

**B.O.Q OF ELECTRICAL WORK FOR INDIAN BANK ,AT MANGALABAG .**

SL.NO.	DESCRIPTION OF ITEMS	UNIT	QUANTIT Y	RATE	AMOUNT
<b>1. ELECTRICAL WIRING WORK</b>					
<b>1.1 Light / fan points</b>					
1.0	Concealed / resessed / surface light point / fan point / call bell point etc. wiring using 1100V <b>FR grade</b> 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 <b>FR</b> 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)	<b>Nos.</b>	<b>22.00</b>		
1.2	Secondary point same as item No. 1.1 ( 2 light/fan controlled by one switch)	<b>Nos</b>	<b>18.00</b>		
1.3	Independent point using one 6 Amp Modular Switch and one 6 Amp, 2/3 pin Modular scoket mounted on a sutable size Box for wall fans.	<b>Nos</b>	<b>12.00</b>		
1.4	6 Amp 2/3 pin Modular scoke with 6A Modular switch. ( on common switch Board.)	<b>Nos.</b>	<b>3.00</b>		
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 )	<b>Nos.</b>	<b>3.00</b>		
2.0	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.	<b>Nos.</b>	<b>1.00</b>		

SL.NO.	DESCRIPTION OF ITEMS	UNIT	QUANTIT Y	RATE	AMOUNT
	<b>1.1 Power points</b>				
3.0	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		
4.0	Concealed raw power point using 6 Amp, 2/3 Pin Modular plug socket with 6 Amp Modular switch of legrand mylinc 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		
5.0	Supply and installation of Concelaed 20A/25A, industrial socket with inbult MCB mounted in a prefabricated powder coated metal enclosure (legrand make or equivalent make ) concealed and complete to the satisfaction of Bank for inverter input .S.I.T.C. as directed by the Engineer-in-charge ( for inverter )	Nos	1.00		
	<b>2 COMPUTER WIRING WORK</b>				
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 mylinc or equivalent make taken from Nearest C.D.B with sutable 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	10.00		
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 mylinc 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		
3.0	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.NO.	DESCRIPTION OF ITEMS	UNIT	QUANTIT Y	RATE	AMOUNT
<b>3 A.C. WORK</b>					
1.0	Supply and installation of Concealed 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	5.00		
<b>4.PANEL BOARD &amp; DISTRIBUTION BOARDS.</b>					
1.0	<b>Main Panel Board</b>	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 , 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).				
	Incoming-				
	<b>1No 125A- 25KA - 4POLE -MCCB.</b>				
	1 set of 100A 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				
	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.				
	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	<b>L.D.B (Light Distribution Board)</b>	Set	1.00		
	12 way SPN DB				

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	Incoming :- 1 No. 32A DP MCB				
	Outgoing :- 10 No. 6-10 A SP MCB				
	All MCB must be class C Type				
3.2	<b>C.D.B (Computer Distribution Board)</b>	<b>SET</b>	<b>1.00</b>		
	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	<b>AC.D.B (AC Distribution Board)</b>	<b>SET</b>	<b>1.00</b>		
	4 way TPN DB				
	Incoming :- 1 No. 63A TPN-10 kA - MCB				
	Out going :- 5 No. 6-10 A SP -10 kA -MCB				
	All MCB must be class C Type				
3.4	<b>U.P.S Incoming DB</b>	<b>SET</b>	<b>1.00</b>		
	4 way SPN DB				
	40 Amp DP MCB – 2 nos (1main & 1 spare).				
	All MCB must be class C Type				
3.5	<b>U.P.S Outgoing DB</b>	<b>SET</b>	<b>1.00</b>		
	8 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				
3.6	<b>U.P.S Changeover DB</b>	<b>SET</b>	<b>1.00</b>		
	4 way SPN DB				
	40 Amp DP Changeover MCB type 2 nos.				
4.0	Supply and installation of Single isolation switch for entire				
4.1	8 way SPN DB	<b>SET</b>	<b>1.00</b>		
	1 No. 100 A -415V-4P isolator. ( for A.C )				
4.2	8 way SPN DB	<b>SET</b>	<b>1.00</b>		
	1 No. 40 A -415V-DP isolator ( for Light )				
	1 No. 40 A -415V-DP isolator ( for Inverte r)				
	<b>5. FITTINGS OF FIXTURES</b>				
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.	<b>Nos.</b>	<b>17.00</b>		
2.0	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	<b>Nos.</b>	<b>14.00</b>		
3.0	Supply,installation and testing of recess LED 5M length strip lights fittings with all accessories complete of Philips / Crompton/ Wipro as required as per direction of Engineer in charge.	<b>Nos.</b>	<b>5.00</b>		
4.0	Providing and fitting of 450 mm sweep full metal body ( 5 star rated ) Wall fan of approved make .	<b>Nos.</b>	<b>9.00</b>		
5.0	Providing and fitting of 400 mm sweep Exhust fan of approved make .	<b>Nos.</b>	<b>3.00</b>		
6.0	Providing and fitting of 1200 mm sweep celing fan of approved make .	<b>Nos.</b>	<b>2.00</b>		

SL.NO.	DESCRIPTION OF ITEMS	UNIT	QUANTIT Y	RATE	AMOUNT
7.0	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		
8.0	Providing and fitting of call bell of approved make .	Nos.	1.00		
9.0	Supplying , fixing of 1x 18watt LED patty fittings with all accessories of Philips / Crompton/ Wipro make as per direction of EIC .	Nos	11.00		
10.0	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.	2.00		
<b>6.CABLE, MAINS &amp; SUBMAINS.</b>					
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/CDB to Common Switch board and power Points / Computer points etc )	Mts	200.00		
1.2	Recessed wiring with ( 2Rx4.0sqmm +1Rx2.5sqmm) copper wire ( UPS output to CDB / AC points )	Mts	150.00		
1.3	Recessed wiring with ( 2Rx6.0 sqmm +1Rx4.0 sqmm ) copper wire ( PANEL to L.D.B / Inverter / UPS input /Light master switch )	Mts	60.00		
1.4	Recessed wiring with ( 1Rx2.5sqmm ) copper wire for inverter wairing .	Mts	40.00		
2.0	S & I of 1100V grade <b>copper</b> 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.				
2.1	Surface wiring with (10 sqmm) 4C core unarmored copper cable . (From main Panel to master AC DB Contoller )	Mts	20.00		
2.2	Surface wiring with (25 sqmm) 3.5C core armored aluminium cable . (From IC Cutout to main panel Contoller )	Mts	6.00		
<b>7. EARTHING</b>					
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		

SL.NO.	DESCRIPTION OF ITEMS	UNIT	QUANTIT Y	RATE	AMOUNT
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.	35.00		
<b>5.DATA / TELEPHONE WAIRING</b>					
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 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. complete as in all respect including making good to all damages caused and as per the direction of Consultant and Engineer-in-charge.	Mts	230.00		
2.0	Supply , fixing of RJ 45 information outlet (I/O) with safety sutter of D-link make with front modular cover plate, flush box metallic or PVC for trucking system etc.	Nos.	10.00		
3.0	Supply & fixing 9" 9 U wall mounted modem rack with power distribution box, cable manager, cantilever self, fan & mounting kit etc all complete. ( Make Valrack, Comrack,	Set	1.00		
4.0	Supply & fixing 24 port PATCH PANEL ( Make D-LINK, AMP, HCL )	No	1.00		
5.0	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		
6.0	Supply & fixing 1Mtr long E-CAT 6 PATCH Cord (Make D-LINK,AMP or Equivalent Make)	No.	10.00		
7.0	Supply & fixing 2Mtr long E-CAT 6 PATCH Cord (Make D-LINK,AMP or Equivalent Make)	No.	10.00		
<b>TOTAL</b>					

SL.NO.	DESCRIPTION OF ITEMS	UNIT	QUANTIT Y	RATE	AMOUNT
<b>B.O.Q OF ELECTRICAL WORK FOR INDIAN BANK ATM AT MANGALABAG .</b>					
SL.NO.	DESCRIPTION OF ITEMS	UNIT	QUANTIT Y	RATE	AMOUNT
<b>1 ELECTRICAL WIRING WORK</b>					
1.0	Concealed / resessed / surface light point / fan point / call bell point etc. wiring using 1100V <b>FRLS grade 3R</b> (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 <b>FR/FRLS</b> 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)	<b>Nos.</b>	<b>2.00</b>		
1.2	Secondary point same as item No. 1.1 ( 2 light/fan controlled by one switch)	<b>Nos</b>	<b>3.00</b>		
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 )	<b>Nos.</b>	<b>2.00</b>		
2.0	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.	<b>Nos.</b>	<b>1.00</b>		

SL.NO.	DESCRIPTION OF ITEMS	UNIT	QUANTIT Y	RATE	AMOUNT
<b>2 COMPUTER WIRING WORK</b>					
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.	Nos	2.00		
<b>3 A.C. WIRING WORK</b>					
1.0	Supply of all required materials and wiring to 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 Sensivity 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.	Nos.	1.00		
<b>4.PANEL BOARD &amp; DISTRIBUTION BOARDS.</b>					
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 :				
1.2	<b>C.D.B (Computer Distribution Board)</b>	SET	1.00		
	4 way SPN DB				
	Incoming :- 1 No. 32A DP-10 kA - MCB				
	Out going :-2 No. 6-10 A SP -10 kA -MCB				
	All MCB must be class C Type				
<b>4. FITTINGS OF FIXTURES</b>					
1.0	Supply,installation and testing of recess LED lights fittings ( 18Wt) of squire type with all accessories complete of Philips / Crompton/ Wipro as required as per direction of Engineer in charge.	Nos.	2.00		
2.0	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.	6.00		
3.0	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.	1.00		



SL.NO.	DESCRIPTION OF ITEMS	UNIT	QUANTIT Y	RATE	AMOUNT
<b>5.CABLE, MAINS &amp; SUBMAINS.</b>					
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 )	<b>Mts</b>	<b>40.00</b>		
1.2	Recessed wiring with ( 2Rx4.0sqmm +1Rx2.5sqmm) copper wire ( UPS input to CDB / AC points )	<b>Mts</b>	<b>50.00</b>		
<b>6. EARTHING</b>					
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 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.	<b>SET</b>	<b>1.00</b>		
2.0	Providing and fixing 4.00 mm dia copper wire on surface or in recess for loop earthing as required.	<b>Mts.</b>	<b>20.00</b>		
<b>TOTAL</b>					

**Total amount in words-**