

Kunnamkulam Town Electrical Works BOQ					
PART A				AMOUNT	
SL NO.	DESCRIPTION OF WORK	QTY	UNIT	RATE	AMT.
1	MSB : Fabrication, Supply, Installation, testing and commissioning of wall mounting type dust and vermin proof cubicle type switch board made out of 16 SWG CRCA sheet with powder coated painting(siemens grey) and consisting of				
	125A,25KA TP MCCB as incomer				
	80A, 16 kA TP MCCB as outgoings -1 Nos. (To Non Essential DB)				
	63A, 16 kA TP MCCB as outgoings -1 Nos. (To Essential DB)				
	25 x 6 mm Copper busbar for 3 phases and neutral.				
	3 nos. LED indicators for RYB indication : 2 sets (each for KSEB & DG Set supply indication)				
	Multifunction LCD Display for Voltage, Current and Frequency for 3 phase- 1 No.				
	2A SP MCB - 6 Nos. for control supply.				
	Complete with all interconnections.	1	Set		
2	MAINS CHANGE OVER Supply and installation of 125A 4 Pole ON LOAD Change over switch with suitable metallic enclosure with cable entry box and powder coat painted and with 6 nos 2A SP MCB with 6 nos LED indicators for the identification of KSEB / DG Set 'ON' & neat marking thereof. (Mains Change Over)	1	No.		
3	Supply and fixing of 80A, 25 KA Four Pole MCCB on a suitable metal box with handle for switching off the non essential loads like air conditioners, LDB after the office hours (This should be installed near to entrance area preferably and the connection to be given by using 4X25sqmm AYFY cable)	1	No		
4	Non Essential Load DB (VDB): Supply, Installation, testing and commissioning of Double door 4 way VTPN MCCB DB consisting of the following.				
	80A, 25 kA TP MCCB as Incomer - 1 No.				
	63A C Series TP MCB as out going- 1 no (To AC DB)				
	32A/40A C Series TP MCB as out going- 2 no (To PDB & LDB)				
	16/20/32A C Series SP MCB as out going -3 Nos.				
	Dummy - 0 Nos.	1.00	Set		
Complete with all inter connections.					
5	AC DB : Supply, Installation, testing and commissioning of Double door Way TPN MCB Vertical DB consisting of the following.	1	Set		
	63A, 100mA ELCB + MCB as Incomer - 1 No.				
	20A/32A C Series TP MCB as out going- 4 no (To 3 Phase AC units & Spare)				
	10/16/20A/32A, SP MCB (C-Series) - 6 Nos.(To Single Ph. AC Units, Power plugs & spare)				
	Dummy - 0 Nos.				
	100A Copper busbar for 3 phases				
Complete with all interconnections.					
6	Essential DB: Supply, Installation, testing and commissioning of Double door 4 way TPN MCB DB consisting of the following.				
	32/40A, 100mA ELCB + MCB as Incomer - 1 No.				
	32A/40A C Series TP MCB as out going- 2 no (To ATM & 3 Phase UPS)				

	6/10A/16A/20A/32A 'C' Series MCB as out going - 6 Nos. (To UPS, Board Light, Security Light)				
	Complete with all inter connections.	1.00	Set		
7	PDB: Supply, Installation, testing and commissioning of Double door 4 way TPN MCB DB consisting of the following.				
	32/40A, 100mA ELCB + MCB as Incomer - 1 No.				
	6/10A/16A 'C' Series MCB as out going - 12 Nos.				
	Complete with all inter connections.	1.00	Set		
8	LDB: Supply, Installation, testing and commissioning of Double door 4 way TPN MCB DB consisting of the following.				
	32/40A, 30mA ELCB + MCB as Incomer - 1 No.				
	6/10A/16A 'C' Series MCB as out going - 12 Nos.				
	Complete with all inter connections.	1.00	Set		
9	UPS INPUT DB: Supply Erection, testing and commissioning of 32/40 A 2P MCB + 32 A DP ELCB 100 mA in suitable metallic enclosure	3	Set		
10	UPS OUTPUT : Supply and installation of 32/40A DP MCB in suitable metallic enclosure for UPS input/Output	3	Nos.		
11	UPS CHANGE OVER PANEL Supply erection testing and commissioning of 2 Nos. 40A rotary type change over switch in suitable metal box with 4 Nos. LED indicator for input / output identification. UPS Output change over switch board.	1.00	Set		
12	COMPUTER DB Supply, erection, testing and commissioning of wall mounted type double door dust and vermin proof 12 way SPN MCB DB fixed on wall comprising the following:				
	25/32A, High Immunity DP RCBO 30mA 25/32A - 1 No.				
	6A / 16A MCB - 10 Nos.				
	SPN MCB DB - 12 way	2	Set		
13	SPN UPS DB for ATM Supply, erection, testing and commissioning of wall mounted type double door dust and vermin proof 8 way SPN MCB DB fixed on wall comprising the following:				
	25/32A, High Immunity DP RCBO 30mA 25/32A - 1 No.				
	6A / 16A MCB - 6 Nos.				
	SPN MCB DB - 8 way	1	Set		
14	CABLE LAYING AND TERMINATIONS Supply, laying and dressing of the following size of 1.1 KV grade PVC insulated armoured cable with aluminium conductor concealed or clamped on wall / ceiling / trench / cable tray/lamps if necessary.				
	i) 3.5 x 50 Sq.mm AYFY (Main cable)	70	Mtr.		
	ii) 4 x 25 Sq.mm AYFY (From MSB to Non Essential & Essential DB, Cut off MCCB to Non Essential DB)	50	Mtr.		
	iii) 4x10 Sq.mm AYFY (From Non Essential DB to LDB, PDB and Essential DB to ATM DB)	75	Mtr.		
	iv) 4X16 Sq.mm AYFY	30	Mtr		
	v)3.5X35 Sqmm AYFY	60	Mtr.		

15	End termination of the following size of cables using flange type cable glands and heavy duty tinned aluminium crimping type cable sockets including gland earthing.				
	i) 3.5x 50 Sq.mm AYFY	2	Nos.		
	ii) 4x 25 Sq.mm AYFY	4	Nos		
	iii) 4x10 Sq.mm AYFY	6	Nos.		
	iv) 4X16 Sq.mm AYFY	2	Nos		
	v)3.5X35 Sqmm AYFY	2	Nos		
16	Supply and providing ISI pipe earthing as per IS 3043 with 2.5m long 40mm dia B class G.I. pipe providing GI clamp at the top of the GI pipe test joint, filling around the GI pipe at the radius of 15cm with homogeneous mixture of charcoal, commol salt and river sand up to height of 2.5m from the botton and the rest of the portion with excavated soil, providing brick work masonries, plastering, fixing cast iron cover of 30x30cm size etc. complete.	6	No.		
17	Same as above but using 60cmX60cm Copper plate earth for UPS earthing	1	No		
18	EARTH CONDUCTORS Supply and laying of the following size of bare copper conductor along with above cables, for interconnections between panels, DBs, change over switches etc.and also for interconnections between earth pits.				
	i) No.10 SWG	380	Mtr.		
	ii) No. 4 SWG	40	Mtr		
	iii) No.8 SWG	30	Mtr		
19	Supply and laying of 2 X No. 10 SWG copper conductor through 20mm PVC conduit for UPS earthing.	40	Mtr.		
20	Supply and laying of 1 run No. 10 SWG copper conductor through 20mm PVC conduit for Datacraft RACK's lightning protection.	45	Mtr.		
	<u>WIRING FOR LIGHT, FAN, PLUG, SOCKETS ETC</u>				
21	Wiring for light,fan,plug-sockets				

a	SITC of all materials and wiring through wall, ceiling, concealed using color coded 1.5 sq mm PVC insulated, 1100V grade FRLS stranded copper wire for point and same size wire with green color as continuous earth for points with independent earth wire for each circuit through ISI grade 25mm PVC conduit including all accessories as per IS 9537 part 1 including circuit wiring using 2.5 sq mm size of wire of same material and quality as above and factory made MS boxes modular type 5A switches and switchboards and ceiling rose /connectors etc. of approved make for controlling one light /fan/exhaust fan calling bell etc. Number of wire to be used in the conduit should be limited to the IS standards. Rate is inclusive of cost of circuit wiring from LDB, chipping floor /wall using machine and re-plastering to original form. All switches/sockets/switch boards shall be modular type. Wherever wires are drawn on walls it shall be concealed by chipping the plaster using proper machine. Where conduits are drawn above false ceiling, it shall be firmly clamped on the concrete ceiling/wall using clamps at regular interval (maximum one meter) or laid through rack/tray as per site condition. one light controlled one switch	80	Nos		
b	Same as above but controlling two lights by one switch	5	Nos		
c	Same as above but controlling three lights by one switch	3	Nos		
d	Same as above (Item no 14a) but for ceiling fans including Supply and Installation of step type 250 W modular electronic regulator of approved make.	7	No		
e	SITC of wiring for 6 or 10 nos LED Bulk head or tube lights in parallel connected to UPS/KSEB supply with single control using 5A modular switch and plate with identification for external lights	1	No		
f	SITC of wiring for 6 nos LED down lighters in parallel connected to UPS supply with single control using 5A modular switch and plate with identification.	2	Nos		
g	SITC of 6A 3 pin plug socket with 6A switch with inter connections complete (combined in switch board)	12	Nos		
h	SITC of 6A 3 pin plug socket with 6A switch with inter connections complete (independent plus points)	6	Nos		
g	SITC of 2 nos of 6A 3 pin plug socket with 6A switch with inter connections complete (for TV Supply)	1	No		
22	SITC of wiring through wall /floor etc recessed using color coded 3 runs 1100V grade 2.5 sq mm PVC insulated FRLS copper wire through ISI marked 20 mm dia PVC conduit including all accessories and provide combined 6A, 3pin modular plug socket with 6A modular switch & 16A combined 3 module modular plug socket with 16A modular switch in single box. (for KSEB supply at counters / Manager cabin) including charges for chipping wall or floor and making to original form. Rate is inclusive of cost of complete circuit wiring from power DB/UPSDB (Maximum of three sockets only will be permitted in one ckt) For wall fan/other items at required location switch shall be within reachable height (1.5m)..	17	Nos		

23	SITC of wiring through wall /floor etc recessed using color coded 3 runs 1100V grade 2.5 sq mm PVC insulated FRLS copper wire through ISI marked 20 mm dia PVC conduit including all accessories and 2 plate 15/5A modular switch and sockets including charges for chipping the wall or floor and making to original form. Rate is inclusive of cost of complete ckt wiring from the KSEB power DB/UPSDB	6	Nos		
24	SITC of wiring through recessed/ wall /floor/partition/surface using color coded 3runs of 2.5 sq mm PVC insulated FRLS stranded copper wire for phase/neutral and green color for earth through ISI marked 20 mm dia PVC conduit from UPS DB for UPS power stations including 4nos 5A 3 pin sockets controlled by one 15A master switch (modular) in metal box .Number of wires in one conduit shall be limited as per standards .Rate quoted is for the complete lenth of wiring from UPS DB .Master switch shall be in separate box at easily accessible position to operate by sitting on the chair.(the item is treated as Main station .	7	Nos		
25	Extension of UPS Stations from main station (Item no:16) to adjacent tables consisting of wires ,switches &sockets same as that mentioned in item no:15a. Maximum three UPS power stations (of 4 sockets treated as one power station) can only be looped from one main station.	17	Nos		
26	Same as above but for 2 Nos. modular type 15 A 3 pin plug points with 2 nos. 15A modular type switch in separate location.(for datacraft rack / I/O Rack)	1	No		
27	SITC of wiring using 5R x 4 sq.mm PVC insulated stranded FRLS Cu.wire with 25mm dia PVC conduit	280	Mtrs		
28	SITC of wiring using 3R x 4 sq.mm PVC insulated stranded FRLS Cu.wire with 25mm dia PVC conduit (single Phase AC units)	220	Mtrs		
29	SITC of wiring using 3R x 2.5 sq.mm PVC insulated stranded FRLS Cu.wire with 25mm dia PVC conduit for DG battery charger Circuit and remote ON/ OFF	80	Mtrs		
30	SITC of wiring using 3R x 1.5 sq.mm PVC insulated stranded FRLS Cu.wire with 25mm dia PVC conduit for DG control circuit wiring (for providing ON/ OFF Control from branch to DG set and for battery Charger supply)	60	Mtr.		
31	Same as above but with 3 x 6 Sq.mm PVC Insulated copper wire. (for UPS O/P COS to Computer DB)	50	Mtr.		
32	SITC of 40A2P Isolator with suitable metallic enclosure	4	No		
33	SITC of 40A4P Isolator with suitable weather proof encloser for supply to aC outdoor units	4	No		
34	SITE of 32A/40 A 4 P MCB + 40A, 100 mA, ELCB in suitable metallic box for 3 Ph UPS input	1	No		

35	Supply and providing 16 A plug top and 1.5m long 3 core 2.5Sqmm flexible copper cable for taking incoming supply from 16A socket. Cable should be given through a flexible hose & hook should be given for hanging the flesible hose (For UPS supply to back office managers, manager & KSEB supply to strong room, line printer and kitchen)	4	No.		
36	Supply and installation of 25/32A DP ELCB 100 mA in manufacturers own enclosure for protection of board light, security light and for single phase AC units.	3	No.		
37	Supply and Installation of 25A Modular type 3 pin plug socket with suitable metallic box for air conditioners.	4	No.		
38	Supply and installation of 25/32A combined Power plug & 20/32A SP MCB in suitable PVC/metallic box. (North West or equivalent make) for connecting AC stabiliser near VDB/ UPS in pit sockets.	4	No.		
39	Supply and Installation of 25/32A Modular type DP switch (2module) with indicator mounted on suitable metallic/PVC box for the local control of the air conditioners.	4	No.		
40	Supply and Installation of 20/32A 4 Pole MCB in suitable metallic enclosure for the local control of 3 Phase Acs.	4	Nos.		
41	Supply and Fixing of modular TV Socket	1	No		
42	Supply and laying of ISI marked 20 mm dia PVC conduit in wall after chipping or in partitions for data line	30	Mtrs		
43	KSEB/DG Indication lamp wiring using 3 nos LED indication lamp with 3 nos 6A switch for indicating KSEB supply using 1sq.mm wire though pvc pipe	1	Set		
44	Marking of Panels, DBs, its switch and fuse ratings, cable size, location etc (Neat identification from top to extreme load end of both light and power distribution including KSEB / UPS plug sockets and generator switch boards) using white / black paint and stencil. (free hand writing not allowed). Good quality stickers may also be used.	1	LS		
45	Charges for preparation of single line diagram of the whole electrical installation using AutoCAD, lamination and displaying it inside the UPS room.	1	LS		
46	Charges for marking the telephone sockets and its correspondonding cable in the KRONE Box and preparation of single line diagram / layout of the whole telephone wiring showing location and numbering marked in the plan using AutoCAD, lamination and displaying it inside the Server Room/Manager Cabin.	1	LS		
47	Charges for preparation of as build layout of the premises indicating position of the earth pits along with the readings and date using AutoCAD, lamination and displaying it inside the UPS room.	1	Ls		
48	Service charge for liaison work with KSEB authorities on behalf of bank for getting power allocation and final sanction for additional load, getting order for statutory payments, shifting/replacement of suitable energy meter if necessary, submission of completion report, obtaining final load sanction from KSEB.	1	LS		

49	Service charge for preparation of electrical schematic drawings and for liaison work with Electrical Inspectorate on behalf of bank including testing of energy meter, site inspection for getting approval / energisation sanction for DG set	1	LS		
50	Supply & neat placing of safety items in electrical room				
a	Caution board	1	No.		
b	Shock treatment chart	1	No.		
c	Rubber gloves	1	Pair		
d	Supply of electrical grade rubber mat	20	Sft		
49	<u>LIGHT FIXTURES & FANS</u>				
a	Supply and Installation of Philips Green square LED Luminare Cat. No.RC380B LED 28S-6500 L60W60 PSI OD or equivalent (including fixing frame if any required) or equivalent. (Bank has the discretion to supply the light fittings if necessary)	25	No.		
b	Supply and installation of 9W LED bulb with angle holder (Toilets & wash area)	7	Nos		
c	Supply & installation of 1 X18 Watts Philips Green LED I 200 DN 193B LED light fitting with lamps and white reflector on false ceiling (including UPS Lights)	25	Nos.		
d	Supply and fixing of 18W 4 ft LED tube light fitting (Philips BN 021 or equivalent)	15	Nos		
e	Supply and installation of LED strip along with drive (Blue / White) along with profile channel for fixing the same	60	RM		
f	Supply & installation of calling bell	1	Nos		
g	Supply and installation of 9" size medium duty exhaust fan. (Toilets) Almonard make	4	Nos.		
h	Supply and installation of 12" size heavy duty exhaust fan. (UPS Room) Almonard make	1	No.		
i	Supply and Installation of 450 mm sweep wall fan with metal frame and body. Crompton Greaves / Usha equivalent	16	No.		
j	Supply and providing of 6A, 3 pin modular socket on suitable metal box for wall fan.	16	Nos.		
k	Supply and installation of 1200mm sweep ceiling fan. (Crompton Greaves High Speed double ball bearing type)	7	No.		
l	Supply and providing fan hook on ceiling.	7	No.		
m	Supply and providing fan rod with painting (upto 1m length) (other than that supplied with fan and if required)	7	Nos.		
n	Supply and providing tinned copper earth bench using 25 x 3 mm copper strip (25 Cm in length)	5	Nos.		
o	Supply and installation of Cut off timer for External lights (to be installed near VDB).(Make Legrand/ Protonix/ L & T)	2	No.		
p	10W LED bulk head light fittings(Philips WP 202 or equivalent)	10	No		
q	Supply and installation of cut off timer with contactor for alternate working of UPS room exhaust fans (Contactor L & T MNX 9 or equivalent)	1	Set		
	PART - B				
1	<u>TELEPHONE</u>				

a	Supply and wiring using 2 pair telephone cable 20mm PVC conduit from the EPABX to the individual points. One separate cable for each point. Number of cables in one conduit limited to 5.				
b	2 pair telephone cabling 0.5Sqmm	330	m		
2	20 pair telephone cabling (1 run for EPABX)	45	m		
a	Supply and fixing of RJ 11 type modular telephone socket on suitable PVC / metal boxes.				
b	Telephone socket - single (modular type)	15	No.		
3	Telephone socket - double (modular type)	1	No.		
	Supply and installation of KRONE connector telephone junction box of 20 pair.	1	No.		
	PART - C				
1	<u>MUSIC SYSTEM</u>				
2	Supply and wiring as per colour code with 2.50Sqmm PVC insulated stranded copper wire 2 runs through ISI grade 20mm conduit for speakers.	120	m		
3	Supply and providing 9W recessed type speakers on ceiling CS 663 T Ahuja make speaker.	7	No.		
4	Supply and installation of Ahuja make 28W Amplifier with USB port. Model: Ahuja DPA 370	1	No.		
	Total Base Amount				