

B.O.Q OF ELECTRICAL & DATA WORK FOR INDIAN BANK AT BALESWAR.

SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE	AMOUNT
	1. ELECTRICAL WIRING WORK				
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.				
1.1	Primary light points including the cost of clip in type 6A Modular switch of legrand mylinc or equivalent make. S.I.T.C. as directed by the Engineer-in-charge.(1 light/fan controlled by one switch)	Nos.	22.00		
1.2	Subsequent point (Looped From Primary)	Nos	16.00		
1.3	Independent point using one 6 Amp Modular Switch and one 6 Amp, 2/3 pin Modular scket mounted on a sutable size Box for wall fans.	Nos	11.00		
1.4	6 Amp 2/3 pin Modular scoke with 6A Modular switch. (on common switch Board.)	Nos.	4.00		
1.5	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.	3.00		
2.0	Concealed power point using 16 Amp 3 Pin plug socket with 16 Amp Modular switch of legrand mylinc or equivalent make mounted on separate board using suitable size galvanized iron junction & switch boxes & clip in type modular type switch plate,etc. Supply taken from R.D.B./ Nearest L.D.B. The point should not taken from any switch Board. S.I.T.C. as directed by the Engineer-in-charge.	Nos	3.00		

SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE	AMOUNT
3.0	Concealed raw power point using 6 Amp, 2/3 Pin Modular plug socket with 6 Amp Modular switch of legrand myline or equivalent make on separate board 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. Maximun 3 Points per Circuit for counter & Table	Nos	10.00		
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		
2 COMPUTER WIRING WORK					
1.0	Supplt and fixing of concealed UPS power points using 1 nos. of 16 Amp, 3 Pin Modular switches to be provided on table top + 4 nos. 6 Amp Modular socket below table top of legrand myline or equivalent make taken from Nearest C.D.B with suitable size galvanized iron/PVC junction & switch boxes & clip in type modular type switch plate, GI/PVC concealed back box, etc. Maximun 3 Points per Circuit for counter & Table. S.I.T.C. as directed by the Engineer-in-charge.	SET	8.00		
1.1	Subsequent point (Same as above looped From Primary point)	Nos	2.00		
2.0	Supplt and fixing of concealed UPS power points using clip in modular type 5 No. of 6/16 amp socket points controlled by 2 No of 16 amp modular switch with indicator of legrand myline or equivalent 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 A.C. WORK					
1.0	Supply and installation of Concelaed 20A/25A, 415 V DP Isolator mounted in a prefabricated powder coated DP metal enclosure (legrand make Ekinox3 model or equivalent make) concealed and complete to the satisfaction of Bank for 1.5 TR Cassatte/split AC.S.I.T.C. as directed by the Engineer-in-charge	Nos	7.00		

SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE	AMOUNT
	4.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-				
	1 Nos 40A, 4P MCB, for U.P.S.				
	1 Nos 40A, 4P MCB, Spare				
	1 Nos100A, 4P MCB, forA.C				
	1 Nos 32A, 4P MCB, Spair				
	7 Nos 25 A DP MCB for 1.5 ton 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		

SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE	AMOUNT
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				
	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.				
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	6 way SPN DB	SET	1.00		
	2 No. 63 A -415V-4P isolator (for Light / power)				
	5. 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.	19.00		
2.0	Supply,installation and testing of recess LED lights fittings (12-15 Wt) of sport type with all accessories complete of Philips / Crompton/ Wipro as required as per direction of Engineer in charge.	Nos.	14.00		

SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE	AMOUNT
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.	4.00		
5.0	Providing and fitting of 450 mm sweep Wall fan of approved make .	Nos.	13.00		
6.0	Providing and fitting of 400 mm sweep Exhaust fan of approved make .	Nos.	3.00		
7.0	Providing and fitting of 1200 mm sweep ceiling fan of approved make .	Nos.	3.00		
8.0	Supply & fixing of fan-hook,by cutting roof slab and welding 10 mm dia.Fan hook with main re-Inforcement of roof slab complete in all respect	Nos.	3.00		
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	7.00		
11.0	Supply,installation and testing of LED light fittings (1x9wt) with angle holder of Philips/ Crompton/ Syska or equivalent as required as per direction of Engineer in charge.	Nos.	5.00		
6.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	200.00		
1.2	Recessed wiring with (2Rx4.0sqmm +1Rx2.5sqmm) copper wire (UPS input to CDB / AC points)	Mts	160.00		
1.3	Recessed wiring with (2Rx6.0 sqmm +1Rx4.0 sqmm) copper wire (PANEL to L.D.B / Inverter)	Mts	45.00		
1.4	Concealed wiring with (4Rx6.0sqmm) + 2Rx4.0sqmm) copper wire (PANEL to U.P.S. input)	Mts	30.00		
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 conforming 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 (10 sqmm) 4C core armored copper cable . (From main Panel to master LDB Contoller)	Mts	7.00		
2.2	Surface wiring with (6sqmm) 4C core copper cable . (From main Panel to master LDB Contoller)	Mts	7.00		

SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE	AMOUNT
	7. 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.	2.00		
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 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		
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.	40.00		
	8.DATA / TELEPHONE WAIRING				
1.0	Supply of all required materials and laying of CAT-6 LAN wiring from server to Hub and Hub to computer I/O Points of approved brand ((D-Link/Digilink/Amps) laid through rigid FR/FRLS PVC conduits of 20mm Dia 1.5 mm thick of ISI mark duly buried 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. complete as in all respect including making good to all damages caused and as per the direction of Consultant and Engineer-in-charge.	Mts	200.00		
2.0	Supply of all required materials & laying 2 pairs 0.51 cross section telephone wires of ITI approved laid through rigid FR/FRLS PVC conduits of 20mm Dia 1.5 mm thick of ISI mark duly buried 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. complete as in all respect including making good to all damages caused and as per the direction of Consultant and Engineer-in-charge.	Mtrs.	30.00		
3.0	Supply , fixing of RJ 45 information outlet (I/O) with safety shutter of D-link make with front modular cover plate, flush box metallic or PVC for trucking system etc.	Nos.	10.00		
4.0	Supply , fixing , testing of RJ11 Modular Telephone socket point with suitable GI boxes complete in all respect as per direction of EIC .	Nos.	2.00		
5.0	Shifting & Refitting Data rack with all accessory , patch panel , switches router etc. as per direction including all labour and transportation.	Job	1.00		

SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE	AMOUNT
6.0	Supply and Fixing of Cat6 Factory crimped moulded 1mtr patch cord. Make: Legrand/ Schneider/ Digisol	Nos.	10.00		
7.0	Supply and Fixing of Cat6 Factory crimped moulded 2mtr patch cord. Make: Legrand/ Schneider/ Digisol	Nos.	10.00		
	TOTAL				

Total amount in words:-

SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE	AMOUNT
B.O.Q OF ELECTRICAL WORK FOR INDIAN BANK , BALESWAR ATM .					
SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE	AMOUNT
	1 ELECTRICAL WIRING WORK				
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.				
1.1	Primary light points including the cost of clip in type 6A Modular switch of legrand mylinc or equivalent make. S.I.T.C. as directed by the Engineer-in-charge.(1 light/fan controlled by one switch)	Nos.	3.00		
1.2	Subsequent point (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		
	2 COMPUTER WIRING WORK				
1.0	Concealed power point using 16 Amp 3 Pin plug socket with 16 Amp Modular switch of legrand mylinc or equivalent make mounted on separate board using suitable size galvanized iron junction & switch boxes & clip in type modular type switch plate,etc. Supply taken from R.D.B./ Nearest L.D.B. The point should not taken from any switch Board. S.I.T.C. as directed by the Engineer-in-charge.				
1.1	Primary light points	SET	1.00		
1.2	Subsequent point (Looped From Primary)	SET	1.00		

SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE	AMOUNT
	3 A.C. WIRING WORK				
1.0	Supply of all required materials and wiring to 2 nos of Split AC in System Room with 2 nos 16 Amp Modular socket of legrand myline 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 Nearest M.L.D.B. 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.	Nos.	1.00		
	4. DISTRIBUTION BOARDS.				
1.0	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 :				
1.0	L DB	SET	1.00		
	8 way SPN DB				
	63 Amp DP MCB – 1 nos				
	32 Amp DP MCB – 3 nos				
	All MCB must be class C Type				
1.0	U.P.S DB	SET	1.00		
	8 way SPN DB				
	40 Amp DP MCB – 1 nos				
	25 Amp DP MCB – 3 nos				
	All MCB must be class C Type				
	5. FITTINGS OF FIXTURES				
1.0	Supply,installation and testing of recess LED lights fittings (12-15 W) of squire type with all accessories complete of Crompton/ Philips/ Orient or Equivalent Make as required as per direction of Engineer in charge.	Nos.	4.00		
2.0	Supply,installation and testing of LED light fittings (1x9wt) with angle holder of Philips/ Crompton/ Syska or equivalent as required as per direction of Engineer in charge.	Nos.	1.00		
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.	2.00		
	6.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.				

SL.N O.	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE	AMOUNT
1.1	Recessed wiring with (2Rx2.5sqmm +1Rx1.5sqmm) copper wire (LDB/RDB to Common Switch board and power Points / UPS points etc)	Mts	40.00		
1.2	Recessed wiring with (2Rx4.0sqmm +1Rx2.5sqmm) copper wire (UPS input / AC points)	Mts	25.00		
7. 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.	20.00		
8.DATA / TELEPHONE WAIRING					
1.0	Supply of all required materials and laying of CAT-6 LAN wiring from server to Hub and Hub to computer I/O Points of approved brand ((D-Link/Digilink/Amps) laid through rigid FR/FRLS PVC conduits of 20mm Dia 1.5 mm thick of ISI mark duly buried 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. complete as in all respect including making good to all damages caused and as per the direction of Consultant and Engineer-in-charge.	Mts	40.00		
1.1	Supply , fixing of RJ 45 information outlet (I/O) with safety shutter of D-link make with front modular cover plate, flush box metallic or PVC for trucking system etc.	Nos.	2.00		
1.2	Supply and Fixing of Cat6 Factory crimped moulded 1mtr patch cord. Make: Legrand/ Schneider/ Digisol	Nos.	2.00		
1.3	Supply and Fixing of Cat6 Factory crimped moulded 2mtr patch cord. Make: Legrand/ Schneider/ Digisol	Nos.	2.00		
TOTAL					

Total amount in words:-