

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

SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTIT Y	RATE	AMOUNT
	1. ELECTRICAL WIRING WORK				
	POINT WAIRING				
1.0	Concealed / ressed / surface light point / fan point / call bell point etc. wiring using 1100V FRLS grade 3R (P+N+E) x 1.5 Sq.mm FRLS multi stranded copper conductor PVC insulated wires (with proper R,Y,B color code) pulled through rigid FR/FRLS PVC conduits of 20mm Dia 1.5 mm thick laid concealed over false ceiling or in wall chases or on the ceiling in case of an open ceiling, with modular type switch plate, switches, GI concealed back box, etc. of legrand mylinc or equivalent make. S.I.T.C.(Supply Installation Testing And Commissioning) as directed by the Engineer-in-charge. (Each circuit shall not feed more than 8 points OR 800 watts as per following configuration.)				
	NOTE:- 1. Only FRLS wire shall be used; 2. The wires from ceiling junction to light points / light fixture shall be drawn in flexible PVC conduit with adptor & cover for junction box & crimp type lugs at both the ends alongwith necessary hardware & accessories, etc. as required; 4. Looping of Neutral / Earth wire between two seperate Primary / Full Points is strictly not allowed; 5. Looping of Neutral / Earth wire between two seperate circuits on similar or other phase is strictly not allowed; 6. Ferulling / numbering / tagging to wires with circuit number & db name for all lighting & raw / ups power shall be strictly followed at both DB & switch board / switch socket boards ends. <i>Circuit wiring is to be included in point wiring rates.</i>				
1.1	Primary light points including the cost of clip in type 6A Modular switch of approved make or as directed by the Engineer-in-charge.(1 light/fan controlled by one switch)	Nos.	28.00		
1.2	Secondary light points controlled by one 6 amp. Modular switch. (Looped From Primary)	Nos	20.00		

SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTIT Y	RATE	AMOUNT
1.3	Independent point using one 6 Amp Modular Switch and one 6 Amp, 2/3 pin Modular socket mounted on a suitable size Box for wall fans.	Nos	10.00		
1.4	6 Amp 2/3 pin Modular socket with 6A Modular switch. (on common switch Board.)	Nos.	2.00		
1.5	Primary light points including the cost of clip in type 6A Modular switch of legrand myline or equivalent make & model as approved by project in charge. (1 light controlled by one switch UPS point)	Nos.	3.00		
	POWER POINTS				
2.0	Same as serial no 1 but using 2*2.5 + 1*2.5 Sq.mm Copper Conductor FRLS wires from DB to first 6A, 5 Pin modular socket controlled by one 6A switch and looped to the nearest second point with same 2*2.5 + 1*2.5 Sq.mm copper conductor wires FRLS insulated 1100V grade using galvanized iron junction & switch boxes & clip in type modular type switch plate, switches, GI/PVC concealed back box, etc. Supply taken from Nearest L.D.B. Maximum 3 Points per Circuit for counter & Table				
2.1	Primary Point	Nos.	7.00		
2.2	Secondary Point looped	Nos.	3.00		
3.0	Same as serial no.1, but wiring for 16 Amp, 6-pin sockets by using 2*4 sq.mm. PVC insulated 1100 V grade copper conductor wire with independent 1* 4.0 sq.mm earth wire from D.B. to first point 1st socket and 1st to 2nd, socket with 2*2.5 sq.mm and 1*2.5 earth wire including providing and fixing of 16 Amp, 6 –pin socket with 16 Amp. Switch. (Modular type switch/ socket/ plate etc. complete assembly) max 2 points per circuit.				
3.1	Primary Point	Nos.	1.00		
3.2	Secondary Point looped	Nos.	0.00		

SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTIT Y	RATE	AMOUNT
4.0	Supply,installation and testing of timer with contactor (L&T / Legrand) make controlling the glowsign board with all accessories complete enclosed in Powder coated metal box as required as per direction of Engineer in charge. The system will be apart of the panel board.	Nos.	1.00		
	A.C POINTS (For indoor & outer unit)				
	For Split A.C				
5.0	Same as serial no.1, but wiring for A/C socket by using 2*4 sq.mm. PVC insulated 1100 V grade copper conductor wire and earthing with 1*4.0 sq.mm. PVC insulated 1100 V grade copper conductor wire with modular type AC box (tiny trip type) with socket complete in all respects controlled by 25/32 A SP MCB to be provided near indoor unit. The point starts from DB/ Panel to stabilizer to the point near the indoor unit including top.(<i>for 1.0T/1.5T A.C</i>)	Nos	6.00		
	2 COMPUTER WIRING WORK				
1.0	Wiring with 2x2.5 sq.mm. + 1x1.5 sq.mm. PVC insulated 1100 V grade multi stranded copper conductor wires in 2 mm thick PVC conduit from UPS DB to computer point. Each point to have 1 nos. of 16 Amp, Modular switches to be provided on table top + 4 nos. 6 Amp 5 pin Modular socket below table top with all accessories, inner/ outer plates, metal box etc. and to be fixed on wooden partitions/ by grouting on wall etc. as per requirement at site. Maximun 3 Points per Circuit for counter & Table. S.I.T.C. as directed by the Engineer-in-charge.				
1.1	Primary Point	SET	9.00		
1.2	Subsequent point (Same as above looped From Primary point)	Nos	3.00		

SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTIT Y	RATE	AMOUNT
2.0	Same as serial no.1 of computer wiring but 5 No. of 6/16 amp socket points controlled by 2 No of 16 amp modular switch with indicator of approved make taken from Nearest C.D.B with galvanized iron junction & switch boxes & clip in type modular type switch plate, switches, GI concealed black box, etc. . The point should not from any switch Board S.I.T.C. as directed by the Engineer-in-charge.	SET	1.00		
3.PANEL BOARD & DISTRIBUTION BOARDS.					
1.0	Main Panel Board	Set	1.00		
	Supply, delivery, installation , testing , commissioning , of L&T indoor wall ,floor , mounted , type distribution boards made out of 2 mm thk. CR sheet metal duely acid treated premised & painted with 2 coats of enamel paint compartment arrangement for each equipment & bus bar chamber on the top of the panel running horizontal through out its length duly lamp , vermin proof having provision cable by conduit entry , earthling 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).				
	Incoming-				
	1No 125A- 25KA - 4POLE -MCCB.				
	1 set of 100A TPN copper bus bar				
	1No 63A- 18KA - 4POLE -MCCB.				
	1 set of 63A TPN copper bus bar				
	63A, 4-POLE Change over				
	1 set of 63 A TPN copper bus bar				
	Out going-				
	1No 25KA - 32A TPN SPD				
	1 Nos 40A, 4P MCB, for U.P.S.				

SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTIT Y	RATE	AMOUNT
	1 Nos 40A, 4P MCB, Spare				
	6 Nos 25 A DP MCB for 1.5 ton split A.C				
	1 Nos 25 A DP MCB Spare				
	1 Nos 32 A DP MCB for L.D.B.				
	1 Nos 25 A DP MCB for Glow sign board & Outer Lighting				
	1 Nos 25 A DP MCB Spare				
	1 Nos 32 A DP MCB Spare				
	1No. VAF Digital meter with (100/5A)CT.				
	Cable tray.				
	Termination bar for each out put				
	6 Nos Phase indicator lamps				
2.0	Supplying & Fixing 100 Amp, 415 V Wireable IC Cutout - 3nos in MS enclouser withj lock & key arrangements.	Set	1.00		
3.0	Supply and installation of SPN, Double Door, Metal type, (hager IP43, legrand make Ekinox3 model or equivalent make as approved by SBIIMS), 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 :				
3.1	L.D.B (Light Distribution Board)	Set	1.00		
	12 way SPN DB				
	Incoming :- 1 No. 32A DP MCB				
	Outgoing :- 10 No. 6-10 A SP MCB				
	All MCB must be class C Type				
3.2	C.D.B (Computer Distribution Board)	SET	1.00		
	12 way SPN DB				
	Incoming :- 1 No. 32A DP-10 kA - MCB				
	Out going :- 10 No. 6-10 A SP -10 kA -MCB				
	All MCB must be class C Type				
3.3	U.P.S Incoming DB	SET	1.00		
	4 way SPN DB				
	40 Amp DP MCB – 2 nos (1main & 1 spare).				
	All MCB must be class C Type				
3.4	U.P.S Outgoing DB	SET	1.00		
	6 way SPN DB				

SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTIT Y	RATE	AMOUNT
	Incoming 1 No. 40A DP MCB				
	Out going 3 No. 25 A SP MCB				
	1 No. 10 A SP MCB				
	All MCB must be class C Type				
3.5	U.P.S Changeover DB	SET	1.00		
	4 way SPN DB				
	40 Amp DP Changeover MCB type 2 nos.				
	Master Switch.				
4.0	Supply and installation of Single isolation switch for entire branch combination of SPN, Single 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	4 way SPN DB	SET	1.00		
	1 No. 100 A -415V-4P isolator. (for A.C)				
4.2	4 way SPN DB	SET	1.00		
	1 No. 63 A -415V-4P isolator (for Light)				
	4. FITTINGS OF FIXTURES				
1.0	Supply,installation and testing of recess LED lights fittings (33 - 39 Wt) of squire type (2'-0"x2'-0") with all accessories complete of Philips/ Cropton /Wipro make as required as per direction of Engineer in charge.	Nos.	0.00		
2.0	Supply,installation and testing of recess LED lights fittings (18Wt) of sport type with all accessories complete of Philips / Crompton/ Wipro as required as per direction of Engineer in charge.	Nos.	42.00		
3.0	Supply,installation and testing of recess LED lights fittings (3-6Wt) of sport type with all accessories complete of Philips / Crompton/ Wipro as required as per direction of Engineer in charge.	Nos.	0.00		
5.0	Providing and fitting of 450 mm sweep Wall fan of approved make .	Nos.	10.00		
6.0	Providing and fitting of 400 mm sweep Exhaust fan of approved make .	Nos.	3.00		

SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTIT Y	RATE	AMOUNT
7.0	Providing and fitting of 1200 mm sweep celing fan of approved make .	Nos.	2.00		
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.	2.00		
9.0	Providing and fitting of call bell of approved make .	Nos.	1.00		
10.0	Supplying , fixing of 1x 18watt LED patty fittings with all accessories of Philips / Crompton/ Wipro make as per direction of EIC .	Nos	9.00		
11.0	Supply,installation and testing of LED light fittings (1x9wt) with angle holder of Philips/ Crompton/ Syska or equivelent as required as per direction of Engineer in charge.	Nos.	6.00		
5.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 (2Rx2.5sqmm +1Rx1.5sqmm) copper wire (LDB/RDB to Common Switch board and power Points / UPS points etc)	Mts	210.00		
1.2	Recessed wiring with (2Rx4.0sqmm +1Rx2.5sqmm) copper wire (UPS input to CDB / AC points)	Mts	90.00		
1.3	Recessed wiring with (2Rx6.0 sqmm +1Rx4.0 sqmm) copper wire (PANEL to L.D.B / UPS)	Mts	50.00		
2.0	S & I of 1100V grade copper armoured 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.				

SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTIT Y	RATE	AMOUNT
2.1	Surface wiring with (10 sqmm) 4C core armored copper cable . (From main Panel to master LDB Contoller)	Mts	5.00		
2.1	Surface wiring with (6sqmm) 4C core copper cable . (From main Panel to master LDB Contoller)	Mts	5.00		
6. EARTHING					
1.0	Providing and fixing Earthing with G.I. earth plate 600 mm X 600 mm X 6.36 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with alternative layer of 150mm thick charcoal/ coke and salt as required. For SPD/ Panel.	Nos.	0.00		
2.0	Providing and fixing of Earthing with copper earth plate 600 mm X 600 mm X 3.18 mm thick including accessories, and providing masonry enclosurewith cover plate having locking arrangement and watering pipeof 2.7 metre long etc. with alternative layer of 150mm thick charcoal/ coke and salt as required. For UPS.	SET	1.00		
3.0	Supplying and laying 25 mm X 5 mm G.I strip at 0.50 metre below ground as strip earth electrode, including connection/terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50mm)	Mts	30.00		
4.0	Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing as required.	Mts.	50.00		
7.TELEPHONE WAIRING					
1.0	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		
2.0	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		

SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTIT Y	RATE	AMOUNT
	8. DATA WORK				
1.0	Supply and laying of Cat6 4-pair 23AWG LSZH UTP Cable for data and voice in existing conduits/trunking. Make: Legrand/ Schneider/ Digisol	Mtr.	150.00		
2.0	Supply , installation and testing of RJ-45Jack of Category 6 with Single-port British-style Modular Face Plate. Make: Legrand/ R&M/ Digisol	Nos.	8.00		
3.0	Supply , installation and testing of RJ-45Jack of Category 6 with Dual-port British-style Modular Face Plate. Make: Legrand/ Schneider/ Digisol	Nos.	2.00		
4.0	Supply , installation and testing of Cat 6 24-port loaded Patch Panel. Make: Legrand/ Schneider/ Digisol	Nos.	1.00		
5.0	Supply and Fixing of Cat6 Factory crimped moulded 1mtr patch cord. Make: Legrand/ Schneider/ Digisol	Nos.	12.00		
6.0	Supply and Fixing of Cat6 Factory crimped moulded 2mtr patch cord. Make: Legrand/ Schneider/ Digisol	Nos.	12.00		
7.0	Supply , installation and testing of 24port 10/100/1000Mbps L2 Unmanaged Switch with Four SFP Ports. Make: Cisco/ HP/ Digisol	Nos.	1.00		
8.0	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)	Set	1.00		
	TOTAL			Rs.	

B.O.Q OF ELECTRICAL WORK FOR INDIAN BANK, JHARSUGUDA ATM .					
SL.NO	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE	AMOUNT
	1. ELECTRICAL WIRING WORK				
	POINT WAIRING				
1.0	Concealed / resessed / surface light point / fan point / call bell point etc. wiring using 1100V FRLS grade 3R (P+N+E) x 1.5 Sq.mm FRLS multi stranded copper conductor PVC insulated wires (with proper R,Y,B color code) pulled through rigid FR/FRLS PVC conduits of 20mm Dia 1.5 mm thick laid concealed over false ceiling or in wall chases or on the ceiling in case of an open ceiling, with modular type switch plate, switches, GI concealed back box, etc. of legrand mylinc or equivalent make. S.I.T.C.(Supply Installation Testing And Commissioning) as directed by the Engineer-in-charge. (Each circuit shall not feed more than 8 points OR 800 watts as per following configuration.)				
	NOTE:- 1. Only FRLS wire shall be used; 2. The wires from ceiling junction to light points / light fixture shall be drawn in flexible PVC conduit with adptor & cover for junction box & crimp type lugs at both the ends alongwith necessary hardware & accessories, etc. as required; 4. Looping of Neutral / Earth wire between two seperate Primary / Full Points is strictly not allowed; 5. Looping of Neutral / Earth wire between two seperate circuits on similar or other phase is strictly not allowed; 6. Ferulling / numbering / taggning to wires with circuit number & db name for all lighting & raw / ups power shall be strictly followed at both DB & switch board / switch socket boards ends. <i>Circuit wiring is to be included in point wiring rates.</i>				
1.1	Primary light points including the cost of clip in type 6A Modular switch of approved make or as directed by the Engineer-in-charge.(1 light/fan controlled by one switch)	Nos.	2.00		
1.2	Secondary light points controlled by one 6 amp. Modular switch. (Looped From Primary)	Nos	2.00		
1.3	Primary light points including the cost of clip in type 6A Modular switch of legrand mylinc or equivalent make & model as approved by project in charge. (I light controlled by one switch UPS point)	Nos.	1.00		

SL.NO	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE	AMOUNT
	A.C POINTS (For indoor & outer unit)				
	For Split A.C				
1.0	Same as serial no.1, but wiring for A/C socket by using 2*4 sq.mm. PVC insulated 1100 V grade copper conductor wire and earthing with 1*4.0 sq.mm. PVC insulated 1100 V grade copper conductor wire 2 nos of Split AC in ATM with 2 nos 16 Amp Modular socket of legrand mylinc or equivalent make mouted on suitable size GI concealed Box controlled by 25 Amp Digital timer operated Alternately supplied by a 25 Amp RCBO Sensitivity 30mA Enclosed in 6 way SPN DB of Legrand or Equivalent make taken from Main Panel . with galvanized iron junction & switch boxes & clip in type modular type switch plate, switches, GI concealed back box, etc. .The point should not taken from any switch Board. S.I.T.C. as directed by the Engineer-in-charge. The point starts from DB/ Panel to stabilizer to the point near the indoor unit including top.(<i>for 1.0T/1.5T A.C</i>)	Nos	1.00		
	2 COMPUTER WIRING WORK				
	Wiring with 2x2.5 sq.mm. + 1x1.5 sq.mm. PVC insulated 1100 V grade multi stranded copper conductor wires in 2 mm thick PVC conduit from UPS DB to computer point. Each point to have 1 nos. of 16 Amp Modular switches + 1nos. 16 Amp 6pin Modular socket with all accessories, inner/ outer plates, metal box etc. and to be fixed on wooden partitions/ by grouting on wall etc. as per requirement at site. Maximun 3 Points per Circuit for counter & Table. S.I.T.C. as directed by the Engineer-in-charge.				
1.1	Primary Point	SET	1.00		
1.2	Subsequent point (Same as above looped From Primary point)	Nos	0.00		
	3. FITTINGS OF FIXTURES				
1.0	Supply,installation and testing of recess LED lights fittings (12Wt) of sport type with all accessories complete of Philips / Crompton/ Wipro as required as per direction of Engineer in charge.	Nos.	4.00		

SL.NO	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE	AMOUNT
	4.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 (2Rx2.5sqmm +1Rx1.5sqmm) copper wire (LDB/RDB to Common Switch board and power Points / UPS points etc)	Mts	20.00		
1.2	Recessed wiring with (2Rx4.0sqmm +1Rx2.5sqmm) copper wire (UPS input to CDB / AC points)	Mts	20.00		
	5. EARTHING				
1.0	Providing and fixing of Earthing with copper earth plate 600 mm X 600 mm X 3.18 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with alternative layer of 150mm thick charcoal/ coke and salt as required. For UPS.	SET	1.00		
2.0	Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing as required.	Mts.	10.00		
	6. DATA WORK				
1.0	Supply and laying of Cat6 4-pair 23AWG LSZH UTP Cable for data and voice in existing conduits/trunking. Make: Legrand/ Schneider/ Digisol	Mtr.	60.00		
2.0	Supply , installation and testing of RJ-45 Jack of Category 6 with Dual-port British-style Modular Face Plate. Make: Legrand/ Schneider/ Digisol	Nos.	1.00		
	TOTAL			Rs.	

SL.NO	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE	AMOUNT
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SUMMERY	
DESCRIPTION	AMOUNT
ELECTRICAL WORK OF BRANCH.	
ELECTRICAL WORK OF A.T.M	
TOTAL AMOUNT	
GST @18%	
TOTAL AMOUNT	