

B.O.Q FOR ELECTRICAL WORK FOR CENTRAL BANK OF INDIA , JHARSUGUDA BRANCH .

SL.No	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE in Rs.	AMOUNT in Rs.
	PANEL BOARD & DISTRIBUTION BOARDS.				
1.0	Main Panel Board Supply, delivery, installation , testing , commissioning , of indoor wall mounted , type distribution boards made out of 2 mm thk. CR sheet metal painted with 2 coats of enamel paint compartment arrangement for each equipment & bus bar chamber on the top of the panel running horizontal through , vermin proof having provision cable by conduit entry , earthing stud as per specification mentioned below duly factory wired confirming to the relevant ISS & as per special condition of contract , making good the damages M.S. Cubical type Panel board should have hinged door at the front. The panel shall be provided with all accessories & following arrangements complete in all respect & direction of EIC (before fabrication of panel board drawing is to be approved by Engineer-in-charge). The Contractor should Submit The Testing Certificate to the Client after Installation. Incoming :- 1No 100 A- 16KA - 4POLE -MCCB. 1 set of 100A TPN copper bus bar (18 X6 mm) 63A, 4-POLE Change over (AC load should not be connected to GENERATOR power.) 1 set of 100 A TPN copper bus bar(16 X 5 mm) Out going :- 1 Nos 40A, 4P MCB, for U.P.S. & INVERTER 1 Nos 40A, 4P MCB, Spare 1 Nos 63 A TPN MCB for A.C DB 2 Nos 40A, 4P MCB, for L.D.B & P.D.B 1 Nos 25 A DP MCB for Glow sign board & Outer Lighting 1 Nos 25 A DP MCB Spare All MCB must be class C Type 1No. Digital Volt meter with Volt meter selector switch & Control fuse. 1No. Digital Ammeter with Ammeter selector switch & CT. Cable tray. Termination bar for each out put 6 Nos Phase indicator L.E.D. lamps	Set	1.00		
2.0	Supplying & Fixing 125 Amp, 415 V Wireable IC Cutout - 3nos in MS encloser withj lock & key arrangements.	Set	1.00		
3.0	Supply & Installation of SPD (Surge Protector Devicve) for general protection of main Electrical Panel Legrad Make Cat No. 412247 (3P+N) , 40 KA, T2- Imax 40KA/pole with complete wiring.	Set	1.00		
4.0	Supply and installation of SPN, Double Door, Metal type Distribution Board. (hager IP43, legrand make Ekinox3 model or equivalent make as approved by Engineer-in-charge), surface / flush mounted on wall, interconnected wiring complete with earthing lugs, including DB wiring, termination of circuits with ping type copper lugs, blank plates, etc. housing following switchgears :				

4.1	L.D.B / P.D.B (Light/power Distribution Board) 12 way SPN DB Incoming :- 1 No. 32A DP MCB Outgoing :- 10 No. 6-10 A SP MCB All MCB must be 'C' Series	Set	1.00		
4.2	C.D.B (Computer Distribution Board) 12 way SPN DB Incoming :- 1 No. 32A DP-10 kA - MCB Outgoing :- 10 No. 6-10 A SP-10 kA - MCB All MCB must be class C Type	SET	1.00		
4.3	A.C.D.B (A.C Distribution Board) 4 way TPN DB Incoming :- 1 No. 63A 4P-10 kA - MCB Outgoing :- 7 No. 25 A SP -10 kA - MCB All MCB must be class C Type	SET	1.00		
4.4	U.P.S Incoming DB 8 way SPN DB Incoming :- 1 No. 40 A TPN -10 kA - MCB Outgoing :- 1 No.32 A DP-10 kA - MCB (for UPS) 1 No.32 A DP-10 kA - MCB (for Inverter) All MCB must be class C Type	SET	1.00		
4.5	U.P.S Outgoing DB 8 way SPN DB Incoming :- 40 Amp DP-10 kA - MCB – 1 No Out going :- 1No. 32 A DP-10 kA - MCB (for C.D.B) 3 No. 6-10 A SP-10 kA - MCB (for essential equipment) All MCB must be class C Type	SET	1.00		
4.6	U.P.S Changeover DB 4 way SPN DB 40 Amp DP Changeover MCB type 2 nos.	SET	1.00		
5.0	Master switch with Phase indicating lamp. Supply, delivery, installation , testing , commissioning , of L&T indoor wall type distribution boards made out of 2 mm thk. CR sheet metal duely acid treated premised & painted with 2 coats of enamel paint . M.S. board should have hinged door at the front. The panel shall be provided with all accessories & following arrangements complete in all respect & direction of EIC (before fabrication of panel board drawing is to be approved by Engineer-in-charge). 4 Nos Phase indicator lamps 1 No. 100 A -415V-4P isolator. (for A.C) 1 No. 63 A -415V-4P isolator (for Light/ Power) 1 No. 40 A -415V-DP isolator (for UPS)	SET	1.00		

6.0	Timer for Glow Sign board . Supply,installation and testing of timer with contactor (L&T / Legrand) make controlling the glowsign board with 16 Amp Modular switch of (MK/Legrand's/Havel's or equivalent) make mounted on separate board using suitable size galvanized iron junction & switch boxes & clip in type modular type switch plate,etc all accessories complete enclosed in Powder coated metal box as required,Supply taken from Panel .wiring using 1100V FR grade 2R (P+N) x 4.0 Sq.mm +1R (E) x 2.5 Sq.mm FR multi stranded copper conductor PVC insulated wires (with proper R,Y,B color code) pulled through rigid FR PVC conduits of 20mm Dia 1.5 mm thick as per direction of Engineer in charge. The system will be apart of the panel board.	SET	1.00		
	FITTINGS OF FIXTURES				
	(NOTE : ANY OF FIXTURES AND FITINGS SHALL BE RE-CONFIRMED WITH THE ARCHITECTS / CONSULTANTS BEFORE ORDERING THEM.				
	Supply , Installation, testing and commissioning of lighting fixtures with lamps and LED driver as per the details below including necessary hardware such as clamps, nuts, bolts, nails, screws and suspension rods as required for fixing the fixtures in position as directed by architect / consultant / client including supply and fixing flexible wires from holder to fixtures hardwares etc. Note :- All Light Fixtures, Fans, Exhaust Fans & other fittings samples shall be approved by the Client / Architect / Consultant before placing order to the Light Fixture Vendor / Supplier makes are specified. Client / Architect / Consultant reserves right to approve / select final Light Fitxtures from any make as required.				
1.0	Supply,installation and testing of recess LED lights fittings (31 - 34 W) of squire type (2'-0"x2'-0") with all accessories complete of Crompton /Philips/ Wipro or Equivalent Make as required as per direction of Engineer in charge. It also include 16 SWG GI wire suported from RCC roof.	Nos.	12.00		
2.0	Supply,installation and testing of recess LED lights fittings (12-18W) of spot type with all accessories complete of Crompton /Philips/ Wipro or Equivalent Make as required as per direction of Engineer in charge.	Nos.	17.00		
3.0	Supply,installation and testing of recess LED lights fittings (2-3W) of spot type (Adjustable focusing) with all accessories complete of Crompton /Philips/ Wipro or Equivalent Make as required as per direction of Engineer in charge.	Nos.	8.00		
4.0	Supply,installation and testing of recess LED lights fittings (18-20W) of Sq. type with all accessories complete of Crompton /Philips/ Wipro or Equivalent Make as required as per direction of Engineer in charge.	Nos.	0.00		
5.0	Providing and fitting of 450 mm sweep High Flo Wall fan (full metal body) of Armoda / Crompton Equivalent Make as required as per direction of Engineer in charge.	Nos.	9.00		
6.0	Providing and fitting of 225 mm sweep heavy duty Exhust fan of Orient/ Crompton Equivalent Make as required as per direction of Engineer in charge.	Nos.	4.00		
7.0	Providing and fitting of 1200 mm sweep celing fan of Orient/ Crompton High Speed Equivalent Make as required as per direction of Engineer in charge.	Nos.	3.00		

8.0	Supply & fixing of fan-hook,by cutting roof slab and welding 10 mm dia.Fan hook with main re-Inforcemerit of roof slab complete in all respect.	Nos.	3.00		
9.0	Supplying , fixing of 1x 20W LED Batten lights fittings with aall accessories complete of Crompton /Philips/ Wipro or Equivalent Make as required as per direction of Engineer in charge.	Nos.	7.00		
10.0	Supply,installation and testing of LED Bulb fittings (1x9wt) with angle holder of Crompton /Philips/ Wipro or equivalent as required as per direction of Engineer in charge.	Nos	4.00		
11.0	Providing and fitting of call bell Remote Controlled with Battery of approved make .	Nos.	1.00		
12.0	SITC of LED COVE/ STRIP LIGHT WITH ITS ELECTRONIC DRIVER(BLUE COLOUR):- SITC of bright LED strip light with its electronic driver complete as required. PHILIPS, WIPRO, CG.	Mt.	50.00		
LIGHT & POINT WIRING WORK					
	Wiring for light/fan/exhaust fan points using (2Rx1.5sqmm +1Rx1.0 sqmm) 1.1 kV grade PVC insulated stranded copper conductor wire (Finolex/ Havell's/ Richa/ RR kebel/ KEI or equivalent) for phase, neutral and earth (with proper R,Y,B color code) in 25 mm dia heavy duty PVC conduit along with associated accessories like MS junction boxes, bends, saddles, screws et. concealed in wall, floor, under flooring, below false ceiling or on surface as well as suspended from ceiling with 25mm X 3 mm MS flat suspenders duly painted above false ceiling from individual light/Fan/Exhaust Fan point outlet. etc. to individual modular type switch boards, 10 Amp modular plate type switches etc.(MK/Legrand's/Havel's or equivalent), as required complete including circuit wiring with 3 X 2.5 sqmm. 1.1 kV grade PVC insulated stranded copper conductor wire and as per site requirement and as instructed by Engineer In-Charge.				
1.0	One light point including the cost of 6A modular switch	Nos	23.00		
2.0	Two light point including the cost of 6A modular switch	Nos	13.00		
3.0	Ceiling Fan Point including the cost of 6A Switch along with 5 step electronic fan regulator.	Nos	3.00		
4.0	Wall Fan Point along with 6 AMP switch & 3 PIN Socket	Nos	9.00		
5.0	Exhaust Fan Point along with 6 AMP switch & 3 PIN Socket	Nos	4.00		
6.0	SITC of Call Bell Point & Call Bell.	Nos	1.00		
7.0	6A Switch & Plug point in same switch board	Nos	3.00		
8.0	Cove light points including the cost of 6A modular switch	Nos	4.00		

	POWER POINT WIRING WORK				
1.0	Raw Power point wiring in heavy duty PVC conduit of IS specification of proper size with (2Rx2.5sqmm +1Rx2.5sqmm) PVC insulated stranded copper wire 1.1KV grade (Finolex/Havells/Polycab/ RR Kabel/ Richa/KEI or equivalent) and with all material supply installation and commissioning complete from LDB/PDB (Raw). The wiring shall be carried out on surface above false ceiling by chiseling the existing surface and plastering the same with cement etc. after fixing the heavy duty PVC conduit with all ccessories like saddles screws, bends T-joint etc. 2 coats of painting Matching to the surface including supply installing, testing, commissioning of modular plate type switch and socket (Legrands / Havells or equivalent) for computer terminal on sheet steel enclosure (cadmium plated),duly fitted with screw to the steel conduit and fixed to the wall partition furniture with all interconnection and proper earthing. All the opening shall be covered with blank plate and be sealed to make the box vermin proof.B48				
1.1	With 1nos 6A socket with single 6A switch.	Nos	9.00		
1.2	With 1nos 16A socket with individual 16A switch. (POWER)	Nos	2.00		
1.3	With 2nos 16A socket with individual 16A switch. (Cash /BM)	Nos	2.00		
2.0	With 1nos 16A socket with individual 16A switch & 16A plug unit with 1.0 mtr long 3 core 2.5 Sqmm Copper flexible cable for strong room power supply switch board installed at <u>STRONG ROOM</u> entrance Gate complete in all respect as required.	Nos	1.00		
	A.C. POINT				
1.0	SITC of AC Point Wiring with 2 No. 4.0 Sq.mm and 1 No. 2.5 Sq.mm Multistrand Copper Wire & Industrial plug & Socket with 10/16 Amp. DPMCB complete in all respect as required by the Bank (for 1.0 / 1.5 TR Hi-Wall Split ACs)	Nos	5.00		
2.0	SITC of AC Point Wiring with 2 No. 6.0 Sq.mm and 1 No. 2.5 Sq.mm Multistrand Copper Wire & Industrial plug & Socket with 20 Amp. DPMCB complete in all respect as required by the Bank (for 2.0 TR Split / Cassette ACs). The point shall be placed near outdoor unit.	Nos	0.00		

	COMPUTER WIRING WORK				
1.0	Computer Power point wiring in heavy duty PVC conduit of IS specification of proper size with (2Rx2.5sqmm +1Rx1.5sqmm) PVC insulated stranded copper wire 1.1KV grade (Finolex/Havells/Polycab/ RR Kabel/ Richa/KEI or equivalent) and with all material supply installation and commissioning complete from UPS OUT GOING DB/CDB . The wiring shall be carried out on surface above false ceiling by chiseling the existing surface and plastering the same with cement etc. after fixing the heavy duty PVC conduit with all ccessories like saddles screws, bends T-joint etc. 2 coats of painting Matching to the surface including supply installing, testing, commissioning of modular plate type switch and socket (Legrands / Havells or equivalent) for computer terminal on sheet steel enclosure (cadmium plated),duly fitted with screw to the steel conduit and fixed to the wall partition furniture with all interconnection and proper earthing. All the opening shall be covered with blank plate and be sealed to make the box vermin proof.B48				
1.1	Computer points using 1 nos. of 16 Amp, Modular switches to be provided on table top + 3 nos. 6 Amp 3 Pin Modular socket below table top taken from Nearest C.D.B . Maximun 3 Points per Circuit for counter & Table. S.I.T.C. as directed by the Engineer-in-charge.	Nos	9.00		
1.2	Computer points using 1 nos. of 16 Amp, Modular switches to be provided on table top + 1 nos. 16 Amp 3 Pin Modular socket taken from UPS outging DB . Maximun 2 Points per Circuit for passbook printing mechine / CCTV monitor/ CCTV DVR & monitor etc . S.I.T.C. as directed by the Engineer-in-charge.	Nos	3.00		
1.3	Computer points using 1 nos. of 16 Amp, Modular switches to be provided on table top + 4 nos. 16 Amp 3 Pin Modular socket taken from UPS outging DB . Maximun 2 Points per Circuit for Data Rack . S.I.T.C. as directed by the Engineer-in-charge.	Nos	1.00		
	CABLE, MAINS & SUBMAINS.				
1.0	Supply of all required materials and wiring to circuits/ submains with following number and sizes of PVC insulated 1100 volt grade multi standard FR copper wire run inside rigid FR PVC conduits of 20mm Dia 1.5 mm thick of ISI mark as required and copper wire as earth continuity conductor and complete in all respect including making good to all damages caused and as per the direction of Consultant and Engineer-in-charge.				
1.1	Recessed wiring with (2Rx4.0sqmm +1Rx2.5sqmm) copper wire (UPS output to CDB/ UPS Master / to glow sign board)	Mts	90.00		
1.2	Recessed wiring with (2 Rx6.0 sqmm +1Rx4.0 sqmm) copper wire (PANEL to L.D.B / P.D.B / UPS input /Light master switch) as per requirement	Mts	50.00		
1.3	Recessed wiring with (1Rx2.5sqmm) copper wire for inverter wairing .	Mts	50.00		
2.0	S & I of 1100V grade copper armoured/ unarmoured cable having sector / circular shaped aluminium conductor PVC insulated cores, laid up, PVC tape wrapped inner sheathed, GI strip / wire armoured and overall extruded PVC sheathed confirming to IS: 1554, laid on wall or ceiling using GI clamps and spacers as per route shown at site and further as directed by Bank / Architect in the following sizes.				

2.1	Surface wiring with (6 sqmm) 4C core unarmored copper cable . (From main Panel to master AC DB / LDB / PDB Contoller / to U.P.S input DB) as per requirement .	Mts	50.00		
2.2	Surface wiring with (10 sqmm) 4C core unarmored copper cable . (From main Panel to master AC DB Contoller)	Mts	10.00		
2.3	Surface wiring with (16 sqmm) 4C core unarmored copper cable . (From main Panel to master AC DB / Kit kat to Panel Contoller)	Mts	5.00		
2.4	SITC of 4 Core 25.0 Sq.mm Copper conductor Armoured Cable for service line connection up to Kit kat fuse unit complete in all respect as required.	Mts	10.00		
EARTHING					
1.0	Preparation and commissioning of earth pits with PIP technology GEL type 50mmdia 3000mm long earth electrod. (One Dedicated Earthing for ATM UPS, Branch UPS, Data Rack and Main Electrical Panel) This item also include commissioning company manufacture 200 mm dia PVC earthing pit.	Nos.	3.00		
2.0	Supply fixing and termination of 32x6 mm G.I. strip with earth station below ground level etc as required for Panel Board .Two separate G.I strip should be laied for Panel board.	Mts.	30.00		
3.0	SITC of Earthing conductor from earth terminal to load point with 10 sq mm multstrand copper conductor FR pvc /XLPE insulated cable in required dia PVC heavy duty conduit complete in all respect as required.	Mts.	35.00		
COMPUTER NETWORKING					
1.0	Supply of all required materials and laying of CAT-6 LAN wairing from server to Hub and Hub to computer I/O Points of approved brand ((D-Link/Digilink/Amps) laid through rigid FR PVC conduits of 20mm Dia 1.5 mm thick of ISI mark duly burried under floor with necessary chasing / breaking in floor and to be refinished with all necessary civil material etc. or to be cleated on wall / ceiling with saddles / spacer etc. necessary termination etc. completeas in all respect including making good to all damages caused and as per the direction of Consultant and Engineer-in-charge.	Mts	170.00		
2.0	Supply & fixing of RJ-45Jack of Category 6 with Dual/Single -port British-style Face plate 86x86 mm with Two Piece design : Mounting Frame and Cover Plate , Elegant : hidden-screw design ,Standards : ANSI/TIA-568-C.2, ISO/IEC 11801:2002 AMMD.2:2010, ISO/IEC 60603-7 Compliant, RoHS Directive 2002/95/EC/Compliant, YD/T 926.3-2009and wall mount box (Material : ABS, Shape : Square Size : 86 x 86, Colour:White) ,and Keystone Jack, Cat6 UTP, 180° Punch Down Type Without Door, Qualified unscreened Class E/Cat.6 Channel ANSI/TIA-568-C.2 , IEC 60603-7 compliant,ROHS Compliant, Plug Insertion Life : ≥ 750 Cycles with FCC Compliant RJ-45 Plug Plug & Jack Contact Force : ≥ 100 Grams with FCC Compliant RJ-45 Plug •ISO/IEC 11801 2.2 Edition. Make: Legrand/Tyco/Digisol				
2.1	Dual Poart	Nos.	2.00		
2.2	Single Poart	Nos	9.00		
3.0	Supply & fixing 1Mtr long E-CAT 6 PATCH Cord (Make D-LINK,AMPor Equivalent Make)	No.	13.00		
4.0	Supply & fixing 2Mtr long E-CAT 6 PATCH Cord (Make D-LINK,AMP or Equivalent Make)	No.	13.00		

5.0	Supply & fixing 9 U wall mounted modem rack with power distribution box, cable manager, cantilever self, fan & mounting kit etc all complete. (Make Valrack, Comrack, HCL)	No.	1.00		
6.0	Supply & fixing 24 port PATCH PANEL (Make D-LINK, AMP, HCL)	No	1.00		
7.0	Supply and fixing 24 port - 10/100/1000 mbps- L2 unmanaged switch with 2SFP port. (Giga switch) of (Cisco / D-link / Zyxel/ HP)	Nos.	1.00		
	PHONE WIRING .				
1.0	Supply of all required materials & laying of the following sizes of phone wires of approved make inside the approved size PVC conduit complete in all respect as per instruction of EIC .2 pairs telephone wires	Mtrs.	50.00		
2.0	Supply , fixing , testing of phone point with suitable GI boxes with phone , socket complete in all respect as per direction of EIC .	Nos.	3.00		
	BRANCH RENOVATION WORK				
1.0	Making temporary connections and dismantelling & shifting of points all across the Branch and for workstations (Electrical, UPS and telephone) to enable smooth functioning of the branch during renovation all complete as per the instructions of Bank's Engineer/ Architect. Item to include supplying all wires, cables, conduits etc. for the same.	Job	1.00		
	TOTAL			Rs.	
ELECTRICAL WORK OF BRANCH :-					
TOTAL :-					

Total Amount In Words:-