

**B.O.Q FOR ELECTRICAL WORK FOR UCO BANK , KEONJHAR BRANCH .**

<b>1. ELECTRICAL WIRING WORK</b>		<b>UNIT</b>	<b>QUANTITY</b>	<b>RATE</b>	<b>AMOUNT</b>
<b>1.1 LIGHT &amp; POINT WIRING WORK</b>					
1.0	Concealed / ressed / surface point etc. wiring using 1100V FR grade 3R (P+N+E) x 1.5 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 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 myline 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 FR 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 separte Primary / Full Points is strictly not allowed; 5. Looping of Neutral / Earth wire between two separte 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/Call bell points including the cost of clip in type 6A Modular switch of legrand myline or equivalent make. S.I.T.C. as directed by the Engineer-in-charge.( 1 light controlled by one switch)	Nos.	20.00		
1.2	Subsequent point ( Looped From Primary)	Nos	10.00		
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	6.00		
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.	2.00		





1.2 POWER POINT WIRING WORK					
1.0	Concealed power point using 16 Amp 3 Pin plug socket with 16 Amp Modular switch of legrand myline 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 wiring using 1100V FR grade 2R (P+N) x 2.5 Sq.mm +1R (E) x 1.5 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 . The point should not taken from any switch Board. S.I.T.C. as directed by the Engineer-in-charge	Nos	2.00		
2.0	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.wiring using 1100V FR grade 2R (P+N) x 2.5 Sq.mm +1R (E) x 1.5 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. Maximun 3 Points per Circuit for counter & Table	Nos	7.00		
1.3 GLOW SIGN BOARD WIRING WORK					
1.0	Supply,installation and testing of timer with contactor ( L&T / Legrand ) make controlling the glowsign board with 16 Amp Modular switch of legrand myline 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 Nearest L.D.B.wiring using 1100V FR grade 2R (P+N) x 2.5 Sq.mm +1R (E) x 1.5 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.	Nos.	1.00		
1.4 COMPUTER WIRING WORK					
1.0	Supplt and fixing of concealed UPS power points using 1 nos. of 16 Amp, Modular switches to be provided on table top + 4 nos. 6 Amp 3 Pin 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.				
1.1	Primary Point	SET	6.00		
1.2	Subsequent point ( Looped From Primary)	SET	2.00		





2.0	Supply 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		
3.0	Supply of all required materials and wiring to circuits/ submains with following number and sizes of PVC insulated 1100V FR grade 3R (P+N+E) x folling size 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 ISI mark laid concealed over false ceiling or in wall chases or on the ceiling in case of an open ceiling including of as required and multy stranded copper wire of folling size 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.				
<b>1.5 A.C. WIRING WORK</b>					
1.0	Supply & Installation of all required materials and wiring to Split AC point 25 Amp 3 Pin Modulat socket mouted on suitable size concealed GI Box near to the AC controlled by 25 Amp DP isolator Enclosed in Powder coated DP Encloser of Legrand Ekinox3 model or Equivalent make taken from Nearest A.C..D.B/ M.L.D.B. with galvanized iron junction & switch boxes & clip in type modular type switch plate, switches, GI concealed back box, etc. of legrand myline or equivalent make.The point should not taken from any switch Board S.I.T.C. as directed by the Engineer-in-charge.	Nos.	3.00		
<b>1.6 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/RDB to Common Switch board and power Points / UPS points etc )	Mts	160.00		
1.2	Recessed wiring with ( 2Rx4.0sqmm +1Rx2.5sqmm) copper wire ( UPS input to CDB / AC points )	Mts	110.00		
1.3	Recessed wiring with ( 2Rx6.0 sqmm +1Rx4.0 sqmm ) copper wire ( PANEL to L.D.B./UPS INPUT)	Mts	30.00		
1.4	Recessed wiring with ( 3Rx10.0 sqmm +1Rx6.0 sqmm ) copper wire ( PANEL to master switch)	Mts	20.00		





2.PANEL BOARD & DISTRIBUTION BOARDS.					
1.0	<b>Main Panel Board</b>	<b>Set</b>	<b>1.00</b>		
	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 Testine Cartificate to the Client after Incoming :-				
	<b>1No 100A- 16KA - 4POLE -MCCB.</b>				
	1 set of 125A TPN copper bus bar (18 X6 mm)				
	<b>1No 63A- 10KA - 4POLE -MCB.</b>				
	1 set of 100A TPN copper bus bar(16 X 5 mm)				
	63A, 4-POLE Change over				
	1 set of 100 A TPN copper bus bar(16 X 5 mm)				
	Out going :-				
	1 Nos 40A, 4P MCB, for U.P.S.				
	1 Nos 40A, 4P MCB, Spare				
	3 Nos 25 A DP MCB for 1.5 ton Split A.C.				
	2 Nos 25 A DP MCB for 1.0 ton Split A.C.				
	2 Nos 25 A DP MCB Spare				
	1 Nos 32 A DP MCB for L.D.B.				
	1 Nos 32 A DP MCB for ATM				
	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				
	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 & Control fuse.				
	Cable tray.				
	Termination bar for each out put				
	6 Nos Phase indicator L.E.D. lamps				
2.0	Supplying & Fixing 125 Amp, 415 V Wireable IC Cutout - 3nos in MS enclouser withj lock & key arrangements.	<b>Set</b>	<b>1.00</b>		



3.0	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 :				
3.1	<b>L.D.B (Light Distribution Board)</b>	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 'C' Series				
3.2	<b>C.D.B (Computer Distribution Board)</b>	SET	1.00		
	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				
3.3	<b>U.P.S Incoming DB</b>	SET	1.00		
	4 way SPN DB				
	40 Amp DP-10 kA - MCB – 2 nos (1main & 1 spare).				
	All MCB must be class C Type				
3.4	<b>U.P.S Outgoing DB</b>	SET	1.00		
	4 way SPN DB				
	Incoming :- 40 Amp DP-10 kA - MCB – 1 No				
	Out going :- 2 No. 25 A SP-10 kA - MCB				
	All MCB must be class C Type				
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				
4.1	<b>Single isolation switch.</b>	SET	1.00		
	8 way SPN DB				
	2 No. 63A -415V-4P Isolator.				





3. FITTINGS OF FIXTURES				
(NOTE : ANY OF FIXTURES AND FITINGS SHALL BE RE-CONFIRMED WITH THE ARCHITECTS / CONSULTANTS BEFORE ORDERING)				
<p>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 hardware etc.</p> <p>Note :- All Light Fixtures, Fans, Exhaust Fans &amp; 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 Fixtures from any make as required.</p>				
1.0	Supply, installation and testing of recess LED lights fittings ( 31 - 34 W) of square type ( 2'-0"x2'-0") with all accessories complete of Crompton /Philips/ Wipro or Equivalent Make as required as per direction of Engineer	Nos.	7.00	
2.0	Supply, installation and testing of recess LED lights fittings (12W) of spot type with all accessories complete of Crompton /Philips/ Wipro or Equivalent Make as required as per direction of Engineer in charge.	Nos.	14.00	
3.0	Providing and fitting of 450 mm sweep High Flo Wall fan of Orient/ Crompton Equivalent Make as required as per direction of Engineer in charge.	Nos.	6.00	
4.0	Providing and fitting of 225 mm sweep heavy duty Exhaust fan of Orient/ Crompton Equivalent Make as required as per direction of Engineer in charge.	Nos.	3.00	
5.0	Providing and fitting of 1200 mm sweep ceiling fan of Orient/ Crompton High Speed Equivalent Make as required as per direction of Engineer in charge.	Nos.	1.00	
6.0	Providing and fitting of Modular type step fan regulator of approved make .	Nos.	1.00	
7.0	Supply & fixing of fan-hook, by cutting roof slab and welding 10 mm dia. Fan hook with main reinforcement of roof slab complete in all respect.	Nos.	1.00	
8.0	Supplying , fixing of 1x 20W LED Batten lights fittings with all accessories complete of Crompton /Philips/ Wipro or Equivalent Make as required as per direction of Engineer in charge.	Nos.	6.00	
9.0	Supply, installation and testing of LED Bulb fittings (1x9w) with angle holder of Crompton /Philips/ Wipro or equivalent as required as per direction of Engineer in	Nos.	4.00	
10.0	Providing and fitting of call bell Remote Controlled with Battery of approved make .	Nos.	1.00	
11.0	Providing and fitting of 5m length strip light of approved colour including driver of approved make. .	Nos.	3.00	





4. EARTHING					
1.0	Supplying and fixing Earthing with G.I. earth plate of size 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.	Nos.	1.00		
2.0	Supplying and fixing of Earthing with copper earth plate of size 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.	SET	1.00		
3.0	Supplying and laying 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	Mts	15.00		
4.0	Supplying and laying 4.00 mm dia copper wire on surface or in recess for loop earthing as required.	Mts.	15.00		
5. COMPUTER NETWORKING					
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 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	140.00		
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.	6.00		
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, HCL )	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.	6.00		
7.0	Supply & fixing 2Mtr long E-CAT 6 PATCH Cord (Make D-LINK, AMP or Equivalent Make)	No.	6.00		



6. TELEPHONE SYSTEM					
1.0	Supply of all required materials & laying 2 pairs 0.51 cross section telephone wires of ITI approved 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.	Mtrs.	30.00		
2.0	Supply , fixing , testing of RJ45 Modular Telephone socket point with suitable GI boxes complete in all respect as per direction of EIC .	Nos.	2.00		
TOTAL				Rs.	

