with necessary supporting frame, members, angles, clamps etc. of following width. The cost of installation shall include connection, bolting, cutting, etc.					
7.258	7.8.2.3) 300 mm width x50 mm depth x 1.6 mm thick	item271	100.00	Metre		
7.259	7.8.2.4) 150 mm width x50 mm depth x 1.6 mm thick	item272	125.00	Metre		
7.260	7.8.3) Supply, Installation, testing and commissioning of hot dip GI LADDER TYPE Cable Trays with accessories such as coupling plates, bends, tees, reducers, coupling nut-bolts etc. along with necessary supporting frame, members, angles, clamps etc. of following width. The cost of installation shall include connection, bolting, cutting, etc.					
7.262	7.8.3.2) 600 mm width x75mm depth x 2.0 mm thick	item273	50.00	Metre		
7.263	7.8.3.3) 300 mm width x75 mm depth x 1.6 mm thick	item274	30.00	Metre		
7.264	7.8.4) GI Raceways:					
7.265	Supply, fixing, laying and embedding in underfloor GI raceway of following sizes complete with all accessories including neoprene gasket in joints ,cutting the floor and jamming the raceway with all necessary hardware (including civil works) as required.					
7.266	7.8.4.1) 50 x 38 x 1.6mm	item275	35.00	Metre		
7.267	7.8.4.2) 100 x 38 x 1.6mm	item276	25.00	Metre		
7.270	7.8.5) Junction box, 14 SWG CRCA powder coated, detachable access plate at four sides. Top cover shall be easily accessible for maintenance & included in scope. The required floor cutting for raceway & junction box shall be included in scope. All the junction boxes shall be provided with additional 3mm thick stainless steel (SS) plate above the junction box.					
7.271	7.8.5.1) 50 X 50 X 50 mm (LxWxH)	item277	25.00	Each		
7.272	7.8.5.2) 100 X 100 X 50 mm (LxWxH)	item278	10.00	Each		
7.273	7.8.5.3) 150 X 150 X 50 mm (LxWxH)	item279	10.00	Each		
7.277	7.9) EARTHING SYSTEM					

Sr. No.	DESCRIPTION	item code	QTY	UNIT	Rate (In Rs.) excl GST	Amount (In Rs.) excl GST
7.278	Supply & installation of Earth conductor of the following sizes to be buried in ground (Min 600mm but could be extended to 1500mm below ground as per site conditions to overcome the crossovers with other utilities) / in cable trays / Trenches / on wall / columns / trusses / inside pvc or hume pipes including cutting, drilling, tapping, jointing by welding, connecting to equipments, painting to welded portion by black bitumen paint and with all necessary GI hardware. Copper strips shall be brazed and layed in sleeves. For Lightning protection fixing of 25x6 mm GI earth strip to PEB roof using necessary clamping arrangement is included in Electrical contractor's scope & necessary co-ordination with PEB vendor shall be ensured by Contractor. Similarly for Roof slab/Parapet wall including vertical air termination system etc. all the necessary accessories such as cleating, saddling etc. shall be included in Electrical Contractor's scope. For outdoor areas earthing laying installation prices shall be inclusive of excavation, backfilling and removal of excess soil, compacting etc. Insulator base for strips running on wall and floor.					
7.279	7.9.1) G.I. earth pipe electrode with Salt/Charcoal : Earthing with GI earth pipe 4.5 Mtr long , 40 mm dia including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/coke & salt as required.	item280	10.00	Set		
7.280	7.9.2) G.I. earth pipe electrode with Salt/Charcoal : Earthing with GI earth pipe 6 Mtr long , 40 mm dia including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/coke & salt as required.	item281	1.00	Set		
7.281	7.9.3) Required number of Test Earth pits as per CEIG specific requirements 100 mm Internal Diameter, 13 mm thick 3000 mm long CI pipe (Class B or better) earth electrode as per IS 3043. The earth pit shall be provided with 75 x 12 mm GI Strip up to chamber, disconnecting links with 500 x 500 mm (clear) brick chamber & 3mm thick CI chequered plate cover with hinge. Removal of excess soil is included in the scope.	item282	1.00	Set		
7.282	7.9.4) Providing and fixing 25mm X 5mm GI strip on surface or in recess for connections etc. as required.	item283	780.00	Metre		
7.283	7.9.5) Providing and fixing 8 SWG GI wire.	item284	500.00	Metre		
7.284	7.9.6) Copper earth plate electrode : Earthing with Copper earth plate 600mm X 600mm X 3 mm thick including accessories and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 m long etc. with charcoal/coke and salt as required.	item285	3.00	Set		
7.285	7.9.7) Supplying and fixing earth bus of 50mmx10mm GI strip on surface or in recess for connections etc. as required.	item286	175.00	Metre		
7.287	7.9.9) Providing and fixing 25mm X 5mm CU strip on surface or in recess for connections etc. as required.	item287	25.00	Metre		
7.288	7.10) LIGHTNING PROTECTION SYSTEM					
7.289	7.10.1) Jointing copper / G.I. tape (with another copper/ G I tape, base of the finial or any other metallic object) by riveting / nut bolting/ sweating and soldering etc as required.	item288	10.00	Each		
7.290	7.10.2) Providing and fixing testing joint, made of 20 mm X 3 mm thick G.I. strip, 125 mm long, with 4 nos. of G.I. bolts, nuts, chuck,nuts and spring washers etc. complete as required.	item289	25.00	Each		
7.291	7.10.3) Providing and fixing 25mm X 5mm GI strip on surface or in recess for connections etc. as required.	item290	500.00	Metre		
7.292	7.10.4) Providing and fixing 25mm X 6 mm GI strip on surface or in recess for connections etc. as required.	item291	18.00	Metre		
7.293	7.11) LIGHT FIXTURES AND FANS					
7.294	7.11.1) S/F Modular Type Electronic Fan Regulator : Supplying and fixing stepped type electronic fan regulator on the existing modular plate & switch box including connections but excluding modular plate etc. as required.	item292	150.00	Each		
7.295	7.11.2) Providing and fixing extra conduit down rod of 20 mm dia, 2X10 cm length wiring with 2 X 1.5 sq. mm FR PVC insulated, copper conductor, single core cable including painting etc. as required. (Note : More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored)	item293	150.00	Each		
7.296	7.11.3) Ceiling Fan : Installation ,testing and commissioning of ceiling fan including wiring the down rods of standard length (upto 30 cm) with 1.5 sq.mm FR PVC insulated ,copper conductor ,single core cable etc.as required. 1200 mm Sweep size, min 340 RPM and Off white color.	item294	150.00	Each		
7.297	7.11.4) Ceiling Fan : Supply of ceiling fan with 1200 mm Sweep size, min 340 RPM and Off white color.	item295	150.00	Each		
7.298	7.11.5) Supplying and fixing extra down rod of 10 cm length G.I. pipe ,15 mm dia, heavy gauge including painting etc. as required. (Note : More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored)	item296	25.00	Each		
7.299	7.11.6) Supplying and fixing extra conduit down rod of 20 cm length G.I. pipe 15 mm dia, heavy gauge including painting etc. as required. (Note : More than 5 cm length shall be rounded to the nearest 10 cm and 5 cm or less shall be ignored)	item297	25.00	Each		
7.300	7.11.7) Numbering of ceiling fan/ exhaust fan/ fluoresent fittings as required.	item298	250.00	Each		
7.301	7.11.8) Installation of exhaust fan in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.					
7.302	7.11.8.1) Upto 450 mm sweep	item299	25.00	Each		

Sr. No.	DESCRIPTION	item code	QTY	UNIT	Rate (In Rs.) excl GST	Amount (In Rs.) excl GST
7.303	7.11.9) Extra for fixing the louvers/ shutters complete with frame for a exhaust fan of all sizes.	item300	100.00	Each		
7.311	7.11.13) LIGHTING FIXTURES: Supply , unloading, handling (shifting from place of unloading to place of storage & shifting from place of storage to place of installation including insurance), installation, testing, commissioning & performance demonstration of luminaries including electronic or electromechanical ballast, control gear, capacitor, terminal connectors, lamp and other accessories as specified below. The luminaries shall be as per the details indicated in Technical specifications and data sheets. Rates quoted shall also include the installation of lighting fixtures, mounting & supporting heavy duty GI pipe/MS angle, down rod, supporting chain, SS hardware, clamps/ connectors & all other accessories required for proper fixing of the lighting luminaries. Supply of flexible metal conduit from junction box to fixture control gear box & up to fixture is included in the scope. All necessary 0.75 kV, 3Cx2.5 sq.mm PVC FRLS multi-stranded Copper conductor flexible cable from junction box to fixture control gear box & up to fixture, assembly of fixture & integral wiring of fixture & terminations are included in the scope. Note: Catalogue numbers indicated are only to describe type of light					
7.312	7.11.13.1) Integral LED 4 ft luminaire with diffuser for smooth light distribution and IP20. The luminaire should have a color consistency SDCM < 5, CRI > 70 and CCT of 6500K/5700K. Luminaire shall be designed to emit at least 4000 nominal lumens at a system efficacy of atleast 100 lumen/watt and system wattage of minimum 34W. The luminaire shall be designed so as to ensure lumen depreciation of up to 30% over 50k burning hours. The electronic driver used shall have a power factor >0.95 and THD <10% and suitable for an operating voltage range of 140-270V AC. LM 79 and LM80 reports need to be submitted from a NABL/UL accredited lab to verify above parameters. Similar to Phillips make BN308C LED40S-6500 L120 PSU WH/ Bajaj make BCLAB 40W LED / Havells make STOUTPLUS1200BS40WLED857SPCWH	item301	175.00	Each		
7.313	7.11.13.2) LED Recessed Downlighter with a nominal system lumen output of 1200 lumens and a minimum system efficacy of 100 lm/W. The luminaire shall have a rated system lifetime of 50,000 burning hours at L70. The luminaire should have a color temperature of 6500K/5700K and CRI>80. The luminaire shall meet IP20 rating with THD<10% and PF > 0.9. The luminaire optics shall have a high efficiency diffuser. The total power consumption should not exceed 12W (including driver). Similar to Philips Make GREENPERFORM "Philips DN 393B LED12S-6500 PSU WH"/ Bajaj Make BZSLO 12W WH PRO/Havells make INTEGRANEODLR10WLED857S	item302	55.00	Each		
7.314	7.11.13.3) LED 2x2 luminaire with CRCA housing suitable with fully diffused diffuser for general lighting in office areas. The luminaire should have CRI > 80 and CCT of both 6500K/5700K. The luminaire shall be compliant with IP20 and IK02 classification. Luminaire shall be designed to emit at least 3600 nominal lumens and efficacy of atleast 110 lumen/watt and Minimum system wattage of 31 Watts. The luminaire shall be designed so as to ensure lumen depreciation of up to 30% over 50k burning hours. The electronic driver used shall have a power factor >0.95 and THD <10%. LM 79 and LM80 reports need to be submitted from a NABL/UL accredited lab to verify above parameters. Similar to Philips RC380B LED36S-6500 G4 L60 W60/ Bajaj make BZRSQX GX 34W CW/ Havells make VENUSNEOHE2X2PLR18-42WLED857MOD	item303	10.00	Each		
7.315	7.11.13.4) Dust and waterproof, IP65 LED Batten with a nominal system lumen output of 4000 lumens and a minimum system efficacy of 100 lm/W. The luminaire shall have a rated system lifetime of 50,000 burning hours at L70. The luminaire should have a color temperature of 6500K/5700K and CRI>80. The luminaire shall meet IP65 rating with THD < 10% and PF > 0.95. The luminaire housing shall have silicone gasket material and UV Stabilized Diffuser. The total power consumption should not exceed 40W (including driver). Similar to Philips Make SMARTBRIGHT Waterproof "WT201C LED40S-6500 PSU L120 "/ Bajaj make BIPC 40W LED XE/ Havells make MAGNUMGRANDNEOIP6636WLED857SPC	item304	20.00	Each		
7.319	7.11.13.8) LED 2ft Batten with a nominal system lumen output of 1000 lumens and a minimum system efficacy of 100 lm/W. The luminaire shall have a rated system lifetime of 25,000 burning hours at L70. The luminaire should have a color temperature of 6500K and CRI>80. The luminaire shall meet IP20 rating with THD < 10% and PF > 0.95. The luminaire housing should made of aluminium with a PC glossy diffuser. The total power consumption should not exceed 10W (including driver). Similar to Philips Make ENDURALED BATTEN "BN 021 LED10S- 6500 PSU GR S1"	item305	50.00	Each		
7.320	7.11.13.9) Surface Mounted 12 W LED Downlight with the following Specifications, CCT-3000K, CRI> 70, High Quality Diffuser, and Constant current Integrated Driver, Similar to Bajaj make: BGSLO SLEEK SURFACE 12 WH RD for Toilets	item306	30.00	Each		
7.321	7.11.13.10) LED Bulkhead with a nominal system lumen output of 700 lumens and a minimum system efficacy of 105 lm/W. The luminaire shall have a rated system lifetime of 25,000 burning hours at L70. The luminaire should have a color temperature of 6500K and CRI > 80. The luminaire shall meet IP65 rating and IK 08 rating with THD < 10% and PF > 0.9. The luminaire housing should made of High pressure die cast Aluminium with polycarbonate front diffuser. The total power consumption should not exceed 6.5W (including driver). Similar to Philips Make VISTAGLOW BULKHEAD "WT202W LED6S NW PSU S2 PC"	item307	35.00	Each		

Sr. No.	DESCRIPTION	item code	QTY	UNIT	Rate (In Rs.) excl GST	Amount (In Rs.) excl GST
7.322	7.11.13.11) Recessed Mounted LED Step Light fitting made of die cast aluminum Housing , Life of fixture (Including Driver) : 25K Hrs. @ L70B50 Lumen maintenance, CCT up to WW, CRI >80, PF >0.90 , an operating Voltage Range of 140 - 270 V. Minimum system Lumens 35. Luminaire Must be having IP67 & IK 10 Impact rating covered with front toughend glass. Similar to Philips make - BWG150 LED50/WW PSU 220- 240V IP67 7043 / Bajaj Make ----- / -----	item308	10.00	Each		
7.325	7.11.13.13) Surface mounted LED 4ft Batten with a nominal system lumen output of 2000 lumens and a minimum system efficacy of 105 lm/W. The luminaire shall have a rated system lifetime of 40,000 burning hours at L70. The luminaire should have a color temperature of 6500K and CRI>80. The luminaire shall meet IP20 rating with THD < 10% and PF > 0.95. The luminaire housing should made of CRCA with a PC glossy diffuser. , IP20, industrial LED type fitting with batten & electronic driver. luminaire & lamp shall be Philips make 1*20W ENDURA LED batten BN108C LED 20S PSU CDL WH Diffused /6500 batten. (lumen output = 2000 lumen/lamp)	item309	30.00	Each		
7.345	7.12) LIFT					
7.346	7.12.1) Vendor shall refer data sheets and technical specification for quoting. vendor shall submit the confirmation of same. Each elevator shall be complete with all fittings and accessories as detailed in specifications, data sheet-A etc. Deviations from the specifications, data sheets, etc. shall be brought to purchaser's notice at the time of bid submission only. No price & delivery implication will be given afterwards. All these Elevators (Passenger+Goods) shall be suitable for floor extensions up to 2 floors in future.					
7.347	Design, detailed engineering, preparation of construction drawing, manufacture, acceptance testing at manufacturer's works, supply, packing, forwarding and delivery from place of storage/ manufacturer's works to erection site (in case of imported goods - cost should be inclusive of loading, sea freight, supply material at indian port near site, port/custom clearance, insurance etc. Bidder to indicate all GST/tax/duty heads accordingly.) including transit insurance, unloading, storage at site, handling, assembly, erection, testing, installation, commissioning, including obtaining statutory approvals, lift licence and performance demonstration of following passenger lifts as per specification requirements. The lift well lighting and maintainance power supply, distribution shall be in lift vendor scope. These Lifts shall meet the requirement of fire lift specification / standards wherever applicable.					
7.348	7. 12.1.1) Passenger Lifts having 13 persons (884 kg) capacity with 1.75 m/s speed, Machine Room Less (MRL) design with all necessary accessories, equipments as per Data sheets and specifications for serving to G+5 storey buildings (for Girls hostel+Staff accomodation building)	item310	2.00	Each		
7.353	7.13) MISCELLANEOUS ITEMS					
7.354	7.13.1) Excavation for cable trenches in soft soil, depth upto 1.2 m including dressing of sides lift upto 1.5m, including getting out the excavated soil , refilling with sand and or good soil after laying of cable / pipe etc. in layers of 20 cm, ramming, watering and disposal of surplus excavated soil as directed , with a lead of 50 meters.	item311	200.00	Cum		
7.355	7.13.2) Excavation of cable trenches in hard rock not exceeding 1.5 meters in width, and lift upto 1.5 metres, including getting out the excavated soil and disposal of excavated soil as directed within a lead of 50 metres.	item312	10.00	Cum		
7.356	7.13.3) Providing, laying and fixing following dia G.I. pipe (medium class) in ground complete with G.I. fittings including trenching (75 cm deep) and re-filling etc. as required					
7.357	7.13.3.1) 50 mm dia	item313	5.00	Metre		
7.358	7.13.4) Providing, laying and fixing following dia RCC pipe NP2 class (light duty) in ground complete with RCC collars, jointing with cement mortar 1:2 (1 cement : 2 fine sand) including trenching (75 cm deep) and refilling etc as required.					
7.359	7.13.4.1) 150 mm dia	item314	15.00	Metre		
7.360	7.13.4.2) 300 mm dia	item315	50.00	Metre		
7.361	7.13.5) Supply, fabrication and installation of cable tray supports, supports for cable trench covers, supporting frame for mounting of control panels, supports for mounting of local control station, Main Electrical Panel, lighting panel, lighting fixture etc. with 2 coats of enemel primer and 2 coats of epoxy paint. Note - The rates shall be inclusive of grouting of supports , Anchor fastner, welding rods, nut, bolts, clamps,and any other consumable which required to complete the works.	item316	1.00	Ton		
7.362	7.13.5.1) Supplying and fixing cable route marker with 10 cm X 10 cm X 5mm thick G.I. plate with LT inscription there on, bolted / welded to 35mm X 35 mm X 6 mm angle iron, 60 cm long and fixing the same in ground as required.	item317	10.00	Each		
7.363	7.13.6) Supply and filling of sand bed in excavated trenches for directly burried cables	item318	25.00	Cum		
7.364	7.13.7) Burnt Bricks of 225 x 100 x 75 mm.(For LV Burried Cable Protection)	item319	1,250.00	Each		

Sr. No.	DESCRIPTION	item code	QTY	UNIT	Rate (In Rs.) excl GST	Amount (In Rs.) excl GST
7.365	7.14) SAFETY EQUIPMENT					
7.379	7.14.13.1) Supply and Installation of Minimum 2 Hrs continuous fire rated fire sealants / barriers for openings due to electrical shaft / Cable trays / Hume pipes / Metal pipes / Conduits by framing and fixing of FM approved composite sheet on both sides of openings and filling of space inside by means of non combustible material. In addition reusable FM approved moldable putty shall be used so as to completely seal the openings. All necessary accessories such as anchor nuts, bolts, etc shall be considered in Bidders scope. This work shall be carried out by authorised skilled personnel only.	item320	2.50	sqm		
8.029	8.2) CCTV ITEMS					
8.030	Supply, Installation & Commissioning of following DVR based CCTV System Component with all required hardware & software as per technical specification & tender drawings.					
8.031	8.2.1) CAMERA					
8.032	8.2.1.1) Analog Fixed dome, True day night INDOOR camera, 1/3" Progressive Scan CCD, Varifocal 3.6 mm lens with auto iris. Video motion detection and tampering detection alarm including necessary power supply unit. Resolution shall be MPEG 4.	item321	15.00	each		
8.033	8.2.1.2) Analog Fixed dome, True day night OUTDOOR IP 66 housing camera, 1/3" Progressive Scan CCD, 3.6 mm lens with auto iris. Video motion detection and tampering detection alarm including necessary power supply unit. Resolution shall be MPEG 4.	item322	10.00	each		
8.034	8.2.1.3) Supply, installation, testing and commissioning of 24 input real time, 400 fps, DVR with 2 video outputs. The storage capacity should be sized for having minimum 30 days of continuous recording @ 400fps and vendor are required to submit data sheet of their storage calculation for both MPEG 4 and JPEG recording formats. The DVR should be capable to support motion based recording, web based monitoring & remote control monitoring software complete as per spec with valid licenses. The unit rate should be including of providing necessary rack for mounting the CCTV equipment & all necessary accessories with power supply units as per specification. The software should enable the user to view multiple cameras in any combination available on the network (maximum 16 Nos).	item323	1.00	each		
8.035	8.2.1.4) Supply, laying, termination and testing of 32" CCTV colour LCD Monitor including all accessories	item324	1.00	each		
8.036	8.2.2) CCTV CABLES AND ACCESSORIES					
8.037	8.2.2.1) 2 core 1 sq.mm, multi strand, copper conductor, FRLS PVC insulated GI armoured cable for power to camera.	item325	1,000.00	each		
8.038	8.2.2.3) FRLS RG-11 type co-axial Jelly filled armoured cable for video signals.	item326	3,000.00	each		
8.039	8.2.2.4) 25mm PVC Conduit	item327	25.00	each		
8.040	8.2.3) POWER SUPPLY UNIT FOR CAMERA					
8.041	8.2.3.1) Power Supply Unit 12 Volt DC	item328	25.00	each		
8.042	8.2.4) POLES					
8.044	8.2.5) CABLE TRAYS					
8.045	8.2.5.1) 300x50mm wide 2mm Thick - 1 Tier (Perforated GI tray)	item329	50.00	metre		
8.117	8.5) ANALOG PUBLIC ADDRESS SYSTEM					
8.118	Supply, Installation, Testing & Commissioning of following equipment for Analog PAS as per technical specification.					
8.119	8.5.1) PAS AMPLIFIERS AND CONTROLLERS					
8.120	8.5.1.1) 6 Watt Wall mounted speakers with built in line matching transformer, grill flush mounting type as per technical specification.	item330	30.00	each		
8.122	8.5.1.3) 240 Watts Analog Audio amplifiers complete with internal cabling within rack.	item331	1.00	each		
8.126	8.5.2) CABLE & CONDUIT					
8.127	Supply & Laying of following cables/cable trays/cable trunk/conduits as per technical specification.					
8.128	8.5.2.1) 2 core * 1 sq.mm, Armoured multi strand, copper conductor, PVC insulated GI Screened flexible audio cable with saddle and required accessories.	item332	1,250.00	metre		
9.000	9.0) IT					
9.002	9.2) Wall mounting 9U 800 (W) x 1000 (D) mm telecom cabinet with all necessary accessories for ICT systems.	item333	2.00	each		
9.006	9.6) 24 Ports fully loaded CAT-6 copper patch panel.	item334	7.00	each		
9.007	9.7) Fully Managed L2 Gigabit Ethernet switches: 8/24- port 10/100/1000T switch with 4x1G SFP uplink ports and a single fixed PSU	item335	1.00	each		
9.008	9.9) Fully Managed L2 Gigabit Ethernet switches: 48- port 10/100/1000T switch with 4x1G SFP uplink ports and a fixed PSU	item336	2.00	each		
9.009	9.10) SFP & SFP+ Modules: 1000BaseLX (10km) SFP (10km with SMF, 1310nm)	item337	6.00	each		
9.010	9.11) 200 Pair MDF BOX with System Side and telephone Side	item338	1.00	each		

Sr. No.	DESCRIPTION	item code	QTY	UNIT	Rate (In Rs.) excl GST	Amount (In Rs.) excl GST
9.011	9.12) Dual Port RJ-45 socket for Data/ Telephone including all Accessories, face Plate, screws, cover, etc	item339	225.00	each		
9.012	9.13) Twisted Pair CAT-6 cable (4 Pair) for data & telephones RJ-45 sockets.	item340	750.00	metre		
9.013	9.14) 12-Core single mode outdoor fibre optic cable (HDPE outer sheath, poly-Al moisture barrier, corrugated steel tape armoured, SM G.652.D, loose tubes with gel filling) - from admin building to ground floor of different buildings.	item341	250.00	metre		
9.015	9.16) Analog Telephone Handsets	item342	30.00	each		
9.017	9.18) Multicore telephone cable 50 Pair	item343	210.00	metre		
9.018	9.19) FO enclosure with pre-terminated SM G.652 pigtailed and LC Connectors, splice tray and fusion splice protection (12 terminations) at ground floor of buildings with all necessary accessories.	item344	2.00	each		
9.020	9.21) 2 mm thick GI cable tray with of the following sizes complete with angle iron supports/hanging arrangement etc and Cable tray supports shall at every 1 meter.					
9.021	9.21.1) 300 x 50 x 2 mm	item345	125.00	metre		
9.022	9.21.2) 150 x 50 x 2 mm	item346	125.00	metre		
9.023	9.21.3) 100 x 50 x 2 mm	item347	125.00	metre		
9.024	9.22) 25mm Dia heavy duty UPVC Conduits concealed in ceiling, wall, floor etc.,	item348	1,350.00	metre		
9.025	9.23) SD Set Top box and Dish for Satellite TV System	item349	6.00	each		
9.026	9.24) Raceway (50 x 38 x 1.6 mm)	item350	200.00	metre		
9.027	9.25) Raceway (100 x 38 x 1.6 mm)	item351	75.00	metre		
9.028	9.26) Patch cords (2 meter)	item352	75.00	each		
9.030	9.28) 20 Pair MDF BOX with System Side and telephone Side	item353	1.00	each		
9.031	9.29) 50 Pair MDF BOX with System Side and telephone Side	item354	250.00	metre		
TOTAL Amount						-