

BILL OF QUANTITIES FOR ELECTRICAL AND AIR-CONDITIONING WORK OF SBI, BANDA BRANCH UNDER RBO-5 SAGAR

S. No.	Description of items	Qty	Unit	Rate	Amount
	ELECTRICAL WIRING				
1	<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 FRLS WIRE 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/Socket 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. The item includes Circuit wiring from DB to the switch board with 3x2.5 Sq.MM. 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 Make of Material for items of BOQ:- (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.	60	Nos.		
b	Providing and fixing of point wiring with same above specifications. Two light points to be controlled by one switch.	15	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.	16	Nos.		
d	providing and fixing 6 Amps Plug Points with same specs as above and install along with same light switchboard	16	Nos		
e	Master switch of 16 Amps(Only Grey/Golden/Wooden colour other than white colour) to install alongwith same light switch board to control all light as a master switch ON/OFF in each switch board	10	Nos		
2	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. (Minimum two and Maximum three points are loop with one circuit as mentioned below)	16	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)	18	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)	16	Nos		
5	AC/Geyser Point (Single Phase). 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. OR 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)	2	Nos		

6	AC Point (Three Phase). Supply, Installation, Testing and commissioning of the surface / recess mounting A.C. Cassette power point with the followings : Metal enclose Four way with one Nos 32 Amp FP MCB with complete Enclosure plate and box.- 1 set i/c electrical connections and making good all the damages, painting, cleaning the site etc complete as required as per site requirement and as directed. (Only one point is connected with one circuit as mentioned below)	5	Nos		
7	CIRCUIT WIRING :(FRLS WIRE) Supply , installation, testing & 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.				
7. 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.	25	Nos		
7.b	3 X 4.0 sqmm (For AC/Power Circuit) in suitable size of 16 SWG (MMS) steel conduit as per IS code.	26	Nos		
8	UPS OUTGOING & OTHER FRLS WIRING, As Per Requirement.				
8.a	3 X 1.5 Sqmm copper multistrand FRLS wire in suitable size of 16 SWG (MMS) steel conduit.	75	R.Mtr		
8.b	3 X 2.5 Sqmm copper multistrand FRLS wire in suitable size of 16 SWG (MMS) steel conduit.	5	RMtr		
8.c	3 X 4 Sqmm copper multistrand FRLS wire in suitable size of 16 SWG (MMS) steel conduit.	5	RMtr		
8.d	3 X 6 Sqmm copper multistrand FRLS wire in suitable size of 16 SWG (MMS) steel conduit.	75	RMtr		
8.e	3 x 10 Sqmm copper multistrand FRLS wire in 25 mm 16 SGW (MMS) steel conduit.(UPS INPUT DB TO UPS)	80	RMtr		
8.f	5 X 4 Sqmm. Copper multistrand FRLS wire in suitable size of 16 SWG (MMS) steel conduit (For Cassette AC)	120	RMtr		
9	Supplying, installation, testing and commissioning of indoor type , sectionalised, compartmentalized, MV Panel board of suitable size fabricated from CRCA sheet of 2 mm thick for frame work,enclosure and doors, 3 mm thick for gland plates with stiffers where required, having vibration free structure chemically treated with seven tank process before painting for surface treatment and powder coated,with aluminum busbar with DMC / SMC busbar supports suitable for 3 Phase 415 V 50 Hz AC supply i/c providing and fixing the following switchgear mounted thereon complete with gaskets and interconnections, connection as per specification complete as required. (The board shall be dust & vermin proof with suitable degree of IP protection) NOTE : All switchgears lcs shall be equal to 100% lcu. Sheet 14 swg : panel sides,upper,lower,and Ft.doors Sheet 16 swg : back side and compartments. Gland plates : 3 mm thick. Cable entry : Provision at bottom and upper sides. The above panel belongs following as under: A. 4 Nos. 200 Amp. Electrolytic grade Aluminum Bus Bars insulated with colored Heat Shrinkable PVC Sleeves & duly supported on SMC/DMC molded supports with Antitracking barriers. B.INCOMING SWITCHGEARS :(RYB LED Indicators for Both Main/DG) (i) 1 No. TP 200 A , 25 KA MCCB with digital voltmeter & ammeter with suitable size of CTs, selector switch etc. C. OUTGOING SWITCHGEARS: (i) 1 Nos- 160Amp TP MCCB for main with 200amp bus bar with indicator. (ii) 160 amp onload changeover with 1 Nos 160 amp 16 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	1	Nos		
10	Supply & Installation of SDP(Surge Protector Device) for general protection of main Distribution Board Legrad Make Cat No. 412247 (3P+N), 40 KA, T2-Imax	1.00	Nos		
11	Providing & fixing 6 way vertical load line double door D.B for AC with 100 Amp. TP MCCB incomer and outgoing to be 4 Nos 32 amp TP MCB, 6 Nos 32 amp SP MCB FOR AC	1	Nos		
12	Providing and fixing 6 way TPN double door DB for LIGHT /POWER POINTS with 63 Amp TPN , controlling 18 Nos. 10/16/32 Amps SPMCBs. & Complete.	2	Nos.		
13	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		
14	Providing and fixing (12) way SPDB double door type For UPS points with 1x32 Amps DP, controlling 10 Nos, 10 AMP SPMCB for ups output	2	Nos.		
15	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 For Branch & ATM	2	Nos.		

16	Providing and fixing (4) way TPN double door type For UPS INPUT with 1x 63 Amps TPN and 63 amp DP MCB- 3 Nos & 3 Nos, 32 amp SP MCB complete (E-lobby/UPS Output)	1	Nos.		
17	CABLES				
	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 (2 No.) of GI wire of 8 SWG size. The size of cables are as under:-				
a	3.5 X 50 Sq.mm XLPE. Al. armoured Cable (AC VTPN & BUS BARS)/ Main cable	50	Mtr		
b	4X 25 Sq.mm XLPE Al. armoured Cable (POWER/LIGHT/UPS)	60	Mtr		
c	4X 16 Sq.mm XLPE.Al.armoured Cable (LIGHT/UPS)	50	Mtr		
18	EARTHING				
	COPPER PLATE EARTH STATION: 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	2	Nos		
	G.I.Plate Earth Station : 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.	4	Nos		
(iii)	Providing and fixing Copper/GI strip as per specification complete including connection to earth electrode revetting/sweating/soldering, burying 15 cms below in all types of soil/rocks etc complete as requiued. 25 x3 mm Cu Strip	5	Mtr.		
	(b) G.I.Strip 25 X 5 mm	45	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.	55	Mtr.		

19	TELEPHONE POINT				
(i)	Two pair, 0.61 mm dia. 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	9	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		
20	DATA CABLING FOR LAN				
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 shuld 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	18	Nos		
b	Providing and fixing Patch Panels 24 port (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 comple with connector on both side.)				
i	for 1 Mt. long	16	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	100	Mtr		
21	TV POINT:- Supply, installation, testing and commissionig of TV point(Modular) with RG-6 cable in the Medimum Gauge 1.6 mm PVC Conduit with all accessories complete in all respect	1	Nos		
22	Supply and installation of Vinyl sticker for on Electrical DBs like, " Switch Off at Night" , Switch Off For Safety, etc	20	Nos		
23	Making & Providing of 3 sets of Asbuilt Drawing with coloured print for entier Electrical work (Power/UPS/Light/Data/Telephone/AC etc.) as advised by the Bank's Authority.	1	Lum sum		
	Description of light /fan fixture				
24	LED LUMINARES:- 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:- CRCO1ORO 38 HP57 HAVELLS:- LHECDIL7IL1W036 (Edge- Lit) CG:- LCTAR3-40-CDL	30	Nos		
25	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,	40	Nos		
26	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	4	Nos		
27	LED Spot Light, 3 Watt, 2/3"(Inches) size as per site requirement. PHILIPS, WIPRO, HAVELLS, CG	6	Nos		

28	LED COVE/ STRIP LIGHT WITH ITS ELECTRONIC DRIVER(BLUE COLOUR):- Supply, installation, testing and commissioning of bright LED strip light with its electronic driver complete as required. PHILIPS, WIPRO, HAVELLS, CG	120	Mtr		
29	Providing & fixing of "Digital Clock" /Digital Panel indicating Time, Day, Date, Temperature at outside as suitable over the facade as advised by the Bank with standard power back up. Make:- Ajanta, Titan	1	Nos		
30	BOX TYPE LUMINAIRES: LED TUBE FITTINGS, 1200mm, 18/20 Watt PHILIPS/WIPRO/HAVELLS/CG	20	Nos		
31	CEILING FAN: Single phase heavy duty grease filled double ball bearing, aerodynamically designed heavy gauge aluminium blades, copper wounded and impregnated silicon stamping motors etc 1200 mm sweep, brilliant white CG/USHA/ ORIENT/HAVELLS	16	Nos		
32	EXHAUST FAN:- 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 wounded, 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	4	Nos		
33	WALL FAN:-(Only Metallic Body) Oscillating wall fan with regulator i/c connections etc complete as required as per approved make, Sweep 400/450 mm , RPM 1300 make are as under: CG/USHA/ ORIENT/HAVELLS	1	Nos		
34	(A) TOTAL ELECTRICAL				
(B)	AIR CONDITIONING				
	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 additional warranty provided by company/vendor in any specific part like compressor etc that is acceptable, please mentioned it.				
1	Supply, installation, testing and commissioning of Higher Efficient models of SPLIT AC, 5 STAR INVERTER RATING OF BEE AIR CONDITIONERS 1.0 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 For ATM	2	Nos		

2	Supply, installation, testing and commissioning of Higher Efficient models of SPLIT AC, 5 STAR INVERTER RATING OF BEE AIR CONDITIONERS 1.5 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 SIZE 12.5/22mm upto 3 metres with class "o" Nitrile insulation	1	Nos		
3	Supply, installation, testing and commissioning of Higher Efficient models of CASSETTE TYPE AIR CONDITIONERS (Three) 3.0 Ton Machines confirming to latest Indian Standards and suitable for operation on 220 /415 Volts + 10 %, three Phase, 50 Hz AC supply with Scroll 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 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	4	Nos		
4	Supply and installation of hard & prime quality of min. 22 G Copper pipe for "Cassette AC Only" with class "o" Nitrile insulation of minimum 12 mm for 3 / 4 ton cassette type 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	60	Mtr		
5	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	30	Mtr		
6	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 pertaing to mentioned work. (If required additionally, payment will made as per actual installtion.) Make:- Kasta/supreme	90	Mtr		
7	Providing & fixing of 4 KVA Voltage stabilizer with time delay option including all accessories with installation at site (For 1Tr /1.5Tr Split AC & 1.5 Tr Cassette AC) Make: Microtek, V-Gards (Voltage Range 150- 280 Volts)	3	Nos		
8	Electronic Timer for auto swith on/off to AC of server/ATM/E-lobby for 4Hr/8Hr. Make:- Legrand, L&T, and other Eq. ISI make	1	Nos		
9	Deinstallation and Refixing of Existing split AC after necessary cleaning with gas toping as required in the new location as per site condition inclusive all necessary civil mechnory, ply & electrical work.	2	Nos		
10	TOTAL:- (B) AIR CONDITIONING WORK				
11	SUMMARY:-				
12	(A) SUB- TOTAL OF ELECTRICAL WORK				
13	(B) SUB- TOTAL OF AIR CONDITIONING WORK				
16	Grand Total (A+B) (Excluding GST)				

Amount (in words).....

Seal & Signature of Vendor