

**BILL OF QUANTITY FOR ELECTRICAL WORKS
 FOR INDIAN BANK, MUNSHIGANJ**

S.NO.	PARTICULARS	Unit	Qty.	Rate	Amount
	<u>A - Light, Fan, 16amp/6 amp points</u>				
1	Light, Fan & 6 A switch points: S/F of light, fan & exhaust fan points controlled thru Anchor make Piano switch. It shall have 3 x 1.5 sq.mm FRLS PVC insulated stranded Cu. Wires in 19mm PVC conduit pipe concealed in wall/ floor/ panelling/ partitions or on the ceiling as per requirement. The work shall also include for cutting chase for conduits in the wall/ floor (Without damaging the building/wall) along with clamping the conduit at every 750mm interval & finally finishing the surface & matching the same with the existing surface. The rate should include the cost of all materials, labour, T&P, taxes & levies, scaffolding, shifting of furniture, carting away the debris and cleaning the floor etc. The job shall be complete & to the entire satisfaction of the Bank.	Point	39		
2	6 A switch points: S/F of 6A switch points with an additional indicator and 6Amp. Anchor make Piano Type switch & socket. It shall have 3 x 1.5 sq. mm FRLS PVC insulated stranded Cu. Wire as per requirement. The rate should include the cost of all materials, labour, T&P, taxes & levies, scaffolding, shifting of furniture, carting away the debris and cleaning the floor etc. The job shall be complete & to the entire satisfaction of the Bank.	Point	10		
3	Circuit Wiring (Light, fan, 6Amps Switch points) : Supply & laying of circuit wiring for light, Fan & 6 Amp. Switch points with 3x 1.5sq.mm FRLS Cu stranded wires laid in 19mm PVC conduit pipe concealed in wall/ floor/ panelling/ partitions or on the ceiling as per requirement. The work shall also include for cutting chase for conduits in the wall/ floor (Without damaging the building/wall) along with clamping the conduit at every 750mm interval & finally finishing the surface & matching the same with the existing surface. The rate should include the cost of all materials, labour, T&P, taxes & levies, scaffolding, shifting of furniture, carting away the debris and cleaning the floor etc. The job shall be complete & to the entire satisfaction of the Bank.	m	107		
4	Circuit Wiring (Single 6/16Amps power Points) : S/F of circuit wiring for 6/16 Amp. Switch points with 2 x 2.5 + 1x 1.5sq.mm FRLS Cu stranded wires laid in 19mm MS conduit pipe concealed in wall/ floor/ panelling/ partitions as per requirement. The work shall also include for cutting chase for conduits and boxes, if required, in the wall/ floor (Without damaging the building/wall) along with clamping the conduit at every 750mm interval & finally finishing the surface & matching the same with the existing surface. The rate should include the cost of all materials, labour, T&P, taxes & levies, scaffolding, shifting of furniture, carting away the debris and cleaning the floor etc. The job shall be complete & to the entire satisfaction of the Bank. (2ckts - 1 D/ w, 1 c/c)	m	34		
5	Circuit Wiring for 2Nos. 6/16Amps power Points: S/F of circuit wiring for 6/16 Amp. Switch points with 2x 4.0 + 1x 1.5sq.mm FRLS Cu stranded wires laid in 19mm MS conduit pipe concealed in wall/ floor/ panelling/ partitions as per requirement. The work shall also include for cutting chase for conduits and boxes, if required, in the wall/ floor (Without damaging the building/wall) along with clamping the conduit at every 750mm interval & finally finishing the surface & matching the same with the existing surface. The rate should include the cost of all materials, labour, T&P, taxes & levies, scaffolding, shifting of furniture, carting away the debris and cleaning the floor etc. The job shall be complete & to the entire satisfaction of the Bank. 2nd PP to be inter looped with first PP (Total 3ckts - 1 for Manager, 1server & 1 for counters)	m	52		

6	6/16Amp. Switch Sockets : S/F of 6/16A Anchor Piano switch socket for power points. The work shall also include for cutting chase for conduits if required, in the wall/ floor (Without damaging the building/wall) & matching the same with the existing surface. The rate should include the cost of all materials, labour, T&P, taxes & levies, scaffolding, shifting of furniture, carting away the debris and cleaning the floor etc. The job shall be complete & to the entire satisfaction of the Bank.	Each	8
B - AIR CONDITIONING			
	Wiring for circuit for AC's: Circuit wiring with 2x4.0sq.mm + 1x 1.5sq.mm stranded Cu. conductor (Finolex /Anchor /Skytone) to be laid in 19mm MS Conduit heavy duty laid & concealed in wall/ floor/ panelling/ partitions or above false ceiling as per requirement. The job includes supply & fixing of 4in one appliance protector pre-wired, IP 20 with factory fitted 25A 2P MCB and 25A socket (Hagers/ Siemens/ ABB). The rate should include the cost of all materials, labour, T&P, taxes & levies, scaffolding, shifting of furniture, carting away the debris and cleaning the floor etc. The job shall be complete & to the entire satisfaction of the Bank.	lcn	0
	Circuit wiring with 2x4.0sq.mm + 1x 1.5sq.mm stranded Cu. conductor (Finolex/Anchor/Skytone) to be laid in 19mm MS/ flexible pipe heavy duty laid on floor & concealed in wall/ floor as per requirement from 4Way TPN Db for AC to various voltage stabilizers. The job includes making connections at both ends with proper size of lugs to the entire satisfaction of the Bank.	m	0
<u>AC distribution (3 Phase)</u>			
	Supply & fixing of Flush mounted metal distribution board for MCB's & isolators completed in all respects. Horizontal Single door IP 20 - Siemens/ L&T/ MDS/ Schnider (The load shall be distributed equally on all phases. In case of emergency AC to be fed from Y phase)		
	4 way TPN Db for AC (Incoming three phase supply)	Each	0
	Supply & fixing of 63A TP MCB (10KA) - Siemens/ L&T/ MDS/ Schnider	Each	0
	Supply & fixing of SPMCB's (10 KA) rating 32 Amp. For AC's Siemens/ L&T/ MDS/ Schnider. All terminations shall be done with proper size of lugs.	Each	0
C - DISTRIBUTION MAINS			
1	SITC of 63Amp. Kit kats fuse unit (Link type) 3nos in wooden patra complete with 63Amp. Neutral link 1no. Complete in all respect as required.	Set	1
2	SITC of 6way VTPN Db Betabus plus of Siemens make c/w 63A 25Ka Adjustable 3P MCCB with following configuration of out going feeders OUTGOINGS - 3 Nos. 20A 1P MCB for 2PP - 1mr, 1server & 1 counter 2Nos. 16A 1P MCB 10kA for single PP 5Nos. 10A 1P MCB 10kA for L & F 6Nos. 6A 1P MCB 10kA for L & F 2no. Blanking plate	Set	1
3	S/ laying of XLPE insulated armoured Al. Conductor cable including cost of lugs, cable glands etc. 4cx10sq.mm from Main Kit Kats to LT Panel incomer 4cx10sq.mm for PP & LF Db 3cx6sq.mm for UPS	m m m	5 20 21
4	Glow sign Board - Circuit wiring with 2x2.5sq.mm + 1x 1.0sq.mm stranded Cu. conductor (Finolex/Anchor/Skytone) to be laid in 19 mm PVC pipe heavy duty laid & concealed in wall/ floor/ panelling/ partitions or above false ceiling as per requirement. The rates should include the cost of all materials, labour, T&P, taxes & levies, scaffolding, shifting of furniture, carting away the debris and cleaning the floor etc. The job shall be complete & to the entire satisfaction of the Bank.	m	8
D - DG SET SUPPLY			
1	S/laying of 4cx10sq.mm XLPE insulated Al. conductor armoured cable from proposed DG set to Changeover switch including its connections at both ends to be laid in rigid PVC /flexible conduit	m	12
2	S/F of 63A TPN Chnageover in SS enclosure including connection as required complete in all respects	Each	1

E- EARTHING		
1	S/burying of Dual pipe technology (Pipe in Pipe) earthing electrode having GI 80mm O/D pipe with 25 micron coating, 3metres long. The space between two pipes to be filled with Highly conductive & Non corrosive chemical compound. The installation shall be thru earth auger. The vacant space between pipe & hole shall also be filled with compound all around. The job also includes S/F of GI strip clamp with two holes (with SS/GI bolts & nuts) on the electrode & taking two earthing leads of 25 x 5 mm GI strip (Assumed length of 10m - beyond 10m to be paid extra) upto Main panel complete in all respects with guaranteed E/N voltage of less than 2 volts and resistance less tahn 1 ohms. (1for power system &1 for UPS). The distance between two earthing pits to be 10ft or more.	Job 1
2	Supply & Fixing of 25 X 5 mm. GI strip from earthing to Db's or main panel.if required beyond 10m	Per M. 6
F - SUPPLY & FIXING ITEMS		
1	S/F of Recess mounted decorative direct - indirect lighting luminaire suitable for compact fluorescent lamp PL-L36W wing colour to be decided by architect, Matt Mirror ribbed cross louver c/w 2nos. 36W CFL lamps.Philips - FBS450 2xPL-L36W IC M2	
	a) Supply	Each 0
	b) Receiving & Fixing	Each 0
2	S/F of 2x36watts Fluorescent Tube light fitting -Surface/hanging mounted mirror optic luminaire suitable for linear fluoresent lamps 2x T-D 36W c/w cost of 2x36w fluorscent tube light - Phillips - Maxlite - TCS350 2 TLD36W IC M1 complete in all respects	
	a) Supply	Each 0
	b) Receiving & Fixing	Each 0
3	Supply & fixing of 2x36w reflector typr fittings - TMC 055 - Mounting rail for fluorescent lamps with special integral lamp holder & bracket c/w 2nos. 36w FTL tube lights - Philips -TMC 055 2xTL-D36W IC	
	a) Supply	Each 4
	b) Receiving & Fixing (1Hanging + 5 Beam)	Each 4
4	Extra for fixing of Tube fitting as pendent with two nos. 19mm dia 16swg rigid steel conduit double check nuts spring loaded flanges or MS hook fabrictaed from 25x3mm flat iron duly grouted in the ceiling upto 3.5m height including painting with synthetic enamel paint along with supply of all materials, labour, T & P etc. as required for proper completion of work	Each 1
4	2x18w CFL recess spot - Recessed downlighter with patterned specular reflector in compact size suitable for horizontal lamps Philips - FBS095 2x18W PL-C HF	Each 0
5	S/F of 1x36watts Fluorescent Tube light fitting c/w cost of 1x36w fluorscent tube light - TARANG ELECTRONIC 4' Philips - TMC090 1xTLD36W HF	
	a) Supply	Each 23
	b) Receiving & Fixing	Each 23
6	S/F of wall mounted fan 400mm sweep -Bajaj/ Crompton/ Alsthom	
	a) Supply	Each 2
	b) Receiving & Fixing	Each 2
7	S/F of ceiling fan 1200mm sweep double ball bearing c/w 5 step regulator - Bajaj/ Crompton/ Alsthom	
	a) Supply	Each 7
	b) Receiving & Fixing	Each 7
8	Supply & Fixing of fresh air fan 12" - Crompton Greaves/ Usha/ Khaitan/ Bajaj	
	a) Receiving & Fixing	Each 2
	b) Supply	Each 2
9	Supply & fixing of Angle bulb holder complete with CFL lamp	Each 1

G - TELEPHONE CABLING

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|---|---|-------|---|
| 1 | Supply & fixing on wall/ furniture/ partition recessed type non modular telephone socket outlet (RJ-11) with mounting box & front plate complete with chase cutting, mending good etc. as required complete with Supply & laying of 2pair 0.6mm dia. PVC insulated telephone cables through rigid PVC conduit of suitable diameter as directed by the consultant from telephone junction box to telephone socket outlet including interconnection mending good etc. as required complete in all respects. | Point | 2 |
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Total for Electrical w/o UPS & Data

0.00

UPS POWER STATIONS WIRING, SPECIFICATIONS AND BILL OF QUANTITY

For server switch - computer power station shall have 3nos. Power points.

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|---|--|------|-----|
| 1 | Supply & Fixing of 2nos. 32A 2P MCB in a 4way SPN Db IP-20 Metallic directly on wall for regulating UPS incoming supply complete in all respects | Nos. | 1 |
| 2 | Supply & running the following size of 660V grade, Finolex brand PVC insulated, multi stranded Cu conductor in suitable size of MS conduit on wall/ wooden partitions under the floor as per site requirements in the case of running the conduit under the flooring or concealed in the wall. The flooring/ wall shall be neatly finished with cement mortar.
3 runs of 2.5sq.mm UPS Db's to power stations of 3 plug each (As explained in Item -1) to be connected to each circuit | m | 106 |
| | 2 runs of 6.0sq.mm with one run of 2.5sq.mm As explained in Item - 6 from change over switch to Db for individual Power station through phase selector & UPS | m | 0 |
| | 2 runs of 4.0sq.mm with one run of 1.5sq.mm for connections of UPS Incomer & UPS Outgoing in flexible/ MS conduit | m | 8 |
| | 2 runs of 4.0sq.mm with one run of 1.5sq.mm for UPS controlled power point strip for server switch in MS conduit | m | 10 |
| 5 | Supply & fixing of computer power stations
6A 5Pin 3nos. sockets surround controlled by 1no. 16A switch & 3nos. apertures with blank plugs - Schnider Clipsal office wonder for work station (H2015/ 6E4X - WE) complete in all respects. The box shall be fixed on wall or Partition (wooden) concealed or open as required at site. (nos. for cash, S/w and Counter) | Nos. | 7 |
| | Manager Cabin & Server Room and Note Counting room - 6A 5Pin 4nos. sockets surround controlled by 1no. 16A switch & 2nos. apertures with blank plugs - Schnider Clipsal office wonder for work station (H2015/ 6E4X - WE) complete in all respects. The box shall be fixed on wall or Partition (wooden) concealed or open as required at site. | Nos. | 2 |
| | Server switch - 13A multi pin 3nos. sockets surround controlled by 1no. 16A switch & 3nos. apertures with blank plugs - Schnider Clipsal office wonder for work station (AAKH2015/ 13E4X - WE) complete in all respects. The box shall be fixed on wall or Partition (wooden) concealed or open as required at site. (0 no. for ATM + 1no. for server switch) | Nos. | 1 |
| 6 | Supply & Fixing of 12way SPN Db single door IP -20 with 9nos. 6A 1P +1no.16A 1P MCB's (10kA rapturing capacity) controlled 32A 2P MCB fixed on the wall or concealed with necessary adpoter box on out going side to facilitate for terminating the 6nos. conduits with necessary holes. The distribution board & MCB's should be of the same make - "Make - STANDARD" | Nos. | 1 |

7	S/burying of Dual pipe technology (Pipe in Pipe) earthing electrode having GI 80mm O/D pipe with 25 micron coating, 3metres long. The space between two pipes to be filled with Highly conductive & Non corrosive chemical compound. The installation shall be thru earth auger. The vacant space between pipe & hole shall also be filled with compound all around. The job also includes S/F of GI strip clamp with two holes (with SS/GI bolts & nuts) on the electrode & taking two earthing leads of 32x3 mm GI strip (Assumed length of 10m - beyond 10m to be paid extra) upto Main panel complete in all respects with guaranteed E/N voltage of less than 2 volts and resistance less tahn 1 ohms. The 25 x 5mm GI strip shall be terminated on a separate 6way earthlink. The connections for Panel earthing & earth bus in the panel should be taken from this earthlink. (1for power system & 1 for UPS). The distance between two earthing pits to be 10ft or more.	Job	1
8	Supply & Fixing of 25 X 5 mm. GI strip from earthing to Db's or main panel.if required beyond 10m	Per M.	10
9	S/F of G I Strip earth clamp	Each	1

Total Estimate for UPS work

0.00

DATA/ MOLEX/ AMP

Each Data point shall have 1nos. Information outlets

Each information outlet shall be fed from separate Cat 6e cable.

Distance between data pipe/ PVC channel & power pipe shall be 300mm & above.

1	Information outlet per number with face plate and base box- Supply & Fixing of XL RJ 45 toolless information outlet Grey colour cat 6e Giga speed Systimax/ D link make including interconnection with single connectors as required complete in all respects.	Nos.	7
2	Patchmax Panel # 24 Ports - Supply & fixing of 24 Port Cat 6e Patch Panel/ Jack panel D - Link/ systimex fully loaded in the rack to be provided by purchaser complete in all respect to the entire satisfaction of the Bank.	Nos.	1
3	Patch Chord - 1metre - Supply & fixing of 1 metre length Grey colour Patch chord Giga speed Systimax/ D link make for connections to nodes	Nos.	7
4	Patch Chord - 2 metres - Supply & fixing of 2metre length Grey colour Patch chord Giga speed Systimax/ D link make for making connections between patch panel & switch thru cable manager	Nos.	7
5	UTP cable (ECAT # 6) - Supply & laying of CAT - 6e cables Giga speed D - Link/ Systimex make through pre-laid rigid PVC conduit/channel as directed by the consultant from Server to Switch, Switch to computer data socket including interconnection with connectors as required complete in all respects. The data cabling pipe/channel should be laid at a minimum distance of 3ft from pipes laid down for power distribution.	m	83
6	Switch 24 Port - D Link/ systimex	Nos.	1
7	PVC Channel Flat 1.5mm and above (Make - Modi) 1" size	m	47
8	4U, 19", 450mmD x300mmW closed wall mount MS 18/20swg powder coated rack with glass door opening in the front with power panel, cable manager & lock & key (Universal make)	Nos.	1

Total Estimate for Data/ LAN wiring

Summary of estimate for Electrical, UPS & Data work for the Branch

Cost of Electrical works

Cost of UPS Related works

Cost of Data /LAN wiring

TOTAL ESTIMATE FOR ELECTRICAL, UPS & DATA