

**BOQ OF ELECTRICAL & AC PIPING WORKS IN NEW BRANCH PREMISES OF "SBI" SME - JANJGIR,
RBO - KORBA, C.G.**

S.No.	Description of Item	Qty	Unit	Rate	Amount
B	Part B : Electrical & A.C. Piping Works :				
1	ELECTRICAL WIRING				
	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/ 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. 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				
i	Providing and fixing of point wiring with above specifications. One light point controlled by one switch.	68	Nos.		
ii	Providing and fixing of point wiring with same above specifications. Two light points to be controlled by one switch.	15	Nos		
2	Call bell point with ceiling rose/ 6amp. 3 pin socket controlled by one 6 amp. Push Modular switch. With call bell	1	Nos		
3	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.	15	Nos.		
4	Providing and fixing 6 Amps Plug Points with same specs as above and install along with same light switchboard	10	Nos		
5	6 amp. Modular switch as serial no 1 on seperate Board using Copper Conductor FRLS wires from DB to first 6A, 5 Pin modular socket controlled by one 6A switch and looped to the nearest second point with same 2*2.5 + 1*2.5 Sqmm copper conductor wires FRLS insulated 1100V grade (max 3 points per circuit).	14	Nos		
6	Same as serial no.1, but wiring for 16 Amp, 6-pin sockets by using 1100 V grade copper conductor wire with independent earth wire from D.B. to first point 1 st socket and 1 st to 2 nd , socket with earth wire including providing and fixing of 16 Amp, 6 –pin socket with 16 Amp. Switch. (Modular type switch/ socket/ plate etc. complete assembly) max 2 points per circuit.	14	Nos		
7	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 beolw)	12	Nos		

8	AC & Power 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)	8	Nos		
9	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.				
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.	14	Nos		
b	3 X 4.0 sqmm (For 1 ton, 1.50, 2.00 & 2.00 Cassette AC / PowerCircuit) in suitable size of 16 SWG (MMS) steel conduit as per IS code.	8	Nos		
10	MAIN PANEL AND METER BOARD				
	All MCB to be "C" series				
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- 100Amp TP MCCB for main with 200amp bus bar with indicator. (ii) 160 amp onload changeover with 1 Nos 125 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 SPD(Surge Protector Device) for general protection of main Distribution Board Legrad Make Cat No. 412247 (3P+N) , 40 KA, T2, Imax 40KA/pole with complete wiring.	1	Nos		
c	Providing & fixing 4 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		
d	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.	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.	2	Nos		
f	Providing and fixing (12) way SPDB double door type For UPS points with 1x32 Amps DP, controlling 10 Nos, 16 AMP SPMCB	1	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	1	Nos.		
h	Providing and fixing (4) way TPN double door type For UPS INPUT with 1x63 Amps TPNand 63 amp DP MCB- 3 Nos & 3 Nos, 32 amp SP MCB complete (E-lobby/UPS Output)	1	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		
11	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:- Make of Material:- (i) PVC/XLPC Armoured cable:- Finolex, Havells, RR cable, CCI(Cable Corp. of India) (ii) Cable Termination:- Dowells, Comet				
i	3.5 X 50 Sq.mm XLPE. Al. armoured Cable (AC VTPN, BUS BARS & A.C. DB)/Main cable	30	Mtr		
ii	Supplying, laying, testing & commissioning of 4 C X 10 sq.mm. at 1100 volts grade PVC insulated <u>copper conductor</u> armoured cable with 10 gauge earth copper wire including cables end termination using appropriate Lugs, Glands, termination accessories, Clamps etc. as required as per specification from Main board to UPS Room	70	Mtr		
iii	Supplying, laying, testing & commissioning of 4 C X 25 sq.mm. at 1100 volts grade PVC insulated aluminum conductor armoured cable with 10 gauge earth copper wire including cables end termination using appropriate Lugs, Glands, termination accessories, Clamps etc. as required as per specification Pane to (POWER/UPS) DB	60	Mtr		
iv	Supplying, laying, testing & commissioning of 4 C X 16 sq.mm. at 1100 volts grade PVC insulated aluminum conductor armoured cable with 10 gauge earth copper wire including cables end termination using appropriate Lugs, Glands, termination accessories, Clamps etc. as required as per specification (Light DB).	70	Mtr		
12	EARTHING				
(i)	COPPER PLATE EARTH STATION: Preparation of the Plate Earth Station: (As per IS:3043) (a)Excavationofhardrockyeath,softmurrum,hardmurrumetcandbackfillingwith blackcottonsoilfortheearthstation,theearthpitsizeis1000mmX1000mm X 2500 mm. (b) Supply and fixing of Copper Plate of Size 600 mm X 600 mm X 3.0 mm thick. (c)Providing&fixingof50mmX6mm,3MtrscopperstripsfromCopperPlatetoearth terminal including brazing/welding at plate etc. (d)Supplyandlayinginposition19mm,2MtrsG.I."B"Classpipeforwateringwithreducer/funnel with mesh. (e) Supply and Laying of the following in the earth station. (i) 75 Kg. Charcoal. (ii) 15 Kg. Original Salt. (iii) Black Cotton soil of adequate amount. (f)Constructionofearthpitchchamberincludingnecessarybrickworkconcrete,plastering, S/F of C.I Cover of size 12" X 12" complete as per site requirement.	2	Nos		
(ii)	G.I.PLATE EARTH STATION : Preparation of the Plate Earth Station: (as per IS:3043) (a)Excavationofrockyeath,softmurrum,hardmurrumetcandbackfillingwithblack cottonsoilfortheearthstation,theearthpitsizeis1000mmx1000mmx2500 mm deep. (b) Supplying & fixing of G.I. plate of size 600 x 600 x 6.0 mm thick. (c)Providing&fixing50mmx6mm,3mtrsG.I,stripsfromG.I.platetoearthterminal including brazing / welding at plate etc. (d)Supplyingandlayinginposition19mm,2mtrsG.I.'B'classpipeforwatering.with reducer/funnel with mesh. (e) Supplying and laying 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. Coverofsize12"x12"complete as per sitereq.and marking its value and identification etc.	3	Nos		
d	Providing and fixing of Copper / GI strips in surface or in recess for loop earthing etc. as required.				

i	25 mm x 3 mm copper strip with proper clamps	10	Mtr		
ii	25 mm x 5 mm GI strip	30	Mtr		
iii	Supply & 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.(Dedicated Earthing for UPS output DB only)	90	Mtr		
e	OCCUPANCY SENSORS:- 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		
13	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 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	10	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		
14	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 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	14	Nos		
b	Providing and fixing Patch Panels 30 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 complete with connector on both side.)				
i)	for 1 Mt. long	14	Nos.		
ii)	for 2 Mt. long	14	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		
15	TV POINT:- 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		
16	Supply and installation of Vinyl sticker for on Electrical DBs like, " Switch Off at Night" , Switch Off For Safety, etc	10	Nos		
17	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		
	Description of light /fan fixture				
18	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	30	Nos		
19	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,	32	Nos		
20	LED DOWNLIGHTER: SURFACE MOUNTED FOR FRONT SIDE (EXTERNAL) 15 Watt, surface mounted circular/square down lighter , 6" dimension with complete its electronic driver are as under:- PHILIPS, WIPRO, HAVELLS, CG	2	Nos		
21	LED Spot Light, 3 Watt, 2/3"(Inches) size as per site requirement. PHILIPS, WIPRO, HAVELLS, CG	6	Nos		
22	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	90	Mtr		
24	Providing & fixing of "Digital Clock" /Digital Panel indicating Time, Day, Date, Temperature at outside of big size, Ajanta 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		
24	BOX TYPE LUMINAIRES: LED TUBE FITTINGS, 1200mm, 18/20 Watt - PHILIPS/WIPRO/HAVELLS/CG	12	Nos		
25	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		
26	CEILING FAN: FIVE 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 ("S" TYPE M.S. FAN HOOKS & STEEL DOWN RODS:- Supply & Fixing of M.S. Down Rods up to 1.00Mt. length) :- CG/ USHA/ ORIENT/ HAVELLS	15	Nos		
27	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	2	Nos		

28	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 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		
30	Electronic Timer for auto swith on/off to U.P.S. Room Exhaust Fan & Glow Sign Board for 4Hr/8Hr. Make:- Legrand, L&T, and other Eq. ISI make	1	Nos		
AIR CONDITIONING PIPE, DRAIN PIPE & CABLE					
1	Supplying and drawing of control cum transmission cable of size 4 core X 2.5 sqmm PVC insulated copper conductor cable in the suitable PVC conduit for connections from I/D Unit to O/D unit complete as reqd.	90	R Mtr.		
2	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	40	R Mtr.		
3	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	50	R Mtr.		
4	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	70	R Mtr.		
5	Providing & fixing of 4 KVA Voltage stabilizer with time delay option including all accessories with installation at site (For 1.0/1.50 Tr Split AC) Make:- Microtek, V-Gards (Voltage Range 150- 280 Volts)	4	Nos		
6	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)	4	Nos		
Sub Total : Part B (Electrical & A.C. Piping Works)					
Total : Part (B)					
Note:- The rates quoted includes all other taxes,duties, loading, unloading,transportation,other expenses etc to site.					
GST will be paid additionally as applicable					
		Seal & Signature of Contractor			