

**BOQ OF ELECTRICAL & AC WORKS OF NEW BRANCH PREMISES AND ON SITE A.T.M. ROOM AT  
Piplanaranwar Branch. - RBO - Chhindwara, M.P.**

S.No	Description of items	Qty	Unit	Estimate Rate	Amount
1	<b>ELECTRICAL WIRING</b>				
	<p>Providing, fixing, testing and commissioning of POINT WIRING of any length for light point/Wall fan point/Exhaust fan point/ Call bell point/ including call bell/ including fan box( if required), 'S' type fan hook etc with 3 X 1.5 Sq.mm(P/N/E) PVC 650V/1100V Grade <b>FRLS WIRE</b> insulated copper conductor single core multi stranded wire in 16 SWG(Medium Gauge) stove enamelled rigid steel conduit 20mm/25mm with conduit accessories like bend, junction box etc in concealed/surface manner as per site requirement with suitable Modular Switches/Sockets with plate and Metal/PVC box, Scaddle, angle bracket (if required), 3 plate ceiling rose/bulb holder etc. The floor/roof/wall junction box should be of MS(heavy duty) box of suitable size and covered with Steel finish Steel cover sheet by screw tight and gasket to avoid water/dust insertion. <b>The item includes Circuit wiring from DB to the switch board with 3x2.5 Sq.MM.</b> The above wiring carried out surface or recess in wall/floor/roof should be cutting by cutter/chisling, replastering, curing, painting with uniform and smooth finish by specialised workman ship and making the surface neat afterwards complete in all respect as per direction of Bank Engg. (EACH Circuit to take NOT MORE than 7-8 points) The conduit/ Flexible conduit/junction box/metal modular box etc must be joined by gland and check nut at both ends. (each circuit to be controlled by one MCB). The colour code of wire are as under: Phase- Red, Neutral- Black, Earth-Green</p> <p><b>Make of Material for items of BOQ:-</b> (i) Modular Type Switch/socket/step electronic fan regulator, plate, box, TV/telephone, bulb holder/3 pin ceiling rose with all accessories:- Lergand/ Anchor(Roma)/MK/ Crabtree (ii) MS conduit/PVC conduit with all accessories:- BEC/AKG/NIC/Precision (iii) PVC insulated copper wire(FR) 650V/1100 V grade:- Finolex/RR cable/ Havells</p>				
a	Providing and fixing of point wiring with above specifications. One light point controlled by one switch.	43	Nos.		
b	Providing and fixing of point wiring with same above specifications. Two light points to be controlled by one switch.	11	Nos		
C	Providing and fixing of ceiling fan point controlled as under (i) one 6 amp switch (ii) one no stepped electronic regulator of two module type.	9	Nos.		
d	providing and fixing 6 Amps Plug Points with same specs as above and install along with same light switchboard	12	Nos		
e.	<b>Master switch of 16 Amps( Only Grey/Golden/Wooden colour other than white colour)</b> to install alongwith same light switch board to control all light as a master switch ON/OFF in each switch board	12	Nos		
2	<p>6 AMP. POINTS ON SEPARATE BOARD :Supply,fixing,testing and commissioning of 1 No 6 A Multi Socket with 1No. 6 A switch ( Modular type ) with cover plate , sheet steel box / PVC modular box etc on surface / concealed manner l/c electrical connections and making good all the damages, painting, cleaning the site etc complete including all accessories as per site requirement and as directed.</p> <p>(Minimum two and Maximum three points are loop with one circuit as mentioned beolw)</p>	10	Nos		

3	Power Wring (6 / 16 AMP. POWER POINTS). Supply, fixing, testing and commissioning of 1 No 16 A switch & 1 No.six pin 6/16 Amp. Multi Socket ( Modular Type ) with cover plate , sheet steel box etc on surface / concealed manner l/c electrical connections and making good all the damages, painting, cleaning the site etc complete including all accessories as per site requirement and as directed. (Maximum two points are loop with one circuit as mentioned below)	15	Nos		
4	SPECIAL POINTS : ( For Computers ). Supply, fixing, testing and commissioning of following Modular type switch socket with cover plate, PVC modular box on Surface / sheet steel box in concealed manner l/c electrical connections and making good all the damages, painting, cleaning the site etc complete including all accessories as per site requirement and as directed. 2 Nos. 6 A Switch + 3 Nos. 6 A, 3 pin Socket (Minimum two and Maximum three points are loop with one circuit as mentioned below)	19	Nos		
5	<b>AC/Geyser Point (Single Phase).</b> Supply, Installation, Testing and commissioning of the surface / recess mounting A.C. / GEYSER power point with the followings : Metra Plug and Socket DBs with one Nos 20 Amp SP MCB, 20 Amp plug and socket with complete Enclosur plate and box.- 1 set i/c electrical connections and making good all the damages, painting, cleaning the site etc complete including all accessories as required as per site requirement and as directed by Bank Engineer. <b>OR</b> Modular 32A DP 1 way switch with plate & box 1 set. + 25A & 10A twin socket (Only one point is connected with one circuit as mentioned below)	8	Nos		
6	<b>CIRCUIT WIRING :(FRLS WIRE)</b> <i>Supply , installation, testing &amp; commissioning of FRLS circuit wiring measured in numbers with suitable size of MS conduit 1.6 mm thick and 25mm dia. The wiring in MS conduit is as per IS code. The average length of wiring around between(25-30) Mtr.</i>				
6. A	3 X 2.5 sqmm ( For UPS Circuit/6 amp Separate Board ) in suitable size of 16 SWG (MMS) steel conduit as per IS code.	19	Nos		
6.B	3 X 4.0 sqmm ( For AC/Power Circuit ) in suitable size of 16 SWG (MMS) steel conduit as per IS code.	14	Nos		
7	<b>UPS OUTGOING &amp; OTHER FRLS WIRING, As Per Requirment.</b>				
a	3 X 1.5 Sqmm copper multistreand FRLS wire in suitable size of 16 SWG (MMS) steel conduit.	20	R.Mtr		
b	3 X 2.5 Sqmm copper multistreand FRLS wire in suitable size of 16 SWG (MMS) steel conduit.	15	R.Mtr		
c	3 X 4 Sqmm copper multistreand FRLS wire in suitable size of 16 SWG (MMS) steel conduit.	25	R.Mtr		
d	3 X 6 Sqmm copper multistreand FRLS wire in suitable size of 16 SWG (MMS) steel conduit.	15	R.Mtr		
8	<b>DISTRIBUTION BOARDS</b>				
	<b>All MCB to be "C" series</b>				

a	B.INCOMING SWITCHGEARS :(RYB LED Indicators for Both Main/DG) (i) 1 No. FP.125 Amp , 25 KA MCCB with thermal magnetic trip unit WITH Digital Voltmeter & Digital Ammeter suitable size of CTS, selector switches etc. C. OUTGOING SWITCHGEARS: (i) 1 Nos- <b>100</b> Amp TP MCCB for main with 200amp bus bar with indicator. (ii) 160 amp onload changeover with 1 Nos 100 amp 25 KA, TP MCCB for DG supply with 200 amp bus bar with indicator (iii) 200 amp bus bar for parallel connection with DG changeover output ( Note:- Before Placing the Panel order, firstly it Passed by The Bank Authority, otherwise it will not considered)	1	Nos		
b	Supply & Installation of SDP(Surge Protector Device) for general protection of main Distribution Board Legrad Make Cat No. 412247 (3P+N) , 40 KA, T2- I <sub>max</sub> 40KA/pole with complete wiring.	1	Nos		
c	Providing & fixing 4 way vertical load line double door D.B for AC with 80 Amp. TP MCCB incomer and outgoing to be 4 Nos 32 amp TP MCB, 6 Nos 32 amp SP MCB FOR AC	1	Nos		
d	Providing and fixing 6 way TPN double door DB for LIGHT /POWER POINTS with 63 Amp TPN , controlling 18 Nos. 10/16/32 - ( 10-8nos. / 16- 6nos./ 32-4nos.) Amps SPMCBs. & Complete.	1	Nos.		
e	Providing and fixing 4 way TPN double door DB for LIGHT /POWER POINTS with 63 Amp TPN , controlling 12 Nos. 16/32 Amps SPMCBs. & Complete.	1	Nos		
f)	Providing and fixing (12) way SPDB double door type For UPS points with 1x32 Amps DP, controlling 10 Nos, 16 AMP SPMCB	2	Nos.		
g	Providing and fixing (8) way SPDB double door type For Light DB only for Emergency Lights like glow sign etc with 1x32 Amps DP, controlling 6 NO.10 A./16 AMP SPMCB	3	Nos.		
h	Providing and fixing (4) way TPN double door type For UPS INPUT with 1x63 Amps TPN and 63 amp DP MCB- 3 Nos & 3 Nos, 32 amp SP MCB complete (E-lobby/UPS Output)	2	Nos.		
i	Providing and fixing of Kit Kat Rewirable Porcelain fuse carrier & base with wooden frame of 200 amp/415 Volt near meter box	1	Set		
<b>9</b>	<b>CABLES</b>				
	Supplying, unloading, storage, laying, testing and commissioning of PVC/XLPE insulated (Heavy Duty) Al/Cu conductor armoured cable suitable for working voltage upto and including 1100 V grade, laid and tied on existing overhead cable trays, or laid and tied over MS supports in masonry trenches with copper/al cable lugs, single compression brass cable glands, tapping, crimping etc. as required and all cables run with double run( <b>2 No.) of GI wire of 8 SWG size</b> .The size of cables are as under:- Make of Material:- (i) PVC/XLPC Armoured cable:- Finolex, Havells, RR cable, CCI(Cable Corp. of India) (ii) Cable Termination:- Dowells, Comet				
a	3.5 X 70 Sq.mm XLPE. Al. armoured Cable(AC VTPN & BUS BARS)/ Main cable	30	Mtr		
b	3.5 X 50 Sq.mm XLPE. Al. armoured Cable(AC VTPN & BUS BARS/ Panel to DG	35	Mtr		
c	4X 25 Sq.mm XLPE.Al.armoured Cable (POWER /LIGHT/ UPS)	60	Mtr		
d	4X 16 Sq.mm XLPE.Al.armoured Cable (LIGHT/UPS)	25	Mtr		
<b>10</b>	<b>EARTHING</b>				

(i)	<b>COPPER PLATE EARTH STATION:</b> Preparation of the Plate Earth Station:( As per IS:3043) (a) Excavation of hard rocky earth, soft murrum, hard murrum etc and back filling with black cotton soil for the earth station, the earth pit size is 1000 mm X 1000 mm X 2500 mm. (b) Supply and fixing of Copper Plate of Size 600 mm X 600 mm X 3.0 mm thick. (c) Fixing of 50 mm X 6 mm, 3 Mtrs copper strips from Copper Plate to earth terminal including brazing/welding at plate etc. (d) Supply and laying in position 19 mm, 2 Mtrs G.I "B" Class pipe for watering with reducer/funnel with mesh. (e) Supply and Fixing of the following in the earth station. (i) 75 Kg. Charcoal. (ii) 15 Kg. Original Salt. (iii) Black Cotton soil of adequate amount. (f) Construction of earth pit chamber including necessary brick work concrete, plastering, S/F of C.I Cover of size 12" X 12" complete as per site requirement.	2	Nos		
(ii)	<b>G.I.Plate Earth Station :</b> Preparation of the Plate Earth Station: (as per IS:3043) (a) Excavation of rocky earth, soft murrum, hard murrum etc and back filling with black cotton soil for the earth station, the earth pit size is 1000 mm x 1000 mm x 2500 mm deep. (b) S/F of G.I. plate of size 600 x 600 x 6.0 mm thick. (c) S/F fixing 50 mm x 6 mm, 3 mtrs G.I. strips from G.I.plate to earth terminal including brazing / welding at plate etc. (d) Supplying and laying in position 19 mm, 2 mtrs G.I. 'B' class pipe for watering.with reducer/funnel with mesh. (e) S/F of the following in the earth station. 75 Kg. Charcoal, 15 Kg. Original Salt. and Black Cotton soil of adequate amount. (f) Construction of earth pit chamber including necessary brick work concrete, plastering, S/F of C.I. Cover of size 12" x 12" complete as per site req.and marking its value and identification etc.	4	Nos		
(iii)	Providing and fixing Copper/GI strip as per specification compete including connection to earth electrode revetting/sweating/soldering, burying 15 cms below in all types of soil/rocks etc complete as required. (a) Copper Strip 25 X 5 mm	20	Mtr.		
	(b) G.I.Strip 25 X 5 mm	40	Mtr.		
(iv)	Supply and laying of 10 Sq.mm 650V/1100 V PVC grade insulated copper wire in 15 mm G.I. Pipe ISI grade including all accessories complete as required.( <b>Dedicated Earthing for UPS output DB only</b> )	140	Mtr.		
<b>11</b>	<b>TELEPHONE POINT</b>				
(i)	Two pair, 0.61 mm dla. telephone cable tinned copper conductor, P.V.C. insulated and sheathed , fire retarding, anti termite, colour coded twisted pairs and rip cord, Double outlet The length of telephone cable upto 35 meter length or less as per site condition with shutter modular type Telephone Outlets ( RJ — 11 ) with suitable size MS / PVC modular boxes and it laying, fixing, testing and commissioning in suitable size 20/25 mm dia,16 SWG (Medium Gauge) thickness rigid PVC conduit with conduit accessories like bend/junction box/cover plate/sheet steel/PVC box on surface/ concealed manner i/c electrical connections and making goods all the damages, replastering, painting, cleaning the site etc complete as required as per site condition. The floor/roof/wall junction box should be of MS(heavy duty) box of suitable size and covered with Steel finish Steel cover sheet by screw tight and gasket to avoid water/dust insertion. Make of Material:- Delton/Finolex/RR cable	7	Nos		

(ii)	Supplying and fixing of krone telephone tag block on surface/ recess mounted with its accessories suitable for the multi core telephone cable and shall accommodate tin-plated phosphor bronze connectors, the connectors shall splice unskinned cables up to 0.61 mm dia and shall be terminate both incoming and out going lines, the tag blocks shall be mounted inside, water proof box and locking arrangement and shall be fully accessible. (A) 20 Pair tag block	1	Nos		
<b>12</b>	<b>DATA CABLING FOR LAN</b>				
a	Providing, fixing, testing and commissioning of all nodes of four pair UTP CAT 6 LAN cables length upto 30 meter length or less as per site condition in suitable size 20/25 mm dia, 16 SWG wall thickness rigid PVC conduit with conduit accessories like bend/junction box/ fan box etc on surface/recessed manner and making good all the damages, painting, cleaning the site etc complete as required as per site condition and as directed as required. Junction box should be covered with Stainless steel plate with screw with gasket for protection of water/dust. Providing, fixing, testing and commissioning of modular type Information Outlets with suitable size of MS/PVC modular boxes complete, all accessories with insulation displacement connectors etc suitable for CAT 6 UTP cabling with RJ-45 socket with testing and commissioning of STP cabling with scanner for all the nodes/switches/jack panel complete (Each point/circuit/cable from both load and source end to be marked with ferrules.) Make of Material:- (i) Data Cable, Cat 6 cable, Switch, Jack panel, Rack, Patch cords & Other accessories:- D-Link, Legrand	16	Nos		
b	Providing and fixing Patch Panels 24port (100 base TX) CAT 6 patch/jack panel with connector, out lets and necessary connectivity complete as required & (D-Link make)	1	Nos		
c	Providing, assembling, fixing, testing and commissioning Floor/Wall mounted RACKS for gig switches, patch panels etc including cooling DUAL fan trays, a 10 Point PDU, Fixed Trays as necessary complete. 9 U wall mounted RACK	1	Nos		
d	Providing and fixing of flowing factory fabricated Patch cords. (UTP/CAT 6 complete with connector on both side.)				
i)	for 1 Mt. long	17	Nos.		
ii)	for 2 Mt. long	16	Nos		
e	Providing, fixing, testing and commissioning of four pair CAT 6 LAN cable in suitable size of 20/25mm PVC medium gauge 16SWG conduit including all accessories to interconnect the switches from different location.	50	Mtr		
<b>13</b>	<b>TV POINT:-</b> Supply, installation, testing and commissioning of TV point (Modular) with RG-6 cable in the Medium Gauge 1.6 mm PVC Conduit with all accessories complete in all respect	1	Nos		
<b>14</b>	Supply and installation of Vinyl sticker for on Electrical DBs like, "Switch Off at Night", Switch Off For Safety, etc	15	Nos		
<b>15</b>	Making & Providing of 3 sets of Asbuilt Drawing with coloured print for entire Electrical work (Power/ UPS/ Light/ Data/ Telephone/ AC etc.) as advised by the Bank's Authority. -	1	Lum sum		
	<b>Description of light /fan fixture</b>				
16	LED LUMINAIRES:- 2' x2' (FULL GLOW TYPE) LED light fittings (600 X600mm) dimension suitable for grid/gypsum ceiling complete with its electronic driver as required per instruction of Bank's Model No are as under:- PHILIPS:- RC380B G2 LED 35S-6500 PSU OD WH LED (FULLGLOW) WIPRO:- CRCO10RO 38 HP57 HAVELLS:- LHECDIL7IL1W036 (Edge- Lit) CG:- LCTAR3-40-CDL	21	Nos		

17	LED DOWNLIGHTER: 15 Watt, recessed mounted circular down lighter , 6" dimension with complete its electronic driver are as under:- PHILIPS:- GREENLED-DN193B LED-12S-6500 PSU WIPRO:- IRIS LED LD 71-121-XXX-50-XX HAVELLS:- LHEBJNP ZPZ 1W 015(ENDURA LOW DEPTH) CG:- LC DD-15-CDL,	29	Nos		
18	LED DOWNLIGHTER: (SURFACE MOUNTED) 15 Watt, surface mounted circular down lighter , 6" dimension with complete its electronic driver are as under:- PHILIPS:- GREENLED-DN193B LED-12S-6500 PSU WIPRO:- IRIS LED LD 71-121-XXX-50-XX HAVELLS:- LHEBJNP ZPZ 1W 015(ENDURA LOW DEPTH) CG:- LC DD-15-CDL,	5	Nos		
19	External Street LED Light- Providing & Fixing of 30 watt LED light fixture, pressure die cast aluminium housing, heat resistant glass, IP 65 protection & better optics for uniform distribution. PHILIPS, WIPRO, HAVELLS, CG	2	Nos		
20	LED Spot Light, 3 Watt, 2/3"(Inches) size as per site requirment. PHILIPS, WIPRO, HAVELLS, CG	8	Nos		
21	<b>LED COVE/ STRIP LIGHT WITH ITS ELECTRONIC DRIVER( BLUE COLOUR):-</b> Supply, installation, testing and commissioning of bright LED strip light with its electronic driver complete as required. PHILIPS, WIPRO, HAVELLS, CG	65	Mtr		
22	<b>Providing &amp; fixing of "Digital Clock" /Digital Panel indicating Time, Day, Date, Temperature at outside of big size, Ajanta</b> as suitable over the facade as advised by the Bank with standard power back up. Make:- Ajanta, Titan- Basic Rate @ Rs. 3500/- to 4000/-	1	Nos		
23	BOX TYPE LUMINAIRES: LED TUBE FITTINGS, 1200mm, 18/20 Watt PHILIPS/WIPRO/HAVELLS/CG	13	Nos		
24	CEILING FAN:(5 Star rating, BLDC Fan) Single phase heavy duty grease filled double ball bearing, aerodynamically designed heavy gauge aluminium blades, copper wound and impregnated silicon stamping motors etc 1200 mm sweep, brilliant white CG/USHA/ ORIENT/HAVELLS	9	Nos		
25	<b>WALL FAN:- ( Only Metallic Body )</b> Oscillating wall fan with regulator i/c coonections etc complete as required as per approved make, Sweep 400/450 mm , RPM 1300 make are as under: CG/USHA/ ORIENT/HAVELLS	2	Nos		
26	<b>EXHAUST FAN:-</b> Single phase, 300mm sweep, 900 rpm, metallic exhaust fan of the following single phase Exhaust fan continuously rated, capacitor start and run type, totally enclosed and ruggedly built, pre lubricated double ball bearing, copper wound, A & E class insulation, dynamically balanced, below 40 db sound level etc, front cover with grill/gravity louver for protection purpose with 12 mm plywood complete in all respect make as under: CG/USHA/ ORIENT/HAVELLS/ALMONARD/ALSTOM	6	Nos		
27	<b>OCCUPANCY SENSORS:-</b> Supply, installation , testing and commissioning of occupancy sensor surface/recess mounted as per site condition complete with all wiring/conduit/Switch etc complete in all respect as per site condition as required Honeywell Make K5015/16, Siemens/Johnson Control OR Equivalent as per Bank's approved.	2	Nos		

	<b>(A) SUB- TOTAL OF ELECTRICAL WORK</b>				
<b>(B)</b>	<b>AIR CONDITIONING</b>	<b>Qty</b>	<b>Unit</b>	<b>Rate</b>	<b>Amount</b>
	Supply, installation, testing and commissioning of following AIR CONDITONERS as under. The Rate shall be inclusive of all taxes excluding GST. GST will be paid additionally by the Bank as applicable subject to GST Number. and system has complete one year warranty & If any additinal warranty provided by company/vendor in any specific part like compressor etc that is acceptable, please mentioned it.				
<b>1</b>	Supply, installation, testing and commissioning of Higher Efficient models of <b>SPLIT AC, FIVE STAR INVERTER RATING OF BEE AIR CONDITIONERS 1.0</b> Ton Machines confirming to latest Indian Standards and suitable for operation on 230 Volts + 10 %, single Phase, 50 Hz AC supply with rotary compressor, Refrigerant and capable to perform cooling, dehumidifying, Air Circulating, auto mode, auto swing, anti bacteria filtering, ventilation and with remote control with Cool/Fan/Dry/Auto mode, sleep mode & on/off timer with suitable thermostat. The rate should include installation charges after making appropriate changes in existing false ceiling. Heavy ready made/fabricated M S Stand to house the out door unit as per site conditions including carpentry work, minor civil work and material including copper piping of hard & prime quality of min. 22 G upto 3 metres with class "o" Nitrile insulation 12mm , cabling from indoor to outdoor unit, heavy gauge PVC drain piping with insulation as per site requirement. The copper piping, drains piping and electrical cabling should be fixed with clamps and no loose piping/cabling is allowed. The out door unit should be anti-rust powder coated. Indoor unit should have LED display. The rates inclusive of all repairs of civil and carpentry work The cost includes original fill and additional top up of refrigerant gas as per site condition. The rate inclusive of all chisel work, plastering, finishing, painting & all civil related work pertaing to mentioned work. Make of ACs:- Daikin/Hitachi/Voltas/Bluestar/Carrier only	3	Nos		
<b>2</b>	Supply, installation, testing and commissioning of Higher Efficient models of <b>SPLIT AC, FIVE STAR INVERTER RATING OF BEE AIR CONDITIONERS 1.50</b> Ton Machines confirming to latest Indian Standards and suitable for operation on 230 Volts + 10 %, single Phase 50 Hz AC supply with rotary compressor, Refrigerant and	5	Nos		
<b>3</b>	Supply and installation of soft & prime quality of min. 22 G Copper pipe for " Split AC only" with class "o" Nitrile insulation of minimum 12mm for split air conditioner including interconnection power/ communication cable between indoor and outdoor unit as per site requirement. ( If required additionally, payment will made as per actual installtion. The rate inclusive of all chisel work, plastering, finishing, painting & all civil related work pertaing to mentioned work. Make of Insulation:- Superlon/ Aflex/ Armacell/ Kflex Make of cable:- Finolex/RR/Havells	90	Mtr		

<b>4</b>	Drain Pipe ( If Required additional) Applicable to both ACs(Cassette & Split AC). Supply and laying of heavy gauge PVC drain piping of 40mm with insulation as per site requirement with its all accessories like bend, solution etc as per site condition. The rate inclusive of all chisel work, plastering, finishing, painting & all civil related work pertaining to mentioned work. ( If required additionally, payment will be made as per actual installation.) Make:- Kasta/supreme	80	Mtr		
<b>5</b>	Providing & fixing of 5 KVA Voltage stabilizer with time delay option including all accessories with installation at site ( For 2.0 Tr Split AC & 2.0 Tr Cassette AC) Make:-Microtek, V-Gards (Voltage Range 150-280 Volts)	8	Nos		
<b>6</b>	Electronic Timer for auto switch on/off to AC of server/ATM/E-lobby for 4Hr/8Hr. Make:- Legrand, L&T, and other Eq. ISI make	1	Nos		
	<b>(B) SUB- TOTAL OF AIR CONDITIONING WORK</b>				
	<b>SUMMARY:-</b>				
	<b>(A) SUB- TOTAL OF ELECTRICAL WORK</b>				
	<b>(B) SUB- TOTAL OF AIR CONDITIONING WORK</b>				
	<b>TOTAL( A+ B )</b>				