

UCO BANK # SALT LAKE ZONAL OFFICE # BILKANDA BRANCH					
B O Q FOR ELECTRICAL WORKS					
SI No.	Description Of Item	Qnty.	Unit	Rate (Rs.)	Amount (Rs.)
1	MAIN INCOMING SFU				
	S/I/T/Commissioning of 100 Amp. TPN Main Switch (HRC type SFU) at main incoming from CESC / SEB to be fixed on MS angle framework & 2 nos. cable end box including necessary interconnections	1	unit		
2	MAIN PANEL BOARD				
	S/I/T/Commissioning of Main Distribution Panel as per given below: - 440 Volts AC, 3 Phase, 50 Hz with 50 KA fault level for 1 second, Floor / Wall mounted, 7 tank cleaning process with duly powder coated with copper bus bar. Incomer : 100 Amps 4P MCCB of 35 KA breaking capacity - with LED type phase indicating lamp, Digital voltmeter, Ammeter with selector switch with required CT unit, Danger Notice Board indicating sign (DANGER) in English, Hindi, Bengali. Outgoing : 63/40 Amps TPN MCB - 3 Nos., 40 Amps DP MCB - 4 Nos., 40 Amp TPN Changeover-1 No., 100 Amp TPN Bus bar Chamber-1 No.	1	unit		
3	DISTRIBUTION BOARDS (All MCBs to be "C" series)				
a	Providing and fixing 12 way SPN double door UPS DB with incomer 1 no. 40 Amps DP MCB controlling 10 nos. 16/10 Amp SP MCB Complete.	1	unit		
b	Providing and fixing 12 way SPN double door LIGHT DB for LIGHT POINTS with incomer 1 no. 25 Amps DP RCBO controlling 10 Nos. 6/10 Amp SPMCB Complete.	2	unit		
c	Providing and fixing 4 way TPN double door AC/POWER DB for A.C. POINTS with incomer 1 no. 63 Amps 4P MCB controlling 12 no. 10/16 Amp SPMCB, keeping other space as spare Complete.	2	unit		
d	Providing and fixing 63 Amps TPN Isolator with Cut Out DB (For Master Switch controlling light, AC, power point etc. excluding UPS distribution) near Branch entrance location.	1	unit		
4	UPS INPUT/ OUTPUT				
	63 Amps/40 Amps DP MCB in MS enclosure box	2	unit		
5	CABLES				
a	Providing and placing in position, testing and connecting 1.1 KV grade Al XLPE cable 3.5C x 35 sq. mm. with 2 Nos 10 swg GI ECC by GI bar and saddles on wall/floorpass. Cable to be for <u>Main switch to Main Panel</u> Including all necessary terminals etc. complete.	50.00	r. m.		
b	Providing and placing in position, testing and connecting 1.1 KV grade Al XLPE cable 4C x 16 sq. mm. with 2 Nos 10 swg GI ECC by GI bar and saddles on wall/floorpass. Cable to be for <u>DG to Main Panel</u> Including all necessary terminals etc. complete.	50.00	r. m.		
6	CABLE TERMINATION				
	Supplying, connecting the end terminations with copper cable lugs, Single Compression Brass Cable Glands, Tapping, Crimping etc. complete.				
a	3.5 core 35 Sq mm Al. Armoured	2.00	unit		
b	4 core 16 Sq mm Al. Armoured	2.00	unit		
7	EARTHING				

SI No.	Description Of Item	Qnty.	Unit	Rate (Rs.)	Amount (Rs.)
a	Earthing installations as per I.E. rules by making earth stations with 600 mm x 600 mm x 3.15 mm. thick copper plate electrode to be installed such that its top edge shall be at a minimum depth. of 3.0 meter below ground level after preparation of ground with charcoal and salt and connecting the MIP with 25 mm x 6 mm G.I. earth lead-in-strip directly in ground by bolting and then brazing to the copper Plate complete with G.I. bolts of suitable length double nuts and washers including supply and fixing of 50 mm dia. partly perforated G.I. pipe with funnel for watering arrangement. 3.0 m. long with 300 x 300 mm. casting plate connection to be fitted with bitumen, the electrode to be driven under G. L. to an av. depth of 3.15 m. The earthing installation should be provided with 300 mm x 300 mm and 300 mm depth inside dimension masonry inspection pit with C.I. hinged cover having locking arrangements, test link of size 150 mm length x 25 mm x 6 mm copper flat connected to copper earth lead-in-strip and restoring the surfaces duly rammed.	1.00	unit		
b	Providing and fixing Pipe Earthing (IS - 3043) 3.0m. deep with 40 mm. dia. GI pipe With perforations filled with alternate layers of Charcoal and salt. The item includes Funnel on top in brick masonry chamber with CI cover for watering purpose complete.	2.00	unit		
c	Providing and fixing Earth Bus Bar of 25 mm. x 6 mm. x 300 mm. complete with brass nut, bolt, washer & bus insulator.	1.00	unit		
d	Providing and fixing Copper Earth Wire 8 guage in pvc conduit in Floor / walls From pipe earthing to Main Panel Board Complete.	40.00	r. m.		
8	POINT WIRING				
	Providing & fixing POINT WIRING for Ceiling and wall lights / fan. The item includes Circuit wiring from DB to the switch board with 2 x 2.5 sq. mm. PVC insulated copper conductor with 1.5 sq. mm. PVC insulated copper conductor for earthing in appropriate size of PVC conduits ISI mark, point wiring to be laid with 2 x 1.5 Sq. mm. PVC insulated copper conductor with all necessary accessories, such as saddles etc. on surface or embedded in wall, chasing the walls and making the surface neat afterwards. The item includes 6 Amp switch with all base plates & cover plates, M.S. box of same make etc. 3 plate ceiling rose to be provided for Exhaust fans complete. This point also includes 2 x 6 sq. mm. & 1 x 2.5 sq. mm. FR PVC coated copper conductors (1.1 KV grade) in pvc rigid pipe/capping-casing on surface of wall duly clamping with necessary fittings and accessories from Main DB to LIGHT DB. Including all necessary terminals etc. complete. Each switch board should have at least 1 no. 5 Amp raw power socket. There will be at least 8 light points to be connected through UPS supply within banking hall area.				
a	Providing and fixing point wiring with same pecifications as MAIN point wiring above : <u>one point to be controlled by one switch.</u>	38.00	unit		
b	Providing and fixing point wiring with same pecifications as MAIN point wiring above : <u>two points to be controlled by one switch.</u>	20.00	unit		

SI No.	Description Of Item	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
c	<p>RAW POWER point for WALL / EXHAUST FAN in PVC Conduit:- Supply & Installation of raw power point wiring for power points on workstations / table/ wall using 2x 2.5 + 1 x 1.5 Sq.mm FR LSH (Fire Resistant Low smoke Low Halogen) copper conductor PVC sheathed flexible wire pulled from POWER DB through PVC Conduit pipe (HMS Grade) concealed in wall/ floor/ panelling/ partitions or above false ceiling as per requirement. Each point consisting of 1 nos of 6A, 3 pin sockets & 1 No.,6A Switch on hall switch board, wired together forming one point. The earth wire of green color only. The work shall also include for cutting chase for conduits and moulded boxes, if required, in the wall/ floor (Without damaging the building/wall) along with clamping the conduit at every 600mm interval & finally finishing the surface & matching the same with the existing surface.The rate should include the cost of all materials, labour, T&P, 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. The above includes supply & fixing modular cover plates, base plates, PVC box/ Gang box in brick wall by making necessary chase/ recess and making good the same. All switches sockets and accessories must be modular. All new points must be provided in concealed/recessed conduit unless directed by architect / engineer in charge Interconnections to movable furniture, if any, shall be done using flexible PVC Conduit with end couplers. This point also includes 4 x 6 sq. mm. & 2 x 2.5 sq. mm. FR PVC coated copper conductors (1.1 KV grade) in pvc rigid pipe/capping-casing on surface of wall duly clamping with necessary fittings and accessories from Main DB to POWER DB. Including all necessary terminals</p>	15.00	unit		

SI No.	Description Of Item	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
d	<p>RAW POWER 6Amp point in PVC Conduit:- Supply & Installation of raw power point wiring for power points on workstations / table/ wall using 2x 2.5 + 1 x 1.5 Sq.mm FR LSH (Fire Resistant Low smoke Low Halogen) copper conductor PVC sheathed flexible wire pulled from POWER DB through PVC Conduit pipe (HMS Grade) concealed in wall/ floor/ panelling/ partitions or above false ceiling as per requirement. Each point consisting of 2 nos of 6A, 3 pin sockets & 1 No.,6A Switch, wired together forming one point. The earth wire of green color only. The work shall also include for cutting chase for conduits and moulded boxes, if required, in the wall/ floor (Without damaging the building/wall) along with clamping the conduit at every 600mm interval & finally finishing the surface & matching the same with the existing surface.The rate should include the cost of all materials, labour, T&P, 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. The above includes supply & fixing modular cover plates, base plates, PVC box/ Gang box in brick wall by making necessary chase/ recess and making good the same. All switches sockets and accessories must be modular. All new points must be provided in concealed/recessed conduit unless directed by architect / engineer in charge Interconnections to movable furniture, if any, shall be done using flexible PVC Conduit with end couplers. This point also includes 4 x 6 sq. mm. & 2 x 2.5 sq. mm. FR PVC coated copper conductors (1.1 KV grade) in pvc rigid pipe/capping-casing on surface of wall duly clamping with necessary fittings and accessories from Main DB to POWER DB. Including all necessary terminals etc. complete.</p>	10.00	unit		

SI No.	Description Of Item	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
e	<p>RAW POWER 16A point in PVC Conduit:- Supply & Installation of raw power point wiring for power points on workstations / table/ wall using 2x 2.5 + 1 x 1.5 Sq.mm FR LSH (Fire Resistant Low smoke Low Halogen) copper conductor PVC sheathed flexible wire pulled from POWER DB through PVC Conduit pipe (HMS Grade) concealed in wall/ floor/ panelling/ partitions or above false ceiling as per requirement. Each point consisting of 1 nos of 16A, 5 pin sockets & 1 No., 16A Switch, wired together forming one point. The earth wire of green color only. The work shall also include for cutting chase for conduits and moulded boxes, if required, in the wall/ floor (Without damaging the building/wall) along with clamping the conduit at every 600mm interval & finally finishing the surface & matching the same with the existing surface. The rate should include the cost of all materials, labour, T&P, 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. The above includes supply & fixing modular cover plates, base plates, PVC box/ Gang box in brick wall by making necessary chase/ recess and making good the same. All switches sockets and accessories must be modular. All new points must be provided in concealed/recessed conduit unless directed by architect / engineer in charge Interconnections to movable furniture, if any, shall be done using flexible PVC Conduit with end couplers. This point also includes 4 x 6 sq. mm. & 2 x 2.5 sq. mm. FR PVC coated copper conductors (1.1 KV grade) in pvc rigid pipe/capping-casing on surface of wall duly clamping with necessary fittings and accessories from Main DB to POWER DB. Including all necessary terminals etc. complete.</p>	2.00	unit		

SI No.	Description Of Item	Qnty.	Unit	Rate (Rs.)	Amount (Rs.)
f	<p>UPS Primary point in PVC Conduit:- Supply & Installation of point wiring for UPS points on workstations / table/ wall using 2x2.5 + 1x1.5 Sq.mm FR LSH (Fire Resistant Low smoke Low Halogen) copper conductor PVC sheathed flexible wire pulled from UPS DB through PVC Conduit pipe (HMS Grade) concealed in wall/ floor/ panelling/ partitions or above false ceiling as per requirement. Each point consisting of 3 nos of 6/10A , 3/5 pin sockets & 1 No.,16A Switch, wired together forming one point. The earth wire of green color only. The work shall also include for cutting chase for conduits and moulded boxes, if required, in the wall/ floor (Without damaging the building/wall) along with clamping the conduit at every 600mm interval & finally finishing the surface & matching the same with the existing surface.The rate should include the cost of all materials, labour, T&P, 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. The above includes supply & fixing modular cover plates, base plates, PVC box/ Gang box in brick wall by making necessary chase/ recess and making good the same. All switches sockets and accessories must be modular. All new points must be provided in concealed/recessed conduit unless directed by architect / engineer in charge Interconnections to movable furniture, if any, shall be done using flexible PVC Conduit with end couplers. This point also includes 2 x 6 sq. mm. & 1 x 2.5 sq. mm. FR PVC coated copper conductors (1.1 KV grade) in pvc rigid pipe/capping-casing on surface of wall duly clamping with necessary fittings and accessories from Main DB to UPS Input and UPS Output to UPS DB. Including all necessary terminals etc. complete.</p>	7.00	unit		
g	<p>UPS secondary point in PVC Conduit:- Supply & Installation of point wiring for UPS points on workstations / table/ wall using 2X2.5 + 1x2.5 Sq.mm FR LSH (Fire Resistant Low smoke Low Halogen) copper conductor PVC sheathed flexible wire looped from nearest UPS point through PVC Conduit pipe (HMS Grade) concealed in wall/ floor/ panelling/ partitions or above false ceiling as per requirement. Each point consisting of 3 nos of 6/10A , 3/5 pin sockets & 1 No.,6/10A Switch , wired together forming one point. The earth wire of green color only. The work shall also include for cutting chase for conduits and moulded boxes, if required, in the wall/ floor (Without damaging the building/wall) along with clamping the conduit at every 600mm interval & finally finishing the surface & matching the same with the existing surface.The rate should include the cost of all materials, labour, T&P, 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. The above includes supply & fixing modular cover plates, base plates, PVC box/ Gang box in brick wall by making necessary chase/ recess and making good the same. All switches sockets and accessories must be modular. All new points must be provided in concealed/recessed conduit unless directed by architect / engineer in charge Interconnections to movable furniture, if any, shall be done using flexible PVC Conduit with end couplers</p>	3.00	unit		

SI No.	Description Of Item	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
h	Providing and fixing BELL POINTS on wall / partition with 2x1.0 Sq.MM copper conductor with call bell switch (Push Type) including ANCHOR call bell TRESSA Multi Tune Bell complete.	1.00	unit		
i	Supply & Installation of point wiring for Air Conditioner on workstations / table/ wall using 2x4 + 1x2.5 Sq.mm FR LSH (Fire Resistant Low smoke Low Halogen) copper conductor PVC sheathed flexible wire pulled from distribution board through PVC Conduit pipe (HMS Grade) concealed in wall/ floor/ panelling/ partitions or above false ceiling as per requirement. Each point consisting of 1 nos of 20/25A , 3/5 pin sockets & 1 No. DP 20/25A MCB, 1 Nos 25A modular starter switch wired together forming one point. The earth wire of green color only. The work shall also include for cutting chase for conduits and moulded boxes, if required, in the wall/ floor (Without damaging the building/wall) along with clamping the conduit at every 600mm interval & finally finishing the surface & matching the same with the existing surface.The rate should include the cost of all materials, labour, T&P, 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. The above includes supply & fixing modular cover plates, base plates, PVC box/ Gang box in brick wall by making necessary chase/ recess and making good the same. All switches sockets and accessories must be modular. All new points must be provided in concealed/recessed conduit unless directed by architect / engineer in charge.	5.00	unit		
j	Supply & Installation of point wiring for GLOW SIGN BOARD using 2x4 + 1x2.5 sq.mm FR LSH (Fire Resistant Low smoke Low Halogen) copper conductor PVC sheathed flexible wire pulled from distribution board through PVC Conduit pipe (HMS Grade) concealed in wall/ floor/ panelling/ partitions or above false ceiling as per requirement. Each point consisting of 1 No. DP 20/25A MCB, 1 Nos 25A modular Timer switch wired together forming one point. The earth wire of green color only. The work shall also include for cutting chase for conduits and moulded boxes, if required, in the wall/ floor (Without damaging the building/wall) along with clamping the conduit at every 600mm interval & finally finishing the surface & matching the same with the existing surface.The rate should include the cost of all materials, labour, T&P, 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. The above includes supply & fixing modular cover plates, base plates, PVC box/ Gang box in brick wall by making necessary chase/ recess and making good the same. All switches sockets and accessories must be modular. All new points must be provided in concealed/recessed conduit unless directed by architect / engineer in charge.	1.00	unit		
9	ELECTRICAL FIXTURES				

SI No.	Description Of Item	Qty.	Unit	Rate (Rs.)	Amount (Rs.)
	Item includes Providing, assembling, fixing, testing & commissioning Following Fixtures including all accessories, lamps & extension chords as maybe necessary complete. All LED / Flurescent fixtures (except down lighters) to be hung from the RCC ceiling by 20 KG grade adjustable GI chain & in NON False ceiling area they are to be hung by appropriate Down Rods.				
a	Providing and Fixing Recessed mounted diffused optics high performance 2' X 2' LED luminaire of HAVELLS or similar with necessary LED lamp. (VENUS NEO Product code : LHEWDRP7PL1W034 with 34w LED 6000K or similar)	14.00	unit		
b	Providing and Fixing Recessed mounted LED spot light of HAVELLS with necessary LED lamp (15W LED 6000K) or similar. (Ceiling cutout ø 155 mm.)	40.00	unit		
c	Providing and Fixing Surface mounted luminaire suitable for HAVELLS or similar : PHOTON PLUS LED TUBELIGHT : product code : LHLDCLEXENL8X018 or similar with Lamp type 18W LED	24.00	unit		
d	Providing and Fixing Surface mounted LED Bulb Holder of HAVELLS with necessary LED lamp (12W LED 6000K) or similar.	2.00	unit		
e	Providing and Fixing wall mounted fans 400 mm. sweep	10.00	unit		
f	Supplying & Fixing of exhaust fan heavy duty industrial type Crompton 225 mm sweep with 1400 RPM.	5.00	unit		
10	DATA CABLING				
a	providing and fixing IOU (information outlet unit) of AT & T make including squire face plate MS housing box with RJ-45 socket etc complete	10.00	unit		
b	Providing and fixing data points with CAT-6 UTP cable from system room to individual points in 20mm PVC conduit fixed on wall, ceiling, partition etc. complete	180.00	r. m.		
c	Providing and fixing Mounting (PATCH) cords one per port.				
i	1.0 m. long	10.00	unit		
	TOTAL				

APPROVED MAKE OF MATERIALS

1	Switch fuse units (HRC)	LEGRAND / SEIMENS / HAVELLS
2	Timer (TSQ 100)	L & T / HAVELLS
3	Voltmeter & Ammeter	A. E. / IMP
4	Voltmeter & Ammeter selector switches	KAYCEE / L & T
5	Phase indicating lamp	Vaishno / SIEMENS / ROSS controls
6	Capacitor	CROMPTON / SIEMENS
7	HRC fuses	GE power / SIEMENS / L & T / SCHNEIDER
8	Power Cable : XLPE	FINOLEX / POLYCAB/HAVELLS / NICCO
9	HRC fuse base & carriers.	GE power / SIEMENS / L & T / SCHNEIDER
10	1.1 KV grade PVC insulated armoured aluminium cable (ISI marked)	GLOSTER / NATIONAL / NICCO / HAVELLS
11	1.1KV / 600V grade PVC insulated & sheathed / insulated	FINOLEX / HAVELLS
12	RCCB / ELCB / MCCB	LEGRAND / SEIMENS / HAVELLS
13	Moulded case circuit breaker	LEGRAND / SEIMENS / HAVELLS
14	RCCB / ELCB	LEGRAND / SEIMENS / HAVELLS
15	Switch fuse with rewirable fuses. (6A & 32A TPN)	LEGRAND / SEIMENS / HAVELLS
16	Isolator	LEGRAND / SEIMENS / HAVELLS
17	Changeover switch (on load type)	LEGRAND / SEIMENS / HAVELLS

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18	MCB distribution board	LEGRAND / SEIMENS / HAVELLS			
19	6/16 Amp modular type switch / flushed type plug socket	Gold Medal / CRABTREE			
20	6/16 Amp modular switch / socket, module plate & mounting M.S. / PVC box.	Gold Medal / CRABTREE			
21	16/25 Amp., 2 module electronic regulator	Gold Medal / CRABTREE			
22	Ceiling rose	KAY / EPP / ANCHOR / JJ			
23	Holder	KAY / EPP / ANCHOR / JJ			
24	Alarm bell	KHERAJ / GETCO			
25	Black enamelled Steel conduits (conforming to IS in all respects)	BEC / SUPREME / AKG			
26	Compression type brass gland	DOWELLS / JOHNSON / COMET			
27	Cable termination socket	DOWELL'S			
28	Light fitting & lamps	PHILLIPS / HAVELLS			
29	Ceiling / Wall Mounted Fan	CROMPTON / ORIENT / HAVELL'S			
30	Exhaust fan	CROMPTON / ORIENT / HAVELL'S			
31	Industrial type socket & top	HAVELL'S / CROMPTON / LEGRAND			
32	Telephone wire	FINOLEX / RRK / NATIONAL			
33	Starters	NORTH WEST / CABTREE			
34	All other items not covered above	As per sample approved by Employer/Consultant			