

TENDER & SPECIFICATIONS OF PROPOSED ELECTRICAL WORKS AT SBI NIT BRANCH, RAIPUR (C.G.)					
S.No.	DESCRIPTION OF ITEM	Unit	Qty	Rate	Amount
	ELECTRICAL WIRING WORK				
	Note: Use of Flexible conduits & Elbows in Circuit wiring is not allowed except in exceptional site conditions with the approval of Bank's Engineer / Architect and All wiring laying in the MS/PVC conduit strickle follow IE (Indian Electricity) rules, IS code, follow in all items of project/ work execution. Proper ferrules, lux, thimble, gland termination to be done in all cabling & wiring from both load/source end. Conduit carrying submain will not carry circuit/point wiring. Similarly conduit carrying circuit wiring will not carry submain/point wiring. Conduit carrying point wiring will not carry submain/circuit wiring. All Electrical works (Cabling/wiring/panel etc) to be carried out as per layout/General Arrangement Drawing attached.				
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 FR 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 requirment 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 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. 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/chiesling, replastering, curing, painting with uniform and				

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	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				
a	Providing and fixing of point wiring with above specifications. One light point controlled by one switch.	Nos.	50		
b	Providing and fixing of point wiring with same above specifications. Two light points to be controlled by one switch.	Nos	25		
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.	Nos.	17		
d	providing and fixing 6 Amps Plug Points with same specs as above and install along with same light switchboard	Nos	18		
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	Nos	18		
2	6 AMP. POINTS ON SEPARATE BOARD :				
	Supply, fixing, testing and commissioning of 1 No 6 A Multi Socket with 1 No. 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 requirement and as directed. (Minimum two and Maximum three points are loop with one circuit as mentioned below)	Nos	18		

S.No.	DESCRIPTION OF ITEM	Unit	Qty	Rate	Amount
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 requirement and as directed. (Maximum two points are loop with one circuit as mentioned below)	Nos	18		
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 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)	Nos	34		
5	AC Point				
a.	Supply, Installation, Testing and commissioning of the surface / recess mounting A.C. Cassette power point with the followings : Metal enclose One way with one Nos 32 Amp SP 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	Nos	11		
	with one circuit as mentioned below.				

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6	CIRCUIT WIRING :				
	Supplying, providing circuit wiring for Power/UPS with following PVC insulated copper conductor single core multi stranded wire (HRFR) in mentioned conduit i/c electrical connections in 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 MS conduit with conduit accessories like bend/junction box/ fan box etc with cover plate, sheet steel box/ PVC modular box etc on surface/ concealed manner i/c electrical connections and making good 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. The length of circuit upto 30 meter length or less as per site condition/requirement. Make of material (i) MS conduit/PVC conduit with all accessories:- BEC/AKG/NIC/Precision (ii) PVC insulated copper wire (FR) 650V/1100 V grade:- Finolex/RR cable/ Havells				
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.	Nos	18		
b	3 X 4.0 sqmm (For AC/Power Circuit) in suitable size of 16 SWG (MMS) steel conduit as per IS code.	Nos	20		
7	UPS Outgoing & Other wiring as per requirement.				
(a)	3 x 10 Sqmm copper multi strand wire in 25 mm 16 SGW (MMS) steel conduit. (UPS INPUT DB TO UPS)	R.Mtr	20		
(b)	3 X 1.5 Sqmm copper multi strand wire in suitable size of 16 SWG (MMS) steel conduit.	R.Mtr	20		
(c)	3 X 2.5 Sqmm copper multi strand wire in suitable size of 16 SWG (MMS) steel conduit.	R.Mtr	10		

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(d)	3x4 Sqmm copper multi strand wire in suitable size of 16				
	SWG (MMS) steel conduit.	R.Mtr	10		
(f)	3 X 6 Sqmm copper multi strand wire in suitable size of 16 SWG (MMS) steel conduit.	R.Mtr	25		
8	DISTRIBUTION BOARDS				
	All MCB to be "C" series				
a	Supply, installation, Testing and commissioning of the surface/recess mounting following ways MCB DB's 230/415 Volts with tinned copper busbar, neutral bar, earth bar, din bar detachable gland plate, interconnection and making good all the damages, painting, cleaning the site etc complete as required as per site requirement. All MCCB has braking capacity is 25KA and ALL MCB/ELCB has breaking capacity has 10 KA. Make of Materials Panel- As per IS Standards/CPRI Tested. DB MCCB/MCB-Legrand/Siemens/Haggar/Schneider only (Note:- Place the Panel order after Bank Authority confirm otherwise it will not be considered)				
b	B.INCOMING SWITCHGEARS :(RYB LED Indicators for Both Main/DG) (i) 1 No. FP.160 A , 25 KA MCCB with thermal magnetic trip unit with digital voltmeter & ammeter with suitable size of CTs, selector switch 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 be considered) should include phase lighting.	Nos	1		
	(iv) Main AC DB Change over 630 A 4 Pole, 415 V, 50Hz)				
	Supply & Installation of SDP (Surge Protector Device) for general protection of main Distribution Board Legrad				
c	Make Cat No. 412247 (3P+N), 40 KA, T2- I _{max} 40KA/pole with complete wiring.	Nos	1		
d	Providing & fixing 6 way vertical load line double door D.B for AC with 125 Amp. TP MCCB incomer and outgoing to be 2 Nos 32 amp TP MCB, 12 Nos 32 amp SP MCB FOR AC	Nos.	1		

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e.	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	1		
f	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.	Nos	1		
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.	2		
h	Providing and fixing of Kit Kat Rewirable Porcelain fuse carrier & base with wooden frame of 200 amp/415 Volt near meter box	Set	1		
i	Providing and fixing compact DB for ATM in size as per requirement, weather-resistant, modular design suitable for outdoor installation. It includes rated voltage (e.g., 415V), rated current (e.g., 100A or higher), busbar material (e.g., copper or aluminum), and protection levels (e.g., IP43 or IP65) with the following features and specification:	set	1		
	Three phase supply from the mains equally distributed to respective load, protected through high quality ELCP/MCP, provision for earthing for both, input and output, wiring for neutral isolation between mains and UPS output, inbuilt timer for alternate AC operation, auto on-off for glow sign board complete in all respect Adhering to relevant Indian standards (e.g., IS:8623).				
9	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				
a	3.5 X 70 Sq.mm XLPE. Al. armoured Cable(AC VTPN & BUS BARS)/Main cable	Mtr	20		
b	3.5X35 Sq.mm XLPE.Al.armoured Cable (POWER)	Mtr	20		

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c	4X25 Sq.mm XLPE. Al. armoured Cable (POWER/LIGHT/UPS)	Mtr	20		
d	4X 16 Sq.mm XLPE.Al.armoured Cable (LIGHT/UPS)	Mtr	30		
10	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 mmX1000mmX2500 mm. (b) Supply and fixing of Copper Plate of Size 600 mmx600mmx3.0 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.	Nos	3		
(ii)	G.I.PLATE EARTH STATION :	Nos	2		
	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.				

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	(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.				
(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 required.				
	(a) Copper Strip 25 x 5 mm	Mtr.	30		
	(b) G.I.Strip 25 x 5 mm	Mtr	20		
(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)	Mtr.	40		
11	TELEPHONE POINT				
	Supplying, Installation, testing and commissioning of the telephone point with the followings				
(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/	Nos	16		
	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				

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(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.	Nos	1		
	(A) 20 Pair tag block				
(iii)	Supply, installation, testing and commissioning of the following size jelly filled armoured tehephone cable.	Mtr	60		
	20 pair				
12	DATA CABLING FOR LAN				
a	Providing, fixing, testing and commissioning of all nodes of four pair UTP CAT 6 LAN cables length upto 15 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	Nos	34		
b	Providing and fixing of flowing factory fabricated Patch cords. (UTP/CAT 6 complte with connector on both side.)				
i)	for 1 Mt. long	Nos.	17		
ii)	for 2 Mt. long	Nos	17		

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h	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.	Mtr	50		
13	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	Nos	1		
14	Supply and installation of Vinyl sticker for on Electrical DBs like, " Switch Off at Night" , Switch Off For Safety, etc	Nos	30		
15	Making & Providing of 3 sets of As built Drawing with coloured print for entire Electrical work (Power/UPS/Light/Data/Telephone/AC etc.) as advised by the Bank's Authority.	Lum sum	1		
16	Description of light /fan fixture				
	Supply and Installation, Testing and commissioning of the following fittings / equipments in surface/recess mounted as directed etc down rods of size upto 300 mm where ever required with ball sockets, anchor fastner etc complete as per site conditions. All fittings should be hang with suitable size of GI wire to four corner of fittings to the RCC rooftop with suitable size of anchor fastner/heavy gauge screw. The necessary arrangement is made by the contractor to install fittings in false ceiling especially 2'X2' and 4'X1' etc. as per instruction of Bank Engg.				
i	LED LUMINARES:- 2'x2'X42W (FULL GLOW TYPE) LED light fittings (600X600mm) 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 Basic rate - Rs. 1950/-	Nos	31		

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ii)	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 Basic Rate - Rs. 600/-	Nos	60		
iii	LED Spot Light, 3 Watt, 2/3"(Inches) size as per site requirement. PHILIPS, WIPRO, HAVELS, CG Basic Rate - Rs. 190/-	Nos	5		
iv	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 Basic Rate - Rs. 190/- per metre	Mtr	120		
v	BOX TYPE LUMINAIRES: LED TUBE FITTINGS, 1200 mm, 18/20 Watt PHILIPS/WIPRO/HAVELLS/CG Basic Rate - Rs. 300/-	Nos	16		
17	CEILING FAN: BLDC Ceiling fan No. of blades-3, Input Voltage 230 V AC + 40V Single phase, Frequency 50 + 2 Hz, Power consumption Maximum 32 Watt, Mounting type Down rod mount (Length 300 + 20mm). The ceiling fan should work in normal regulator operation. Mounting accessories such as nut, bolt, clamp etc. should also be supplied along with the fan. CG/USHA/ ORIENT/HAVELLS make. Basic rate- Rs. 2950/-	Nos	17		
18	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 12mm plywood complete in all respect make as under: CG/USHA/ ORIENT/HAVELLS/ ALMONARD/ALSTOM Basic Rate - Rs. 1550/-	Nos	4		
	TOTAL AMOUNT ELECTRICAL WORKS				