BOQ OF RENOVATION OF ELECTRICAL & AIR CONDITIONING WORKS OF "S.B.I." SECL BRANCH, RBO KORBA, C.G.

S.No.	Description of Item	Qty	Unit	Rate	Amount
C	Part C : Electrical Works :				
1	ELECTRICAL WIRING				
1					
a	Providing and fixing of point wiring with above specifications. One light point controlled by one switch. Providing and fixing of point wiring with same above specifications. Two	64	Nos.		
b	light points to be controlled by one switch.	10	Nos		
С	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.	14	Nos.		
d	providing and fixing 6 Amps Plug Points with same specs as above and install along with same light switchboard	12	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	8	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 I/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 beolw)		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 I/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)		Nos		

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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 I/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)		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)		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 Enclosur 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)		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.	'	1403		
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.	10	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.	10	Nos		
8	UPS OUTGOING & OTHER FRLS WIRING, As Per Requirment.		_ 1	·	
(a)	3 x 10 Sqmm copper multistreand FRLS wire in 25 mm 16 SGW (MMS) steel conduit.(UPS INPUT DB TO UPS)	20	R.Mtr		
(b)	3 X 1.5 Sqmm copper multistreand FRLS wire in suitable size of 16 SWG (MMS) steel conduit.	5	R.Mtr		
(c)	3 X 2.5 Sqmm copper multistreand FRLS wire in suitable size of 16 SWG (MMS) steel conduit.	5	R.Mtr		
(d)	3 X 4 Sqmm copper multistreand FRLS wire in suitable size of 16 SWG (MMS) steel conduit.	5	R.Mtr		
(e)	5 X 4 Sqmm. Copper multistrend FRLS wire in suitable size of 16 SWG (MMS) steel conduit (For Cassettee AC)	40	R.Mtr		
(f)	3 X 6 Sqmm copper multistreand FRLS wire in suitable size of 16 SWG (MMS) steel conduit.	30	R.Mtr		
9	DISTRIBUTION BOARDS				
	All MCB to be "C" series				

A	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. Glande 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. FP.200 Amp, 25 KA MCCB with thermal magnetic trip unit WITH Digital Voltmeter & Digital Ammeter sutiable size of CTS, selector switches etc. C. OUTGOING SWITCHGEARS: (i) 1 Nos- 125Amp 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	
В	Supply & Installation of SDP(Surge Protector Devicve) for general protection of main Distribution Board Legrad Make Cat No. 412247 (3P+N), 40 KA, T2-Imax 40KA/pole with complete wiring.		Nos	
С	Providing & fixing 8 way vertical load line double door D.B for AC with 125 Amp. TP MCCB incomer and outgoing to be 7 Nos 32 amp TP MCB, 3 Nos 32 amp SP MCB (First Floor)		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.		Nos	
Е	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	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		Nos.	
Н	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)		Nos.	
10	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.		Nos	
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:- (ii) PVC/XLPC Armoured cable:- Finolex, Havells, RR cable, CCI(Cable Corp. of India) (iii) Cable Termination:- Dowells, Comet			
a)	3.5 X 70 Sq.mm XLPE. Al. armoured Cable(AC VTPN & BUS BARS)/ Main Cable	15	Mtr	
	3.5 X 50 Sq.mm XLPE. Al. armoured Cable(AC VTPN & BUS BARS)/Main cable	30	Mtr	
	4X 25 Sq.mm XLPE.Al.armoured Cable (POWER/LIGHT/UPS)	40	Mtr	
d)	4X 16 Sq.mm XLPE.Al.armoured Cable (LIGHT/UPS)	40	Mtr	
12	EARTHING			
(i)	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 12" X 12" complete as per site requirment.		Nos	
(ii)	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. (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.		Nos	
(iii)	connection to earth electrode revetting/ sweating/ soldering, burying 15 cms below in all types of soil/ rocks etc complete as requiued. (a) Copper Strip 25 X 5 mm		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.(Dedicated Earthing for UPS output DB only)	40	Mtr.	
13	TELEPHONE POINT			

(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 tele-phone cable upto 35 meter length or less as per site condition with shutter modular type Telephone Outlets (RJ-11) wth suitable size MS / PVC modular boxes and it laying, fixing, testing & 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 shuold 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	6	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	
	Supply, installation, testing and commissioning of the following size jelly	'	1403	
(iii)	filled armoured tehephone cable. 20 pair	40	Mtr	
14	DATA CABLING FOR LAN Providing, fixing, testing and commissioning of all nodes of four pair UTP			
а	CAT 6 LAN cables length upto 30 meter length or less as per site conditionin 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		Noo	
	Providing and fixing Patch Panels 24 port (100 base TX) CAT 6 patch/jack	10	Nos	
b	panel with connector, out lets and necessary connectivity complete as required & (D-Link make) $$	1	Nos	
С	Providing and fixing Patch Panels 16 port (100 base TX) CAT 6 patch/jack panel with connector, out lets and necessary connectivity complete as required & (D-Link make)	1	Nos	
d	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 necessarycomplete. 9 U wall mounted RACK	1	Nos	
е	Providing and fixing of flowing factory fabricated Patch cords. (UTP/CAT 6 complte with connector on both side.)			
i)	for 1 Mt. long	10	Nos.	
ii)	for 2 Mt. long	10	Nos	
f	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.	30	Mtr	
15	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		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 entier Electrical work ower/ UPS/ Light/ Data/ Telephone/ AC etc.) as advised by the Bank's Authority.	1	Lum sum	
	Description of light /fan fixture	'	Gain	
18	LED LUMINARES:- 2' x2' (FULL GLOW TYPE) LED light fittings (600 X600mm) dimension suitable for grid/gypsum ceiling complete with its electrionic 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:- CRC010RO 38 HP57 HAVELLS:- LHECDIL7IL1W036 (Edge- Lit) CG:- LCTAR3-40-CDL			
		20	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,	24	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	4	Nos	
21	LED Spot Light, 3 Watt, 2/3"(Inches) size as per site requirment. 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	65	Mtr	
23	Providing & fixing of "Digital Clock" /Digital Panel indicating Time, Day, Date, Temperature at outside of big size,(Ajanta - OLC-1070) as suitable over the facade as advised by the Bank with standard power back up. Make:- Ajanta, Titan	1	Nos	
24	BOX TYPE LUMINAIRES: LED TUBE FITTINGS, 1200mm, 18/20 Watt make: PHILIPS/WIPRO/HAVELLS/CG	15	Nos	
	External Street LED Light- Providing & Fixing of 30 watt LED light fixture,	-		
25	pressure die cast aluminium housing, heat resistant glass, IP 65 protection	4	Nos	
26	& better optics for uniform distribution. PHILIPS, WIPRO, HAVELLS, CG CEILING FAN: Supply, Installation, Testing and Commissioning of 1200 mm sweep, BEE 5 star rated, ceiling fan with Brush Less Direct Current (BLDC) Motor, class of insulation: B, 3 nos. blades, 30 cm long down rod, 2 nos. canopies, shackle kit, safety rope, copper winding, Power Factor not less than 0.9, Service Value (CMM/W) minimum 6.85, Air delivery minimum 215 CMM, 350 RPM (tolerance as per IS: 374-2019), THD less than 10%, remote or electronic regulator unit for speed control and all remaining accessories including safety pin, nut bolts, washers, temperature rise=75 degree C (max.), insulation resistance more than 2 mega ohm, suitable for 230 V, 50 Hz, single phase AC Supply, earthing etc. complete as required. Each, White Make:CG/USHA/ ORIENT/HAVELLS 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 complete in all respect make as under: CG/USHA/		Nos	
	ORIENT/HAVELLS/ALMONARD/ALSTOM	5	Nos	

28	WALL FAN:-(Only Metallic Body) 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	
С	Sub Total : Part C (Electrical Works)	_		
	De 4 De 14 Octobre de 180 de 1			
D	Part D : Air Conditioning Works :			
	AIR CONDITIONING Supply, installation, testing and commissioning of following AIR CONDIRIONERS 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.			
1	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 min. 22 G upto 3 metres with class "o" Nitrile insulation		Nos	
2	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.		R Mtr.	
3	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		R Mtr.	
4	Drain Pipe (If Required additional) Applicale 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		R Mtr.	
5	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)		Nos	
6	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 mechinory, ply & electrical work.		Nos	
D	Sub Total : Part D (Air Conditioning Works)			
	Sub Total : Part C (Electrical Works)			
	Sub Total : Part D (Air Conditioning Works)			
	Sub Total :(C+D)			
	E- Buy-Back Items: Tables, counter, side table, Partitions. as per the direction/ instructions of Bank Engineer/RBO-Korba	-1	Nos.	

Seal & Signature of Contractor			r
	Seal & S	Seal & Signature	Seal & Signature of Contractor