

Canara Bank, Circle Office, Bhubaneswar - Plot No 1556(P), 1561(P), Jagamara, Khandagiri, Bhubaneswar -751030
Phone : 0674-2353123; Email : pecobhu@canarabank.com; Website: www.canarabank.com

B.O.Q FOR ELECTRICAL WORKS AT: BRANCH & ATM AT CANARA BANK, BICHANA BRANCH.

S. NO.	DESCRIPTION OF ITEM	QTY	UOM	RATE (Rs.) (Excl. GST)	AMOUNT (Rs.) (Excl. GST)
CAPITAL EXPENDITURE ITEMS					
C1	ELECTRICAL MAIN PANEL: Supply, delivery, installation, testing, commissioning, of L&T make indoor wall/ floor mounted type distribution boards made out of 2 mm thk. CRCA sheet metal duely acid treated premised & painted with 2 coats of enamel paint compartment arrangement for each equipment & bus bar chamber on the top of the panel running horizontal through out its length duly lamp, vermin proof having provision cable by conduit entry , earthing stud as per specification mentioned below duly factory wired confirming to the relevant ISS & as per special condition of contract, making good the damages M.S. Cubical type Panel board should have hinged door at the front. The panel shall be provided with all accessories & following arrangements complete in all respect & direction of EIC (Before Placing the Panel order, firstly it passed by the Bank Authority, otherwise it will not considered). It shall have the following:	1.00	Job		-
	INCOMER: 1 No.100 Amp. TPN, MCCB (25 KA breaking capacity) with overvoltage protection as incomer for Main supply. Bus bars 150 Amp., 3 phase, 4 strips, 415 volts, 50 Hz. Electrolytic grade Aluminum Bus Bars insulated with colored Heat Shrinkable PVC Sleeves & duly supported on SMC/DMC molded supports with Antitracking barriers. There should be 2 sets of BUS BAR in such a way that AC load should not be connected to GENERATOR power. 100 Amp Onload changeover with 1 Nos 100 amp 25 KA, TP MCCB for DG supply Incomer with 100 amp bus bar. Instruments: TWO set of Digital Multi function Meter (<u>One for Main Power Supply & Other for Generator Supply</u>) of standard make for displaying Input Voltage, Ampere, Power factor, KWH used with CTs. TWO set of Phase indicator lamp (One for Main Power Supply & Other for Generator Supply) Note- 1. All wiring and lugs inside the panel shall be of copper to be fixed using nut-bolt & spring washers. 2. All switchgears shall be properly marked with operaion marks. 3. All MCB to be "C" series				
	OUTGOING: AC DB - 63 Amp TPN MCB - 1 No. (from Non-Generator Powered Bus.) SUPPLY FROM GENERATOR POWERED BUS: 1. INVERTER DB - 63 Amp TPN MCB - 2 Nos. (1+1 SPARE) 2. POWER DB - 63 Amp TPN MCB - 3 Nos. (2+1 SPARE) 3. BRANCH UPS - 63 Amp TPN MCB - 2 Nos. (1+1 SPARE) 4. ATM DB - 40 Amp TPN MCB - 2 Nos. (1+1 SPARE) 5. 6-32 AMP DP MCB. 3 Nos (for Glow Sign board, Strong Room & One Spare)				
C2	DISTRIBUTION BOARDS:				
a	<u>Rotary Phase selector switch - TO BE LOCATED INSIDE UPS ROOM</u>				
	SITC of 40/63 Amp. <u>Rotary Phase selector switch</u> complete with RYB indication in enclosure for <u>Branch's & ATM UPS input power network and Inverter</u> . Complete in all respect as required.	3.00	Nos.		

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b	<u>U.P.S. DISTRIBUTION BOARD (INCOMER DB) - TO BE LOCATED INSIDE UPS ROOM</u>				
	SITC of the surface / recess mounting following way Double door MCB D.B.- Single phase distribution board (Consumer unit) for single phase out going with IP 42 protection incl. the followings accessories - incl. Electrical connection ,earthing, making good all the damages, painting, cleaning the site, etc complete as per site requirement and as directed.				
	INCOMER (Branch UPS)				
	1 NOS 63 A DPMCB				
	OUTGOINGS				
	2 Nos- 40 Amp DP MCB+ 1 Spare				
	SET AS ABOVE	1.00	Nos		
c	<u>U.P.S. DISTRIBUTION BOARD (OUTGOING DB) - TO BE LOCATED INSIDE UPS ROOM</u>				
	SITC of the surface / recess mounting following way Double door MCB D.B.- Single phase distribution board (Consumer unit) for single phase out going with IP 42 protection incl. the followings accessories - incl. Electrical connection ,earthing, making good all the damages, painting, cleaning the site, etc complete as per site requirement and as directed.				
	INCOMER (Branch UPS)				
	1 NOS 40 A DPMCB				
	OUTGOINGS				
	3 Nos- 40 Amp DP MCB+ 1 Spare				
	SET AS ABOVE	1.00	Nos		
d	<u>INVERTER INCOMER & OUTGOING MS BOX - TO BE LOCATED INSIDE UPS ROOM</u>				
	SITC of 40/63 Amp. DP MCB - 1 no. in a MS encloser Single Door complete complete in all respects as required.	2.00	Nos.		
e	<u>LIGHT DISTRIBUTION BOARD</u>				
	SITC of the surface / recess mounting following way MCB three phase distribution board for single phase outgoing with IP 42 protection , direct on wall incl. the followings accessories				
	INCOMER - Incoming Supply from Inverter output				
	1 No. DPMCB 40 Amp				
	OUTGOINGS				
	6-8 Nos SPMCB 6-10 Amp				
	SET AS ABOVE	1.00	Nos		
	incl. Electrical connection ,earthing, making good all the damages, painting, cleaning the site, etc complete as per site requirement and as directed.				
f	<u>POWER DISTRIBUTION BOARD</u>				
	SITC of the surface / recess mounting following way MCB three phase distribution board for single phase outgoing with IP 42 protection , direct on wall incl. the followings accessories				
	INCOMER				
	1 No. TPMCB 63 Amp				
	OUTGOINGS				
	6-12 Nos SPMCB 16/32 Amp				
	SET AS ABOVE	1.00	Nos		
	incl. Electrical connection ,earthing, making good all the damages, painting, cleaning the site, etc complete as per site requirement and as directed.				
g	<u>AC DISTRIBUTION BOARD</u>				
	SITC of the surface / recess mounting following 8 way vertical three phase distribution board for single phase outgoing with IP 42 protection , direct on wall incl. the followings accessories				
	INCOMER				
	1 No. 63 Amp TPN MCB				
	OUTGOINGS				
	4 -6 Nos DPMCB 25 Amp + 1 Nos Spare				
	SET AS ABOVE	1.00	Nos		
	incl. Electrical connection ,earthing, making good all the damages, painting, cleaning the site, etc complete as per site requirement and as directed.				
h	<u>SITC of 12 WAY SPN Double Door DB complete with 1 No. 40 AMP DP MCB as incomer and 10 NOS. 6-10 AMP SPMCB as outgoing for Branch UPS power distribution to Computer points on Staff Counters / Tables.</u>	1.00	Nos.		

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i	SITC of 8 WAY SPN Double Door DB complete with 1 No. 32 AMP DP MCB as incomer and 6 NOS. 6-10 AMP SPMCB as outgoing for UPS power distribution points for ESSENTIAL LODAS like CCTV System, Fire & Burglar Alarm Systems, Networking Rack, ATM (if separate ATM UPS not available) and select Light points powered by UPS.	1.00	Nos.		
j	SITC of 1 no. 10A DP MCB with MS enclosure Industrial Plug Socket Unit with 1.0 mtr long 3 core 2.5 Sqmm Copper flexible cable for strong room power supply switch board installed at STRONG ROOM entrance Gate complete in all respect as required.	1.00	Nos.		
k	ATM DISTRIBUTION BOARD (ATM DB) - to be place in ATM Back Room				
	SITC of the surface / recess mounting following way MCB three phase distribution board for single phase outgoing with IP 42 protection , direct on wall incl. the followings accessories				
	INCOMER - Incoming Supply from Main Panel				
	1 No. DPMCB 40 Amp				
	OUTGOINGS				
	10 Amp SP MCB - 3 Nos. (ATM light)				
	2 Nos DPMCB 25 Amp + 1 Nos Spare (ATM AC)				
	SET AS ABOVE	1.00	Nos		
	incl. Electrical connection ,earthing, making good all the damages, painting, cleaning the site, etc complete as per site requirement and as directed.				
C3	FIXTURES/FANS (All light fixtures and fans to be supplied COMMERCIAL MODELS only)				
a	SITC of 36W 2' X 2' Square decorative LED light fitting of approved model & make. (contractor to get the model approved from bank before installation)	13.00	Nos.		
b	SITC of surface mounted 40W LED batten light including required hanging arangement wherever required	6.00	Nos.		
c	SITC of 10W LED Down Lighter of approved make	23.00	Nos.		
d	SITC of 5-7W LED COB / Spot light of approved model & make (contractor to get the model approved from bank before installation)	4.00	Nos.		
e	SITC of 450mm Wall Mounted full metal body Fan of approved make.	8.00	Nos.		
f	SITC of 1200mm / 900mm Ceiling Fan of approved make with required down rod and hanging arrangement	1.00	Nos.		
g	SITC of 9" metal body exhaust fan of approved make.	3.00	Nos.		
TOTAL CAPITAL EXPENDITURE ITEM (B) (Rs.)					
REVENUE EXPENDITURE ITEMS					
R1	SITC of 3 Nos. Kit Kat Rewirable Porcelain fuse carrier & Base with neutral link on wooden frame of 160 amp/415 Volt near meter Box complete with connections complete in all respect to the satisfaction of Bank.	1.00	Set		
R2	Supply & Installation of SPD (Surge Protector Devicve) for general protection of main Electrical Panel Legrad Make Cat No. 412247 (3P+N) , 40 KA, T2- Imax 40KA/pole with complete wiring.	1.00	Nos.		
R3	CABLES				
	All cables / wires shall be routed through PVC conduits / bends / elbows etc., as required, of appropriate dia. The conduits shall be clamped firmly to the walls / columns / pillars etc. with clips / clamps and fasteners rigidly even if above false ceiling.				
	Complete job shall include cutting chiseling in walls, floor and making good of all chases / cuts etc. with combination of cement-mortar, including painiting with type and shade of existing wall. The work shall be completed to the satisfaction of Bank. NO CABLE / WIRE / CONDUIT SHALL BE VISIBLE IN THE BRANCH HALL / CUSTOMER LOBBY / STAFF WORKING AREA.				
a	SITC of 4 Core 25.0 Sq.mm Copper conductor Armoured Cable for service line connection up to Kit kat fuse unit complete in all respect as required.	15.00	Mtr.		
b	SITC of 4 core 6.0 Sq.mm Copper conductor Armoured Cable from Main Panel to INVERTER, LDB, ATM UPS & Branch UPS input power supply.	20.00	Mtr.		
c	SITC of 2 runs of 6.0 Sq.mm and 1 no. of 2.5 Sqmm FRLS PVC Insulated Multistrand Copper conductor wire from selector switch to UPS/INVERTER to UPS/LDB Distribution boards.	30.00	Mtr.		
d	SITC of 4 core 10 Sq.mm + 1 X 4 sq.mm Copper conductor Armoured Cable from main Panel / Non Generator power Bus to AC DB.	15.00	Mtr.		
e	SITC of Sub main Wiring for Strong room and Glow Sign Board with 2 No. 4.0 Sq.mm and 1 No. 2.5 Sq.mm Multistrand Copper conductor FR pvc/ xlpe insulated Wire in required dia pvc conduit complete in all respects as required.	30.00	Mtr.		

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R4	AC POINT (High wall and Cassette)				
a	SITC of AC Point Wiring with 2 No. 4.0 Sq.mm and 1 No. 2.5 Sq.mm Multistrand Copper Wire & Industrial plug & Socket with 10/16 Amp. DPMCB complete in all respect as required by the Bank (for 1.0 / 1.5 TR Hi-Wall Split ACs)	6.00	Nos.		
b	SITC of AC Point Wiring with 2 No. 6.0 Sq.mm and 1 No. 2.5 Sq.mm Multistrand Copper Wire & Industrial plug & Socket with 20 Amp. DPMCB complete in all respect as required by the Bank (for 2.0 TR Cassette ACs). The point shall be placed near outdoor unit.	0.00	Nos.		
R5	EARTHING				
a	Preparation and commissioning of earth pits with PIP technology GEL type 50mmdia 3000mm long earth electrod. (One Dedicated Earthing for ATM UPS, Branch UPS, Data Rack and Main Electrical Panel)	3.00	Nos.		
b	Supply fixing and termination of 32x6 mm G.I. strip with earth station below ground level etc as required.	40.00	Mtr.		
c	SITC of Earthing conductor from earth terminal to load point with 10 sq mm multstrand copper conductor FR pvc /XLPE insulated cable in required dia PVC heavy duty conduit complete in all respect as required.	45.00	Mtr.		
R6	UPS/RAW POWER POINT				
	Computer/Raw Power point wiring in heavy duty PVC conduit of IS specification of proper size with 3nos 2.5sq.mm single core PVC insulated stranded copper wire 1.1KV grade (Finolex/Havells/Polycab/ RR Kabel/ Richa/KEI or equivalent) and with all material supply installation and commissioning complete from UPS DB/PDB (Raw). The wiring shall be carried out on surface above false ceiling by chiseling the existing surface and plastering the same with cement etc. after fixing the heavy duty PVC conduit with all ccessories like saddles screws, bends T-joint etc. 2 coats of painting Matching to the surface including supply installing, testing, commissioning of modular plate type switch and socket (Legrands / Havells or equivalent) for computer terminal on sheet steel enclosure (cadmium plated),duly fitted with screw to the steel conduit and fixed to the wall partition furniture with all interconnection and proper earthing. All the opening shall be covered with blank plate and be sealed to make the box vermin proof.B48				
a	With 3nos 6A socket with single 16A switch. (UPS)	7.00	Nos.		
b	With 2nos 16A socket with individual 16A switch.	2.00	Nos.		
c	With 1nos 16A socket with individual 16A switch. (POWER)	9.00	Nos.		
R7	LIGHT/FAN POINT				
	Wiring for light/fan/exhaust fan points using 3 X 1.5 1.1 kV grade PVC insulated stranded copper conductor wire (Finolex/ Havell's/ Richa/ RR kebel/ KEI or equivalent) for phase, neutral and earth (with proper R,Y,B color code) in 25 mm dia heavy duty PVC conduit along with associated accessories like MS junction boxes, bends, saddles, screws etc. concealed in wall, floor, under flooring, below false ceiling or on surface as well as suspended from ceiling with 25mm X 3 mm MS flat suspenders duly painted above false ceiling from individual light/Fan/Exhaust Fan point outlet. etc. to individual modular type switch boards, 10 Amp modular plate type switches etc.(MK/Legrands/Havel's or equivalent), as required complete including circuit wiring with 3 X 2.5 sqmm. 1.1 kV grade PVC insulated stranded copper conductor wire and as per site requirement and as instructed by Engineer In-Charge.				
a	One light point including the cost of 6A modular switch	23.00	Nos.		
b	Two light point including the cost of 6A modular switch	14.00	Nos.		
c	Three light point including the cost of 6A modular switch	0.00	Nos.		
d	Four light point including the cost of 6A modular switch	0.00	Nos.		
e	Ceiling Fan Point including the cost of 6A Switch along with 5 step electronic fan regulator.	1.00	Nos.		
f	Wall Fan Point along with 6 AMP switch & 3 PIN Socket	8.00	Nos.		
g	Exhaust Fan Point along with 6 AMP switch & 3 PIN Socket	3.00	Nos.		
h	SITC of Call Bell Point & Call Bell.	1.00	Nos.		
i	6A Switch & Plug point in same switch board	4.00	Nos.		
j	Cove light points including the cost of 6A modular switch	8.00	Nos.		
k	16A, 5 pin industrail plug & Socket with 25 A MCB protected (for Strong Room)	1.00	Nos.		
R8	DATA CABLING & POINT				
	Supplying and laying of D-Link make CAT-6 (UTP) cable through trenches / conduits.				
a	Supplying and laying D-link make CAT-6 Cable in P.V.C. Conduit Complete with CAT-6 information outlet with plate & suface Box at individual Tables	0.00	Nos.		
b	Supplying and fixing of 1 mtr long crimped patch cord	0.00	Nos.		
c	Supplying and fixing of 2 mtr long crimped patch cord	0.00	Nos.		
d	Supplying and fixing of 12 U Rack complete with exhaust fan, lockable front glass door, cable managers, electrical socket board etc.	0.00	Nos.		
e	Supplying and fixing of 24 port jack panel	0.00	Nos.		

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R9	VOICE NETWORKING				
a	Supply and fixing of 1 nos. 30 pair telephone MDF consisting of tag blocks, disconnecter type, complete with powder coated metal enclose, krone tag block mounting arrangement telephone distribution chart and locking arrangement [for P&T/EPABX]	1.00	Job		
b	Supplying and laying telephone cables 0.5mm dia 2 pair electrolytic tinned copper conductors PVC insulated and twisted pair with rip cord, including PVC conduits/Racewaysand RJ11 telephone socket outlet. The rate shall include termination at both ends on tag blocks. 2 Nos. RJ11 Telephone socket with plate and box	3.00	No.		
R10	FIRE & ELECTRICAL SAFETY INDICATION				
a	Supply and installation of Vinyl sticker for on Electrical DBs like, " <u>Switch Off at Night</u> ", <u>Switch Off For Safety</u> , etc	4.00	Nos.		
b	SITC of a set of indication lamp set (4 Nos. RED, YELLOW, BLUE & GREEN Color) in a concealed PVC modular box. <i>The Box shall be placed at a suitable location at entrance and it shall be clearly visible in CCTV.</i>	1.00	No.		
c	Wiring in heavy duty PVC conduit of IS specification of proper size with 2 runs of 1.5sq.mm single core PVC insulated stranded copper wire 1.1KV grade (Finolex/Havells/Polycab/ RR Kabel/ Richa/KEI or equivalent) and with all material supply installation and commissioning complete from Computer Counter DB, AC DB, LDB, PDB outgoing to a set of indication lamp set (4 Nos. RED, YELLOW, BLUE & GREEN Color).	40.00	Mtrs		
R11	SITC of Angle holder complete in all respect with 9W LED lamp	4.00	Nos.		
R12	SITC of LED COVE/ STRIP LIGHT WITH ITS ELECTRONIC DRIVER(BLUE COLOUR):- SITC of bright LED strip light with its electronic driver complete as required. PHILIPS, WIPRO, HAVELLS, CG.	50.00	Mtrs		
R13	Supply and laying of ISI mark Electrical safety Insulating mat of dimension 1000mm X 1000mm in UPS Room.	1.00	Nos.		
R14	Making temporary connections and dismantelling & shifting of points all across the Branch and for workstations (Electrical, UPS and telephone) to enable smooth functioning of the branch during renovation all complete as per the instructions of Bank's Engineer/ Architect. Item to include supplying all wires, cables, conduits etc. for the same.	1.00	Job		
TOTAL REVENUE ITEM (A) (Rs.)					
TOTAL (A+B) (EXCL. OF GST)					
In Word:					