

**CONSTRUCTION OF HEAD QUARTERS BUILDING AT KUDAPPANAKKUNNU,
THIRUVANANTHAPURAM FOR KERALA STATE YOUTH WELFARE BOARD - Phase I**

PART II- ELECTRICAL WORKS

SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
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A. LT Wiring					
1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in recessed medium class PVC 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.				
1.1	Group C	Each	350		
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. FRLS PVC insulated copper conductor single core cable etc as required.	Each	8		
3	Wiring for circuit/submain wiring along with earth wire with the following sizes of FRLC PVC insulated copper conductor, single core cable in surface medium class PVC conduit as required.				
3.1	2 x 1.5 sq.mm + 1 x 1.5 sq.mm earth wire	Rm	900		
3.2	2 x 2.5 sq.mm + 1 x 2.5 sq mm earth wire	Rm	4200		
3.3	2 x 4.0 sq.mm + 1 x 4.0 sq mm earth wire	Rm	600		
4	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.				

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
4.1	20 mm	Rm	450		
4.2	25 mm	Rm	300		
4.3	32 mm	Rm	150		
5	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface / recessed steel / PVC conduit, furniture as required.				
5.1	3 x 1.5 sq mm	Rm	250		
5.2	3 x 2.5 sq mm	Rm	250		
6	Supplying and fixing metal box of size 250 x 300 x 100 mm deep (normal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including painting etc as required.	Each	10		
7	Supplying and drawing 2 pair 0.5 sq mm FR PVC insulated annealed copper conductor, unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as required.	Rm	2800		

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
8	Supplying and drawing co-axial TV cable RG-6 grade, 0.7mm solid copper conductor PE insulated, shielded with fine tinned copper braid and protected with PVC sheath in the existing surface/ recessed steel/ PVC conduit as required.	Rm	300		
9	Supplying and fixing following modular socket outlet on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
9.1	Telephone socket outlet	Each	65		
9.2	TV antenna socket outlet	Each	5		
10	Supplying and fixing stepped type electronic fan regulator-modular on the existing modular plate switch box including connections but excluding modular plate etc. as required.	Each	50		
11	Supply and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	80		
12	Supplying and fixing following size / modules, PVC box alongwith modular base & cover for modular telephone/ data sockets in recess / surface etc as required.				
12.1	1 or 2 module	Each	130		
13	Supplying and fixing suitable size GI / PVC box with modular plate and cover in front on surface or in recess, furniture including providing and fixing 3 pin 5/6 amps modular socket outlet and 5/6 amps modular switch, connection etc. as required.	Each	230		

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
14	Supplying and fixing suitable size GI / PVC box with modular plate and cover in front on surface or in recess, furniture including providing and fixing 6 pin 5/6 & 15/16 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required.	Each	35		
15	Supplying and fixing 3 pin, 5 amp ceiling rose on the existing junction box/ wooden block including connection etc as required.	Each	80		
16	Supplying and fixing call bell / buzzer suitable for single phase, 230 volt, complete as required.	Each	5		
17	Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of all types, complete with all accessories and tube etc. directly on ceiling/ wall, false ceiling with chain and hook including connection with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable and earthing etc. as required.	Each	190		
18	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.	Each	50		
19	Installation of exhaust fan in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.				
19.1	Upto 450 mm sweep	Each	20		
20	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)	Each	80		

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
21	Supplying and drawing UTP 4 pair CAT 6 LAN cable in the existing surface / recessed steel / PVC conduit as required.	Rm	3000		
B. MCBs, DBs and Cable Trays					
22	Supplying and fixing following way surface / recess mounting vertical type, 415 volt, TPN MCB distribution board of steel sheet, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's, with provision of 100 amps TP 16kA MCCB as incomer, interconnection between incomer MCCB and bus bars (But without MCB's/ MCCB) as required. (Note: Vertical type MCB TPDB is normally used where 3 phase outlets are required.)				
22.1	8 way TP	Each	3		
23	Providing and fixing 100 amp 16 kA TP MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections etc as required.	Each	3		
24	Supplying and fixing following way prewired vertical type TP&N MCB distribution board of steel sheet for 415 volts on surface/ recess complete with loose wire box of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's, terminal connectors for all incoming and outgoing circuits, duly prewired with adequate size of FR PVC insulated copper conductor upto the terminal connector/ neutral link, earthing etc as required (But without MCB/ RCCB/ Isolator). (Note : Prewired vertical type MCB TPDB is normally used where 3 phase outlets are required.)				
24.1	6way, Double door	Each	2		

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
24.2	4way, Double door	Each	2		
25	Supplying and fixing following way prewired TP&N MCB distribution board of steel sheet for 415 volts on surface/ recess complete with loose wire box, terminal connectors for all incoming and outgoing circuits, duly prewired with suitable size FR PVC insulated copper conductor up to terminal blocks, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, powder painted including earthing etc. as required.(But without MCB/ RCCB/ Isolator)				
25.1	4 way, Double door	Each	4		
25.2	6 way, Double door	Each	5		
25.3	8 way, Double door	Each	2		
26	Supplying and fixing following way prewired SP&N MCB distribution board of steel sheet for 240 volts on surface/ recess complete with loose wire box, terminal connectors for all incoming and outgoing circuits, duly prewired with suitable size FRLS PVC insulated copper conductor up to terminal blocks, tinned copper bus bar, neutral link, earth bar, din bar, detachable gland plate, interconnections, powder painted including earthing etc. as required.(But without MCB/ RCCB/ Isolator)				
26.1	4 way, Double door	Each	1		

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
26.2	8 way, Double door	Each	2		
27	Supplying and fixing following rating, four pole, 415 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
27.1	40 amps	Each	6		
27.2	63 amps	Each	4		
28	Supplying and fixing following rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
28.1	40 amps	Each	3		
29	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.				
29.1	25 amps	Each	2		
29.2	40 amps	Each	1		

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
30	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.				
30.1	25 amps	Each	4		
30.2	40 amps	Each	6		
30.3	63 amps	Each	4		
31	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.				
31.1	Single pole	Each	120		
31.2	Triple pole	Each	4		
31.3	Triple pole and neutral	Each	4		
32	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	74		

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
33	Supply and fixing TP sheet steel enclosure on surface recess along with 16/25/32/ amps 415V "C" curve TP MCB complete with connections, testing and commissioning etc as required.	Each	8		
34	Supplying and fixing 20 amps, 240 volts, SPN industrial type, socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 amps "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	6		
35	Supplying and fixing 30 amps, 415 volts, TPN industrial type, socket outlet, with 4 pole and earth, metal enclosed plug top alongwith 30 amps "C" curve, TPMCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	2		
36	Supply and installing 300mm x 50 mm depth x 1.6mm thick perforated GI cable trays with perforations not more than 17.5% in convenient sections, joined with connectors, GI suspenders including nuts and bolts, bends, tees etc as required	Rm	100		
C. Earthing					
37	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	Each	2		
38	Earthing with GI earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	Each	6		
39	Earthing with GI earth pipe 4.5 m long, 40 mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/ coke and salt as required.	Each	8		

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
40	Supply and laying 25mm x 5mm copper strip at 0.5m below ground as strip earth electrode, including connection / terminating with nut, bolt, spring, washer etc as required (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced 50mm).	Rm	30		
41	Supply and laying 25mm x 5mm GI strip at 0.5m below ground as strip earth electrode, including connection / terminating with nut, bolt, spring, washer etc as required (Jointing shall be done by overlapping and with 2 sets of GI nut bolt & spring washer spaced 50mm).	Rm	150		
42	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required.	Rm	100		
43	Providing and fixing 25 mm X 5 mm GI strip on surface or in recess for connections etc. as required.	Rm	300		
44	Providing and fixing 8 SWG dia G.I. wire on surface or in recess for loop earthing as required.	Rm	600		
45	Providing and fixing 4 mm dia Cu wire on surface or in recess for loop earthing as required.	Rm	300		
D. MV Cable laying and Termination					
46	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.				
46.1	Upto 35 sq. mm	Rm	100		

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
46.2	Above 35 sq. mm and upto 95 sq. mm	Rm	30		
46.3	Above 95 sq. mm and upto 185 sq. mm	Rm	160		
47	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing HUME/RCC/METAL pipe as required.				
47.1	Upto 35 sq. mm	Rm	40		
47.2	Above 35 sq. mm and upto 95 sq. mm	Rm	10		
47.3	Above 95 sq. mm and upto 185 sq. mm	Rm	20		
48	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size in the existing masonry open duct as required.				
48.1	Upto 35 sq. mm	Rm	50		
48.2	Above 35 sq. mm and upto 95 sq. mm	Rm	10		
48.3	Above 95 sq. mm and upto 185 sq. mm	Rm	20		

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
49	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required.				
49.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	Rm	350		
49.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	Rm	20		
49.3	Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40x3mm MS flat clamp)	Rm	10		
50	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required.				
50.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	Rm	200		
50.2	Above 35 sq. mm and upto 95 sq. mm (clamped with 25x3mm MS flat clamp)	Rm	20		
50.3	Above 95 sq. mm and upto 185 sq. mm (clamped with 25/40x3mm MS flat clamp)	Rm	10		
51	Supplying and making cable route marker with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) of size 60 cm X 60 cm at the bottom and 50 cm X 50 cm at the top with a thickness of 10cm including inscription duly engraved as required.	Each	20		

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
52	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.				
52.1	3.5 x 120 sqmm cable	Each	4		
52.2	3.5 x 70 sqmm cable	Each	8		
52.3	3.5 x 35 sqmm cable	Each	14		
52.4	4 x 16 sqmm cable	Each	12		
52.5	4 x 10 sqmm cable	Each	12		
52.6	4 x 6 sqmm cable	Each	16		
53	Providing, laying and fixing of 100mm dia G.I. pipe (medium class) in ground complete with G.I. fittings including trenching (75 cm deep)and re-filling etc as required	Rm	20		
E. LT Panel Board and Accessories					

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
54	Supply, Installation, Testing & Commissioning of cubicle type Floor panel board, made out of 2mm thick CRCA sheet, totally enclosed, IP42, free standing, floor mounting, dust and vermin proof, powder coated, indoor, compartmentalised, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system, including internal wiring with suitable size wires, rotary handle, spreaders etc. The panel shall include supply & installation of following switchgears, metering instruments and accessories as per specification.				
	Incomer				
	1 no. 160A, 35kA, TP+NL MCCB having isolation duty with E/F release, microprocessor release for O/L & SC protection.				
	Busbar				
	1 Set of 200 Amp TPN busbars of high conductivity electrolytic quality Aluminium alloy.				
	Instruments				
	1 No 3 phase Digital Multi function meter to read V, A, F with Acc class 1.				
	1 No 3 phase 4 wire CT operated energy meter, 5-10A, Acc. Class 1.				
	1 Set of phase indicating lamps, LED type, RYB.				
	1 Set of 2A 10kA C curve SP control MCB				
	1 Set of 150/5A, Class 1.0, 10VA, Cast Resin CT for metering.				
	3 nos Ammeter (0-150A), Acc class 1 with 240 deg., defl. Scale.				
	Outgoing				
	2 nos. 100A, 35kA, TP+NL MCCB having adjustable thermal magnetic release for O/L & SC protection.				
	4 nos. 63A, 35kA, TP+NL MCCB having adjustable thermal magnetic release for O/L & SC protection.	Job	1		
55	KSEB Meter Board - Supply, Installation, Testing & Commissioning of Three phase meter box, cubicle type, made out of 2mm thick CRCA sheet, totally enclosed, IP54, wall / floor mounting, dust and vermin proof, powder coated, outdoor, compartmentalised, suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system including internal wiring with suitable size wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket etc. The panel shall include supply & installation of following switchgears, metering instruments and accessories as per specification.				
	Switchgear & other Accessories				

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
	3 phase CT operated energy meter from KSEB with all connections, glass view panel, control MCB, lockable compartment etc.				
	3 nos. Suitable ratio CT (as per KSEB) with Acc. Class 0.5, 10VA in lockable compartment.				
	3 nos 200A cutout fuse unit with fuse and 1 no. Neutral link.				
	1 no. 200A, FP, AC23A, 415V, 50Hz switch disconnector fuse unit with Din type HRC fuse of suitable rating (as per KSEB) in separate cubical.				
	1 Set of phase indicating lamps, LED type, RYB.				
	1 Set of 2A 10kA C curve SP control MCB				
	1 no of Analogue voltmeter, Acc. Class 1 with selector switch.				
	The meter board shall have 250 Amp TPN busbars of high conductivity electrolytic quality Aluminium alloy, earth bus of required size, 4P terminal connectors, control wiring with all required accessories complete.	Each	1		
F. LT Cables					
56	Supply of the following size 1.1kV grade XLPE insulated PVC sheathed, armoured Aluminium conductor power cable conforming to IS 7098 (part 1) ammended upto date.				
56.1	3.5 x 120 sqmm cable	Rm	200		
56.2	3.5 x 70 sqmm cable	Rm	80		
56.3	3.5 x 35 sqmm cable	Rm	160		
56.4	4 x 16 sqmm cable	Rm	160		

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
56.5	4 x 10 sqmm cable	Rm	120		
56.6	4 x 6 sqmm cable	Rm	200		
G. Light Fixtures					
57	Supply of 1x28 watts surface mounted luminaire, CRCA powder coated housing, without reflector, pre-wired complete with all accessories like electronic ballast, 28W T5 lamp etc complete as required. (Wipro WIF 20128 SG / Crompton T5JB1328REB / GE GET CI 1x28 C/S HF).	Each	50		
58	Supply of 2x18 watts down light luminaire with frosted glass cover, complete with all electrical accessories like electronic ballast, lamp holder, 18W CFL lamp etc complete as required. (Wipro GCP 61218 SG / Crompton DDSH218EB / GE GE CFL C 2x18 DN FG S).	Each	15		
59	Supply of 1x18W, indoor surface mountable decorative luminaire, with opal acrylic diffuser, end caps, 18W T8 lamp, ballast, lamp holder, prewired complete with all necessary accessories suitable for operation on 230V, 50Hz AC supply as required (Wipro WRF 21118 / Crompton T5JB13114EB / GE TRI 118 HF).	Each	30		
60	Supply & installation of LED square type recess mounted down light fixture, with diffuser complete with all accessories like driver, installation accessories etc complete as required. (Wipro CRCO15R013HP57 / Crompton LCDSQ-12-CDL / Equi).	Each	35		
61	Supply and installation of 4x14W recess mounted light luminaire, with mirror optic luminaire, powder coated CRCA housing complete with all electrical accessories like electronic ballast, lamp holder, 14W T5 lamp, mounting chain, hook etc complete as required. (Wipro WVF 14414 SGW / Crompton T5CQ11414EBB / GE PFR 414 MiO).	Each	16		

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
62	Supply & installation of LED round type recess mounted down light fixture, with diffuser complete with all accessories like driver, installation accessories etc complete as required. (Wipro CRDL11R013HP57 / Crompton LCDV-12-CDL / GE GDR012.56S1).	Each	20		
63	Supply of surface mounted circular LED down light fixture, with diffuser complete with all accessories like driver etc complete as required. (Wipro CRDL115017HP57 / GE GDS018.56S1).	Each	15		
64	Supply of 2x36W surface mounted light luminaire, with mirror optic luminaire, powder coated CRCA housing with double parabolic louvers complete with all electrical accessories like electronic ballast, lamp holder, 36W T8 lamp etc complete as required. (Wipro WVF 41236 SG / Crompton CSBW1124EB / GE GETC 2x36 MO S HF).	Each	70		
65	Supply of ceiling fan 1200 mm sweep, double ball bearing, approved colour and quality with original down rod, suspension shackle, canopy etc with out regulator complete with all accessories as required. (Usha Sonata max / Crompton High Breeze)	Each	50		
66	Supply and installation of 400 mm sweep, wall fan, swinging type with speed control, necessary adapter, of approved colour, for single phase 230 volt, 50Hz AC supply complete with motor, capacitor all accessories as required complete. (Usha Helix High speed or Equi).	Each	5		
67	Supply of heavy duty exhaust fan 300 mm sweep, 900 rpm, metal blades of approved colour, for single phase 230 volt, 50Hz AC supply complete with motor, capacitor and all accessories as required complete.	Each	16		
H. UPS & MCBs					
68	Supply, installation, testing & commissioning of 15 kVA, 3 phase, input, 3 phase output, true on-line UPS system with 20 minutes back up (full load), including all accessories, Tubular batteries VRLA type with powder coated MS cabinet, battery cabling including all accessories as required complete having following specification.				
	Fully digital controlled based on DSP				

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
	Power factor corrected from end > 0.9				
	Pure sine wave output.				
	Full time output voltage & frequency regulation				
	Auto regulation of battery end voltage				
	Intelligent interface with LED/LCD display				
	Static bypass switch & manual by pass switch				
	Auto temperature compensation	each	2		
69	Supplying and fixing following rating, 415 Volts, "C" series, miniature circuit breaker suitable for power loads of following poles in the existing MCB DB complete with connections, testing and commissioning etc as required.				
69.1	40A TP MCB	Each	6		
69.2	63A TP MCB	Each	6		
70	Supply and fixing FP sheet steel enclosure on surface recess along with 63 amps 415V FP MCB complete with connections, testing and commissioning etc as required.	Each	3		
I. External lighting					
71	Supply & installation of Hot dipped Galvanised (internally and externally), seamless, octagonal pole of overall length 6 M with single arm bracket of 1.5m length 48mm dia x 3.25mm thick with standard arm cap. The pole shall have inbuilt cable loop in loop out with flush door and locking facility. The bottom dia of the pole shall be 135mm and top 70mm with 3mm sheet thickness. The pole shall be with base plate of 225x225x16mm and 4nos required size of foundation bolt. The pole shall be mounted on suitable size foundation (design to be got approved) with baseplate arrangement and provided with 4A SP C curve MCB, loop in loop out terminals block, required dia GI / PVC pipe shall be provided in the foundation for taking cable in & out from the pole, 3Cx1.5sqmm unarmoured PVC insulated round copper cable from loop in loop out to light fixture etc with all required accessories. The cost of the civil foundation is not considered in this item.	Each	5		

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
72	Supply, installation, testing & commissioning of IP66,150W MH street lighting, with die cast aluminium housing, POT optics reflector, toughened glass, stainless steel toggle, heavy duty copper ballast, pf capacitor, 1x150W MH lamp etc as required. The light fitting shall be suitably installed with all required accessories to poles. The item shall include 3C x 1.5 sqmm PVC insulated copper unarmoured cable for connecting between the luminaire and the loop in loop out box. (Similar to Wipro WSH 41150 / Crompton MHSGP 1215IH09/FG / GE GX150SVNG)	Each	5		
74	Supply and installation of IP65,150W MH integral flood light luminaire, with die cast aluminium housing, aluminium reflector, toughened glass, stainless steel toggle, heavy duty copper ballast, pf capacitor, 1x150W MH lamp etc as required. The light fitting shall be suitably installed in ground above concrete foundation with all required accessories. The item shall include 3C x 1.5 sqmm PVC insulated copper unarmoured cable for connecting between the luminaire and the junction box. (Similar to Wipro WFZ 53150 / Crompton FADT1115IH09 / GE GEFM1X150CAI).	Each	5		
75	Supply & installation of Bollard with 1x26W CFL, with die-cast aluminium body, UV stabilised polycarbonate diffuser and all accessories, 26W CFL lamp. The light fitting shall be mounted on suitable size concrete foundation 3mtr length pole, pole base, separate thermoplastic based loop in loop out box with all necessary accessories including lamp. The cost of the civil foundation shall be measured along with civil items (Wipro FBP 32126 / Crompton CFBL 1526EB / GE ORE26 - BS)	Each	10		
76	Supply & installation of outdoor type wall light 1x26W CFL, with reinforced thermoplastic housing, vandal resistant polycarbonate diffuser, 26W CFL lamp and all accessories. (Wipro FWP 47126 or Equi)	Each	20		

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
77	Supply, Installation, Testing & Commissioning of Street lighting panel, cubicle type, made out of 2mm thick CRCA sheet, totally enclosed, free standing, floor mounting, dust and vermin proof, powder coated, outdoor type, compartmentalised, double door suitable for operation on 3 phase and neutral, 415 V, 50Hz AC system, including internal wiring with suitable size wires, rotary handle, spreaders, 3mm thick gland plate, hinged type door with neoprene gasket etc. The panel shall include supply & installation of following switchgears, metering instruments and accessories as per specification				
	Incomer				
	63A, TPN, switch disconnecter unit (Isolator), AC23, 415V, 50Hz, complete with handle assembly having door interlock - 1 no.				
	Busbar				
	1 Set of 100 A TPN busbars of high conductivity electrolytic quality Aluminium alloy.				
	Instruments				
	2A, C curve SP MCB - 3 nos.				
	RYB indication lamp, LED type - 3 nos.				
	1 No 3 phase Digital Multi function meter to read V, A, F Acc class 1.				
	60/5A 5VA class 1 resin cast CT - 1 set				
	Outgoing.				
	25A TP+NL C curve MCB - 4 nos.				
	32A AC1 duty 4P Power contactor - 4 nos.				
	24Hr Timer with all accessories - 2 nos.	Each	1		
	J. Telephone & Network system				
78	Supply, installation, testing & commissioning of Digital EPBAX, PCM/TDM, 100% non-blocking, main box equipped with				
	4 Analogue Trunk lines				
	4 Analogue Extensions				
	8 Digital display interface				
	Voice guided FAX / DID module				
	Analog Clip (both on Trunk and Extension)				
	Flexible numbering Scheme, Call back on busy/ no answer				
	Call Forward – Internal/ External, Optional ADSL interface				

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
	Call pickup: group/selective, CTI protocol via V.24. Conference				
	DND- Do Not Disturb. Music on hold				
	The device shall be expandable up to 10 P&T Lines and 100 extensions. (Similar to Siemes Hipath 1150 Medium).	Each	1		
79	Supply and laying 50 pair 0.5 sqmm FR PVC insulated annealed copper conductor, jelly filled armoured telephone cable in surface / through pipe / underground including excavation and re-filling including all accessories as required.	Rm	250		
80	Supply and Installation of 100 pair MDF box, back mount frame and original krone connectors with all accessories.	Each	1		
81	Supply and Installation of 40 pair MDF box, back mount frame and original krone connectors with all accessories.	Each	2		
82	Supply & fixing modular type computer outlet (RJ-45) with modular base and cover plate, GI box complete with all accessories, connection etc. complete as required.	Each	65		
83	Supply, installation, testing & commissioning of 48 port unmanaged Gigabit 10/100/1000 Mbps Unmanaged Switch, RoHS compliant with all required accessories.	each	2		
84	Supply and installation of 6-48 port fully loaded 110 connect jack panel 1U with cable manager and all required accessories.	each	4		
85	Supply & installation of Cat 6, 4ft, RJ45-RJ45, UTP, Patch cord with all required accessories.	each	35		

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
86	Supply & installation of Cat 6, 7ft, RJ45-RJ45, UTP, Patch cord with all required accessories.	each	35		
87	Supply and installation of 9 U wall mounted Network Rack made of steel, powder coated, front glass cover with PDU's, cable manager and cooling fans including all required accessories.	each	3		
K. Miscellaneous					
88	Supply and providing 6 mm thick & 1 m wide electrical grade chequered type rubber mat to withstand 3.3 KV dielectric strength conforming to IS 5429/ 1969.	Rm	5		
89	Supply, fabrication and fixing 3 nos MS Fire buckets on suitable fabricated MS angle iron stand with hook, painting with red paint & filled with dry sand as required with all required accessories.	Set	2		
90	Supply and providing First Aid Chart duly framed and placed in a conspicuous location for clear vision.	Each	2		
91	Supply and providing Electrical main single line Diagram duly framed and placed in a conspicuous location for clear vision.	Each	1		

PART II- ELECTRICAL WORKS					
SI No	Description	Unit	Qty	Rate Rs(in figures&words)	Amount in Rs
92	Preparation of electrical drawing for the building, submission of drawings to Electrical inspectorate / KSEB and obtaining approval, arranging inspection for entire installation and other utilities, obtaining road cutting permission obtaining sanction orders for the electrical installation. Necessary power allocation, service connection, energising the installation from KSEB complete. Including all incidental expenses except the fees payable to the electrical inspectorate with valid receipts from the authorities.	Job	1		
	TOTAL -PART II ELECTRICAL WORKS				