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BILL OF QUANTITY FOR ELECTRICAL WORKS
FOR INDIAN BANK, A.T.M. AT (JHANSI)

S.NO.	PARTICULARS	Unit	Qty.	Rate	Amount
	A - Light, Fan, 16A & 6A points - All switch & sockets shall be modular type complete with cover plate & GI/ MS box.				
	The work shall also include 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. (Items 1, 3, 4 & 5)				
	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.				
1	Point Wiring for light, fan & exhaust fan points controlled thru modular switches c/w boxes & cover plate - S/F of light, fan & exhaust fan points controlled thru 6A modular type switch with 3x1.5 sq.mm Fire Resistant Low smoke Halogen (FRLSH) Copper stranded PVC insulated wires (with proper R,Y,B color code) in 20mm OD PVC medium duty conduit pipe concealed in wall/ floor/ panelling/ partitions or on the ceiling as per requirement. The job shall be complete & to the entire satisfaction of the Bank.	Point	5.00		
2	6 A switch socket points on Sdb: S/F of 6A switch with 6A modular socket c/w MS box, sheet etc. The connections shall be made with 3 x 1.5sq.mm FRLSH stranded Cu. Wires as per requirement. The job shall be complete & to the entire satisfaction of the Bank	Point	1.00		
3	Circuit Wiring (Light, fan, 6Amps Switch points) : Supply & laying of circuit wiring for light, Fan, Exhaust fan & 6 Amp. Switch points with 3x 1.5sq.mm FRLSH Cu stranded wires laid in 20mm OD PVC heavy duty conduit pipe concealed in wall/ floor/ panelling/ partitions or on the ceiling as per requirement. The job shall be complete & to the entire satisfaction of the Bank.	m	22.00		
	Power Point Wiring				
4	Circuit Wiring for Single 6/16Amps power Points) : Supply & laying of circuit wiring for 6/16 Amp. Switch points with 2 x2.5 + 1x 1.5sq.mm FRLSH Cu stranded wires laid in 20mm OD PVC medium duty conduit pipe concealed in wall/ floor/ panelling/ partitions as per requirement. The job shall be complete & to the entire satisfaction of the Bank.	m	22.00		
5	Supply & fixing of 16A modular switch along with 16A twin socket power plug points complete with box & cover plate etc as per requirement. The work shall also include making of connections, cutting chase for conduits and moulded boxes, if required, in the wall/ floor (Without damaging the building/wall) & finally finishing the surface & matching the same with the existing surface. The job shall be complete & to the entire satisfaction of the Bank.	Each	2.00		
	B - AIR CONDITIONING				
	The work shall also include 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. (Item 1)				

1	Circuit wiring for AC -Circuit wiring with 2x 4.0 + 1x 1.5sq.mm FRLSH Cu stranded wires laid in 20mm OD medium duty PVC conduit pipe concealed in wall/ floor/ panelling/ partitions as per requirement. The job shall be complete & to the entire satisfaction of the Bank	m	23.00		
2	AC Boxes - Supply & Fixing of 1P 20A 2P MCB industrial plug & socket IP 20 with provision for MCB Siemens 8GB0501SRC or equivalent c/w 25A 2P MCB. The rate should include the cost of all materials, labour, T&P, taxes & levies etc.The job shall be complete & to the entire satisfaction of the Bank.	Each	2.00		
	<u>C - DISTRIBUTION MAINS</u>				
1	S/F of 3 nos.100Amp 415V Kit kats c/w 5 hole heavy duty terminals with shroud & cover including making of connection from electronic meter c/w wooden board etc.	Set	0.00		
2	Supply, Installation, Testing & commissioning of Main L T panel fabricated from CRCA sheet 1.8mm dust proof, vermin proof as under - All switchgears to be of Siemens/ ABB/ L& T.	Set	0.00		
	Incomer - 100A 3P MCCB 25Ka with adjustable thermal & Magnetic trip unit				
	Changeover TPN 100A- ABB / socomac				
	OUTGOINGS -				
	63Amp 3P MCB - 1no. - 10kA for VTPN Db				
	63Amp 3P MCB - 1no. - 10kA for AC (to be tapped directly & there shall be no supply to AC Db from DG set)				
	63Amp 3P MCB - 1no. - 10kA for E Lobby				
	63A 3P MCB - 2no. for UPS 1 & 2 -10kA				
	63Amp 3P MCB - 1nos. Spare -10kA				
	32Amp -2P MCB 4nos. - for Strong Room, Sign Board, Fire alarm & spare				
	Bus Bar - 100Amp c/w Ammeter & its selector switch, voltmeter & its selector switch, Indication lamps etc.				
	Cable entry from top & bottom - removable gland plates (bottom at 2 points) c/w powder coated Grey paint (two coats) with name labels for all incoming & outgoing feeders. The panel shall be complete in all respects including all accessories such as earthing bus, Air ventilators, lifting hooks etc.				
3	S/ laying of XLPE insulated armoured Cu Conductor cable including cost of lugs, cable glands etc. The cable should be laid on surface with proper clamps @750mm or laid & concealed in wall/ floor/ PVC Conduit/ false ceiling complete in all respect. The work also includes cutting chases for conduits in the wall/ floor (Without damaging the building) along with clamping the cable.				
	4c x 6sq.mm for ATM TPN Db from main panel in branch	m	16.00		
4	Supply & laying of 6Swg GI wire on surface or in recess for loop earthing along with sub main cable as required complete in all respects	m	16.00		
5	Supply & fixing of Flush mounted HTPN Db IP - 43 single door complete in all respects. Siemens/ L&T/ MDS/ Schnider (The load shall be distributed equally on all phases)	Each	1.00		
	Incoming - 415V 63A 3P MCB -10kA				
	OUTGOINGS				
	3no. 32A 1P MCB 10kA - for 2 AC's & 1 for signage				
	2no. 32A 2P MCB 10kA - for UPS I & UPS II				
	1Nos. 16A 1P MCB 10kA for single PP				
	2Nos. 10A 1P MCB 10kA for L & F				
	2nos. - Blanking plate				
	All connection thru lugs				
6	Glow sign Board - Circuit wiring with 2x2.5sq.mm + 1x 1.5sq.mm stranded Cu. conductor (Finolex/Anchor/Skytone) to be laid in 20mm OD PVC pipe medium 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	12.00		

	D - DG SET SUPPLY				
1	S/laying of 4cx10sq.mm XLPE insulated Copper 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	10.00		
	DG set supply from Main Panel				
	E- EARTHING - Additional for VTPN Db & Machines				
1	Panel/ Power earthing - 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 conducive & Non corrosive chemical compound. 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 4mm dia copper wire (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.	Job	1.00		
2	Supply & Fixing of 4mm dia Cu. wire on surface or in recess for loop earthing as required earthing to Db's or main panel.if required beyond 10m	Per M.	18.00		
	F - SUPPLY & FIXING ITEMS				
1	S/F of Energy efficient recessed mounted LED luminaire - GreenSquare, profiled recess mounted luminaire, energy efficient with longer life, resulting in lower operational cost Philips - RC170B LED29S-6500 PSE WH 220-240V 50Hz or equivalent Wipro/ Crompton Greaves or any other make approved by Bank/ architect	Each	1.00		
2	S/F of recessed LED downlighter - Recessed mounted LED down lights Philips BBS170 1xDLED -5000 PSU WH complete in all respects or equivalent Wipro/ Crompton Greaves or any other make approved by Bank/ architect	Each	4.00		
3	S/F of Surface & wall mounted LED batten - Ultra-slim poly carbonate decorative LED batten with inbuilt heat sink, anti glare polycarbonate diffuser & energy efficient electronic driver 20W 1800 lumens - Panasonic LED Batten light ABT 019206 or equivalent Philips Astra - BN150W LED20S-6500 PSE OD GR or any other equivalent make approved by Bank/ Architect	Each	1.00		
4	S/F of 1x36watts Fluorescent Tube light surface mounted fitting c/w cost of 1x36w fluorscent tube light - Phillips -TARANG ELECTRONIC 4' TMC090 1xTLD36W HF (HPF Batten) complete in all respects	Each	0.00		
5	S/F of wall mounted fan 400mm sweep - Havells Palatina model or equivalent Bajaj / Crompton/ Alstom/ Usha	Each	1.00		
	Total for Electrical w/o UPS & Data				
	UPS POWER STATIONS WIRING, SPECIFICATIONS AND BILL OF QUANTITY				
	Alternate Computer points shall be connected to UPS1 & UPS 2.				
	For Manager Room & server room- one point shall be from UPS 1 & other from UPS 2. It shall have 4nos. 6A switches in computer power station.				
	For note counting - computer power station shall have 4nos. 6A switches				
	For server switch - computer power station shall have 3nos. Power points.				
	FOR UPS -1				
1	Supply & Fixing of 40A 2P MCB in 2way SPN Db IP 20 metallic directly on wall for UPS Incoming supply	Nos.	1.00		
2	Supply & Fixing of 4way SPN Db single door IP - 20 with 2nos.16A 1P (10kA rapturing capacity) controlled 32A 2P MCB fixed on the wall or concealed with necessary adopter box on out going side to facilitate for terminating the conduits with necessary holes. The distribution board & MCB's should be of the same make - "Make - STANDARD"/ Siemens	Nos.	1.00		

3	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	16.00		
	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	0.00		
	2 runs of 4.0sq.mm with one run of 1.5sq.mm for connections of UPS Incomer & UPS Outgoing in PVC flexible conduit	m	17.00		
	2 runs of 4.0sq.mm with one run of 1.5sq.mm for UPS controlled power point strip for Machines & spare in MS conduit	m	0.00		
4	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. (For cash, S/w and Counter)	Nos.	1.00		
	FOR UPS -2				
1	Supply & Fixing of 40A 2P MCB in 2way SPN Db IP 20 metallic directly on wall for UPS Incoming supply	Nos.	1.00		
2	Supply & Fixing of 4way SPN Db single door IP - 20 with 2nos.16A 1P (10kA rapturing capacity) controlled 32A 2P MCB fixed on the wall or concealed with necessary adopter box on out going side to facilitate for terminating the conduits with necessary holes. The distribution board & MCB's should be of the same make - "Make - STANDARD"/ Siemens	Nos.	1.00		
3	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	13.00		
	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	0.00		
	2 runs of 4.0sq.mm with one run of 1.5sq.mm for connections of UPS Incomer & UPS Outgoing in PVC flexible conduit	m	11.00		
	2 runs of 4.0sq.mm with one run of 1.5sq.mm for UPS controlled power point strip for Machines & spare in MS conduit	m	0.00		
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. (4nos. for officer cash, rear, Counter & advance)	Nos.	1.00		
	COMMON FOR BOTH UPS 1 & 2				

1	UPS earthing - 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 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 4mm dia copper wire (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 than 1 ohms. The 4mm dia Cu. earth wire shall be terminated on a separate 6way earthlink. The connections for Panel earthing & earth bus in the panel should be taken from this earthlink.	Job	0.00		
2	Supply & Fixing of 4mm dia Cu. wire on surface or in recess for loop earthing as required earthing to Db's or main panel.if required beyond 10m	Per M.	0.00		
3	S/F of G I Strip earth clamp	Each	0.00		
4	Supply & Fixing of 63A 3 phase 2way fused Db (Anchor/ Stanadard/ equivalent brand)	Nos.			
5	Supply & Fixing of 63A TPN SFU with HRC fuses on suitable angle iron frame Havells IHCSFE0063	Nos.	0.00		
6	Supply & Fixing of 40 Amp. manual three phase changeover switch (Sielzer make or any other equivalent brand)	Nos.	1.00		
7	Supply & Fixing of 63A TP MCB in a MS box directly on wall for 3P UPS	Nos.	0.00		
	Total				
Total Estimate for UPS work					
DATA/ MOLEX/ AMP					
	Each Data point shall have 2nos. 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.	4.00		
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.	0.00		
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.	2.00		
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.	2.00		
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	60.00		
6	Switch 24 Port - D Link/ systimex	Nos.	0.00		
7	PVC Channel Flat 1.5mm and above (Make - Modi)				
	1" size	m	19.00		

8	9U, 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.	0.00		
	Total for Data/ LAN Cabling				
	Charges for verification & certification per LAN station	Per station	4.00		
	Parking charges per day (Not applicabe at places where Vendor has office/ branch/ service centre)	Days	1.00		
	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				
	The items given in this BOQ are provisional. The vendor shall be paid for the actual work executed at the rates tendered. The Bank reserves the right to increase or decrease any of the quantities, or to ommit totally any item of work. Any claim by the vendor on these accounts will not be entertained.				
	All the items of work given in this BOQ of quantities shall be executed strictly in accordance with the latest Indian Standard Specifications and the requirements of the Electricity Supply Authority & read in conjunction with the relevant drawings and Specifications enclosed with package.				
	All electrical items body earthing connections to be made properly & checked throughly.				
	All cable connections to be properly terminated thru lugs.				
Note:The Contractors should quote the rates without G.S.T. No Tender shall be accepted which clames the rates including G.S.T.					