

CANARA BANK
INVITATION TO TENDER

ONLY FOR EMPANELLED CONTRACTORS

OF

CIRCLE OFFICE KOLKATA

TENDER FROM ANY OTHER CONTRACTOR WILL BE SUMMARILY REJECTED

INSTRUCTION TO BIDDERS

AND

GENERAL CONDITIONS OF CONTRACT

FOR

ELECTRICAL WORKS

AT

CANARA BANK – RAH DURGAPUR

TENDER NO.: 26/25-26/BDS

NAME OF THE CONTRACTOR:

.....

ADDRESS:

.....

SEAL & SIGNATURE OF TENDERER

NOTICE INVITING THE TENDER

To,

M/s

Sealed tenders on item rate basis are invited from panel Contractors for **Electrical Works at premises of RAH Durgapur.**

Tender Documents may be obtained at free of cost from the Premises & Estate Section, Circle Office Canara Bank, Kolkata during working hours from **01.07.2025 till 08.07.2025.**

Earnest Money Deposit : NIL

Period of completion : 20 days

**Last date, time and place for Submission of tender : On or before 3:00 pm, 08.07.2025 to
The Divisional Manager,
Premises & Estate section
Canara Bank, Circle Office
Kolkata**

Time and date of opening of tender : 3.30 pm on 08.07.2025

The Bank will not be bound to accept the lowest tender and reserves the right to accept or reject any or all the tenders without assigning any reason whatsoever.

**Divisional Manager
Premises & Estate Section
Canara Bank, Circle Office
Kolkata**

.....

Date: 01.07.2025

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GENERAL RULES & INSTRUCTIONS TO TENDERERS

Name of the work: Electrical Works to be carried out at PREMISES OF RAH Durgapur

The rates quoted shall also be inclusive of materials, labour charges, work contract tax, surcharge and all the taxes except GST.

GST WILL BE PAID EXTRA.

The rates quoted by the tenderer shall hold good till the completion of the work from the date of issue of the "WORK ORDER" and no enhancement in the rates are allowed during the period of execution of the work under any circumstances. The rates quoted shall also cover for the work to be executed before and after office hours and also on holidays.

The time stipulated for the completion of the work is 20 days from the date of issue of the WORK ORDER and the work is to be carried out as per the convenience of occupants without disturbing other occupants of the building.

TENDERS:

The entire set of tender paper issued to the tenderer should be submitted fully priced and also signed on the last page together with initials on every page. Initials / signatures will indicate the acceptance of tender papers by the tenderers.

The schedule of quantities shall be filled in as follows:

- The "rate" column to be legibly filled in ink in both English figures and words.
- 'Amount' column to be filled in for each item and the amount for each sub-head as detailed in the "schedule of quantities".
- All corrections to be initialed.
- The "Rate" column for all the items shall be filled up.
- The "Amount" column for the items for which the quantities are not mentioned shall not be filled up.
- In case of any errors / omissions in the quoted rates, the rates mentioned in the tender in words shall be taken as correct rates.

No modifications, over-writings or corrections can be made in the tender papers by the tenderer, but may at his option offer his comment or modifications in a separate sheet of paper attached to the original tender papers.

The Bank reserves the right to reject the lowest or any tender or all of the tenders for each section or to split up and distribute any item of work to any specialist firm or firms, without assigning any reason.

The tenderers should note that tender is strictly on the item rate basis and their attention is drawn to the fact that the rates for each and every item should be correct, workable and self – supporting. If called upon by the bank, detailed analysis of any or all the rates shall be submitted. The architects/bank shall not be bound to accept the contractor's analysis.

The Quantity mentioned in the BOQ is approximate measurements. The works will be paid for as "measured work" on the basis of actual work done and not as "lump sum" contract.

All the items of work described in the schedule of quantities are to be deemed and paid as complete works in all respects and details including preparatory and finishing works involved, directly, related to and reasonably detectable from the drawings, specifications and schedule of quantities and no further extra charges will be allowed in this connection. In the case of lump-sum charges in the tender in respect of an item of works, the payment of such items of work will be made for the actual work done on the basis of lump-sum charges as assessed to be payable by the architects/bank.

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The bank has power to add or delete any work or described in specifications or included in schedule of quantities and intimates the same in writing but no addition, omissions or variation shall be made by the contractor without authorization from the bank. No variation shall vitiate the contract. The bank reserves the right to delete any of the items in the tender without assigning any reasons whatsoever.

The tenderer shall note that his tender shall remain open for consideration for a period of 90 days from the date of opening of tender.

AGREEMENT

The successful contractor is required to sign agreement as may be drawn up to suit the local conditions and shall pay for all the stamps and legal expenses incidental thereto. The original will be kept with the Bank and duplicate with contractor.

EARNEST MONEY AND SECURITY DEPOSIT:

There is NO Earnest Money Required to deposit/ submit along with the bids. Retention Money shall be deducted from the final bill at 5% of the gross value of bill. The Retention amount will be refunded to the contractor 15 days after the end of defects liability period provided he has satisfactorily carried out all the work and attended to the entire defect in accordance with the condition of the contract. No interest is allowed on Retention Money.

A part of the Security Deposit if and as decided by the constituent bank can also be furnished in the form of a Bank Guarantee on the bank other than that of the constituent bank.

CONTRACTOR TO PROVIDE EVERYTHING NECESSARY:

The contractor shall provide everything necessary for the proper execution of the work according to the intent and meaning of the drawings, schedule of the quantities and specifications taken together weather the same may or may not be particularly shown or described therein provided that the same can reasonably be inferred there from and if the contractor finds any discrepancies therein he shall immediately and in writing, refer the same to the Architects/Bank whose decision shall be final and binding.

The rates quoted against individual items will be inclusive of everything necessary to complete the said items of works within the contemplation of the contract, and beyond the unit price. No extra payments will be allowed for incidental or contingent labour and/or materials inclusive of all taxes and duties whatsoever except for specific items, if any, stipulated in tender documents

The contractor shall supply, fix and maintain at his own cost, for the execution of any work, all tools, tackles, machineries and equipments and all necessary scaffolding, staging and lighting by night as well as by day required not only for proper execution and protection of the said work.

The contractor shall take down and remove any or all such scaffoldings as occasion shall be required or when ordered to do so, and shall fully reinstate and make good all matters and things disturbed during the execution of work to the satisfaction of architect/bank.

The contractor shall all times give access to workers employed by the bank or any men employed at site and to provide such parties with proper sufficient and if required, special scaffolding and ladder and provide them lighting as may be required to enable such workmen to inspect the work, lay or fix pipes, electrical wiring, special fittings etc. The quoted rates of tenderers shall accordingly include all these above-mentioned contingent works.

LIQUIDATED DAMAGES:

Should the work be not completed to the satisfaction of bank within the stipulated period, the contractor shall be bound pay the bank a sum calculated as given below by way of Liquidated Damages after the expiry of completion date

.1.00% of the estimated amount shown in the tender per week subject to a ceiling of 10% of the accepted contract sum.

TIME PERIOD FOR COMPLETION: 20 days from the date of award of work.
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FINAL PAYMENTS

The final bill shall be accompanied by a certificate of completion from the Occupant/Bank Officials. Payments of the final bill shall be made after deduction of retention money as specified in clause 9 of these conditions which sums shall be refunded after the completion of the defects liability period after receiving the banks certificate that the contractor has rectified all defects to the satisfaction of the banks. The acceptance of payments of the final bill by the contractor would indicate that he would have no further claims in respect of the work executed.

ESCALATION:

The rates quoted shall be firm throughout the tenure of the contract [including extension of time, if any granted] and will not be subject to any fluctuation due to increase in cost of materials, labour, sales tax, octroi etc, unless specifically provided in these documents.

CONTRACTORS EMPLOYEES:

The contractor shall employ technically qualify and competent supervisors for the work who shall be available [by turn] throughout the working hours to receive and comply with the instructions of the bank officials. The contractor shall engage at least one experienced engineer, as site in-charge for the execution of the work the contractor shall employ in connection with the work persons having appropriate skill or ability to perform their job efficiently. The contractor shall employ local labours on the work as far as possible. No laborers below age of 16 and who is not an Indian national shall be employed on the work. Any laborers supplied by the contractor to be engaged on the work on day-work basis either wholly or partly under the direct order or control of bank or its representative shall be deemed to a person employed by the contractor.

The contractor shall comply with provision of all labour legislation including the requirements of

- a. Payments of minimum wages act
- b. Employers liabilities
- c. Workmen's compensation act
- d. Contract labour (regulation and abolition) act, 1970 and central rules 1971
- e. Apprentices act 1961
- f. Any other act or enactment relating thereto and rules framed there under from time to time

The contractor shall keep the bank saved harmless and indemnified against claims if any of the workmen and all costs and expenses as may be incurred by the bank in connection with any claim that may be made by any workmen.

The contractor shall comply at his own cost with the order of requirement of any health officer of state or any local authority or of the bank regarding the maintenance of proper environmental sanitary condition of the area.

The contractor shall arrange to provide first aid treatment to the laborers engaged on the works. He shall within 24 hrs of occurrence of any accident at or about the site or in connection with execution of work, report such accidents to the bank and also the competent authority where such report is required by law.

The contractor shall obtain all Risk Insurance Policy at their cost within 7 days of commencement of work, for the laborers/workmen working at the site including the work till the work is completed. The policy shall be in the joint name of the Bank and contractor and Bank's name shall appear First.

PAYMENTS:

The contractor, in the form prescribed by the bank shall prepare all the bills and submit the same to Bank with measurement of work. Normally one interim bill shall be prepared each month. Bank may release payment within 15 days of receipt of bills/after check measurement, after deduction of retention money, Income Tax etc. The contractor shall have a competent engineer at site for the supervision of the work.

The contractor shall have to make his own arrangements for watch and ward of the work/building, till the work is handed over to the bank.

The decision of the bank will be final and binding with regard to the quality of work is concerned.

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The contractor is responsible for procuring the required materials for the work and stores the same at site at his cost and risk.

The amount stated in the interim certificate shall be the 75% of total value of the work executed up to date of the bill, less the amount to be retained by the bank as retention money. If the bank has supplied any materials or goods to the contractors, the cost of such materials will be progressively deducted from the amount due to the contractor on accordance with the quantities consumed in the work. All the interim payments shall be regarded as payments by way of advance against the final payment only and not as payments for works actually done and completed and shall not preclude the requiring of bad, unsound or imperfect or unskilled work to be removed and taken away and reconstructed or re-erected or be considered as an admission of the due performance of the contract or any part there of if any respect or accruing of any claim nor shall it conclude, determine of effect in any way the power if the bank under conditions or any of them add to the final settlement and adjustment of the accounts or otherwise or in any other way or affect the contract.

The contractor shall submit the final bill within one month from the date of completion of the work. A certificate of completion from the bank shall accompany the final bill. The payment of the final bill shall be made after deduction of retention money as specified elsewhere in these documents.

ARBITRATION:

All disputes or differences of any kind whatsoever which shall at any time arise between the parties here to touching or concerning the works or the execution or maintenance thereof of this contract or the rights touching or concerning the works or the execution of maintenance thereof of this contractor or the construction remaining operation or effect thereof or to the rights or liabilities of the parties are arising out of or in relation thereto whether during or after determination foreclosure or branch of the contract[other than those in respect of which the decision of any person is by the contract expressed to be final and binding] shall after written notice by either party to the contract to the other of them and to the employer hereinafter mention to deal referred for adjudication to a sour arbitrator to be appointed as hereinafter provided.

For the purpose of appointing the sole arbitrator referred to above, the employer will send within 30 days of receipt of the notice, to the contractor a panel of 3 names of persons who shall be presently unconnected with the organization for which the work is executed.

The contractor shall on receipt of the names as aforesaid, select, anyone of the person's name to be appointed as a sole arbitrator and communicate his name to the employer within 30 days of the receipt of the names. The employer shall thereupon without any delay appoint the person as the sole arbitrator. If the contractor fails to communicate such selection as provided above within the period specified, the competent authority shall make the selection and appoint the selected person as the sole arbitrator.

If the employer fails to send to the contractor the panel of 3 names as a foresaid within the period specified, the contractor shall send to the employer a panel of 3 names of persons who shall be unconnected with either party. The employer shall on receipt of the name as a foresaid select anyone of the person's names and appoint him sole arbitrator. If the employer fails to select the person and appoint him as a sole arbitrator within 30 days of the receipt of the panel and inform the contractor accordingly, the contractor shall be entitled to appoint one of the persons from the panel as the sole arbitrator and communicate his name to the employer.

If the arbitrator as appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever another sole arbitrator shall be appointed as aforesaid.

The work under contract shall, however, continue during arbitration proceedings and payment due or payable to the contractor shall be withheld on account of such proceedings.

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The arbitrator shall be deemed to have entered on the reference the data he issued notice to both the parties fixing the date of the first hearing.

The arbitrator may from time to time, with the consent of parties, enlarge the time or making and publishing the award.

The arbitrator shall give a separate award of each disputes or difference referred to him. The arbitrator shall decide each dispute in accordance with the terms of the contract and give a reasonable award. The venue of arbitration shall be such place as may be fixed by the arbitrator in his sole discretion.

The fee, if any, of the arbitrator shall, if required to be paid before the award is made and published, be half and half by each of the parties. The cost of the reference and of the award including the fees, if any, of the arbitrator who may direct to and by whom and in what manner, such costs or any part thereof shall be paid and may fix or settle the amount of costs to be so paid.

The award of the arbitrator shall be final and binding on both the parties.

Subject to aforesaid the provision of the arbitration act 1940 or any statutory modification or re-enactment thereof and the rules made there under, and for the time being in force, shall apply to the arbitration proceeding under this clause.

The employer and the contractor hereby also agree that arbitration under the clause shall be a condition precedent to action under the contract with regard to the matters hereby expressly agreed to be so referred to arbitration.

Date:

**Signature of the Contractor
With seal and address**

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SCHEDULE OF ELECTRICAL WORKS TO BE DONE AT ALTERNATE PREMISES OF RAH DURGAPUR	
GENERAL NOTES	
	All equipment and material shall be IS approved. All approvals shall be obtained from Client / Consultant. All equipment and material shall be inspected at manufacturer's works as per relevant IS by the Client or his representative before despatch to site. All vendor drawings shall be approved by the Client / Consultant before fabrication work starts. All Testing and Commissioning shall be as per relevant IS for equipment and IS:732:1989 for the installation. All testing records are to be maintained and submitted for Client's representative.
A.	CIRCUIT CUM POINT WIRING
1	All wiring (P,N,E) shall be 1100 volts grade, FRLS PVC insulated stranded copper conductor wires, single or multi core as called for.
2	All Switches & Sockets shall be of modular design complete with modular plate and suitable sized GI/ moulded boxes as called for and shall be suitable up to 250V, AC / DC supply or as specified, with M.S box at the back.
3	The rates for all point wiring items shall also include supplying and fixing of the following:
4	The recessed Switches & Socket outlet boxes shall be of 16G GI and of the same make / manufacturer as of the switches & sockets. Local make boxes are not to be used.
5	Conduits, shall be PVC (AKG / BEC Make).
6	All circuit & point wiring shall be colour coded & shall have ferruling on either end for circuit identification.
7	All work necessary for wiring a point circuit of any length from the Final Distribution Board to connector via switch and shall include the circuit wiring also except where identified.
8	The rates shall include material & labour for necessary length of circuit and point wiring, earth wiring, rigid and flexible conduiting, bends, junction boxes, pull boxes, screws, washers, check nuts, couplers, saddles, hangers supports, GI pull wire, civil work comprising chipping, cutting chases, fixing conduits & making good or surface clamping of conduit work as the case may be, modular switches, socket outlets, Electronic fan regulators surface or recessed outlet boxes as the case may be, ceiling rose, rigid and flexible conduit (PVC / GI/ MS) as may be required, connectors and terminal blocks of proper rating etc. & sleeves etc. including lugs/ thimbles for terminations.
9	Switch, socket outlet and necessary blank plates wherever required.
10	PVC insulated copper conductor stranded flexible wire of Green colour with yellow bands for earthing of fixtures, outlet boxes and third pin of socket outlet.
11	All wires shall be PVC insulated FRLS copper conductor stranded flexible 1100 volts grade and shall be of approved make.
12	All sockets shall be shuttered type and with earth terminal.
13	Suitable rating of plugs top shall be provided for all splash proof industrial socket outlets.

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14	Separate neutral and earthing wire shall be provided for each circuit.				
15	Lighting and power circuit to be kept separate.				
16	Wiring shall include conduiting and wiring (Phase, Neutral, Earth) of light points/ fan points / UPS and raw sockets outlets of any length from the distribution board via switch to the point.				
Sr. No.	Description	Unit	Qty.	Rate	Amount (Rs.)
A	DISTRIBUTION BOARD				
	Providing, installing, testing & commissioning of surface/recessed mountings, Double door 415 volts TPN MCB distribution board of steel steel, 1.6mm thick dust phosphatized and painted, inclusive of 100 amps, finned copper busbars, earthbar, common neutral link, din bar for mounting of MCB's detachable gland / knock out plate & with built in loose wire box , and superior make terminal connectors for all incoming and outgoing circuits duly prewired with adequate size of PVC insulated copper wires between the bus bars and the MCB's as well as the incomer and upto the terminal connectors/ neutral link and ready for installation of following ways as required.				
	Use 'B' curve MCB's for lighting & small power circuits, 'C' curve for motor duty i.e. for pumps, AC motors, AHU motors, split /casette AC's etc. & 'D' curve for UPS DB's i.e. for computers/ PC's circuit. Main incomer & outgoing circuit MCB's shall be selected accordingly i.e. type B,C & D. Contractor to select the MCB's accordingly as per the nature of the circuit/ load.				
	Each DB shall have separate neutral links of rating not less than 100A for each phase. The main incoming neutral link shall be in addition to three outgoing neutral links and shall be of 125A.				
	UPS DB's shall have a dedicated Earthing link fixed on insulated supports, which will be in addition to body earth link.				
	All internal inter connecting wiring with in the DB's shall be PVC insulated flexible copper conductor FRLS wires of adequate capacity as per the current rating.				
a	12-way TPN DB (POWER DB)	No.	1		
	Incomer :-				
	1 No.63 Amp TPN (10 KA) MCB with 40A DP RCCB (30MA) each phase				
	Outgoing :-				

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	30 Nos.16/20Amp (10 KA) SP MCB,				
b	12-way TPN DB (LIGHT DB)	No.	1		
	Incomer :-				
	1 No.40 Amp TPN (10 KA) MCB with 32A DP RCCB (30 MA) each phase				
	Outgoing :-				
	24Nos.10 / 16Amp (10 KA) SP MCB,				
c	12-way TPN DB (UPS DB)	No.	1		
	Incomer :-				
	1 No.63 Amp TPN (10 KA) MCB				
	Outgoing :-				
	24 Nos.10 / 16Amp (10 KA) SP MCB,				
d	10 way SPN DB (Emergency DB for server)				
	8Nos. 10 -16Amp. SP MCBs as outgoing and 40Amp DP MCB with as incomer.	Nos.	1		
1	Supply, installation, testing and commissioning of 1.6 mm th. sheet metal enclosed 100 A TPN MCCB (25 KA) for 20 KVA UPS. (This shall include cable entry boxes both for incoming and outgoing cable)	Nos.	1		
2	Supply, installation, testing and commissioning of 1.6 mm th. Weather proof sheet metal enclosed 100A TPN MCCB (25 KA).for 20 HP OUTDOOR UNIT .(This shall include cable entry boxes both for incoming and outgoing cable) degree of protection IP : 65	Nos.	1		
3	Supply, installation, testing and commissioning of 1.6 mm thickness weather proof polycarbonate enclosures fitted with 32A DP MCB for A.C(Hensel Make) degree of protection IP : 66	Nos.	1		
B	MAIN PANEL AND METER BOARD (CPRI APPROVED)				

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	<p>Designing, fabrication, supply, installation, testing and commissionings of front operated cubicle type compartmentalised, front access, free standing on 75MM "I" MS channel, dust and vermin proof (IP 42 degree protection) panel suitable for use at 415V, 3 phase, 4-wire 50Hz system suitable for fault level of required value symmetrical at 415V fabricated from 2mm thick CRCA MS sheets with hinged, gasketted (Metal based neoprene) locable doors having structural reinforcement including 3mm thick gland plates on top and bottom, lifting hooks, GI earth strip of required size with 2 nos earth terminals, 2 nos 230V AC operated 250mm X 250mm size axial fans for exhaust of heat with On-Off toggle switches including 2 coated primer and 2 power coated paint finish of approved shade over metal surface cleaned and treated with seven tank process complete with seven tank process complete with interconnections etc as per specifications as required.as per the following specifications, (Part IV - Sub-station) and IS: 8623 comprising of followings panel mounting switchgears etc. as required,</p>				
	<p>All switchgears shall have provision for entry of cables from the top or bottom through Cable Alley.</p>				
	<p>All live accessible parts shall be shrouded and all equipment shall be finger touch proof. The busbars insulation shall be with heat shrinkable sleeves SMC/DMC shrouds and busbar supports shall be used. Padlocking facility shall be provided on all outgoing feeders doors and switch handles shall be locable in OFF position.</p>				
	<p>Suitable arrangement shall be made for termination of multiple incoming cables.</p>				
	<p>All kA values indicated shall be ICS breaking capacity</p>				
	<p>Panel :- CPRI approved</p>				
A.	<p>The ELEC PANEL -1 (Light ,Power & AC) shall consists of :-</p>				
	<p>INCOMER</p>				
	<p>1no. 160 Amp 4P On Load ACOS (Automatic Change over switch) with 1 No. 160 Amps,TPN MCCB (35 KA) with extendible rotary handle each thermal over current, instantaneous, Short circuit releasE,Earth fault.</p>				
	<p>BUSBARS</p>				

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	200 amps TPN pole busbar chamber of suitable length with copper busbars. All busbars and interconnections shall be of suitable size copper strips current density of Aluminium shall not be more than 1.6 Amps/sq.mm provide 50% capacity for neutral bus bar.				
	INDICATING PANEL				
	Digital flush type class-1.0 accuracy multifunction meter showing V, A, PF etc. with 3 Nos. current transformers of 160/5A ratio, 15 VA Class-1.0 metering. - 1 sets				
	Red / Green / Amber ON / OFF / TRIP indicating lamps with 2A SP MCB backup protection.				
	1 set of three phase indicating lamps along with 2A SP MCB backup protection.				
	Restricted Earth fault relay with 3 Nos. current transformers of 160/5 ratio, 15 VA Class 5P 10 (Numeric Relay not required.)				
	Undervoltage, Overvoltage & phase reversal relay for persisted voltage of 105-180% & 20-95% of rated voltage. (Numeric Relay not required.)				
	OUTGOINGS :-				
	Capacitor Panel (25 KVAR)				
	One set of (3 Nos.) LED type RYB phase indicating lamps with 2 A SP MCBs for protection.				
	Power factor meter with Automatic P.F.C.R. & CT for unbalanced load - 1 Set.				
	Control MCCBs:				
i.	2 Nos. 32Amp. TP MCB.				
ii.	ON / OFF push buttons (2No. ON & 2 No. OFF)				
iii.	3 No. 20Amp. TP MCB.				
iv.	ON/OFF push buttons (1 No. ON & 1 No. OFF)				
c)	Contactors:				
	Capacitor Duty Contactor with O/L relay for 10 KVAR - 2 Nos.				

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ii.	Capacitor Duty Contactor with O / L relay for 5 KVAR-1no.				
	ON / OFF indication lights for each unit 3 Sets.				
	Auto-Manual Switch - 1 No.				
	P.F. sensing cable & control MCB - Lot.				
	Time delay relay resistance, aux, relays A/M selector switch and necessary control for above.				
	all Capacitors are Heavy duty comprising of (1x 5KVAR + 2x10 KVAR)				
	4Nos 100A TPN MCCB (25 kA) terminals suitable to receive cable on one side and wire connection to Bus bars.				
	1 No 63A TPN MCB (10 kA) terminals suitable to receive 4 x 25 sq mm XLPE armoured copper conductor cable on one side and wire connection to Bus bars.				
	4Nos 63A TPN MCB (10 kA) terminals suitable to receive 4 x 16 sq mm XLPE armoured copper conductor cable on one side and wire connection to Bus bars.				
	4 Nos 63/40 A DP MCB (10 kA) terminals suitable to receive 3 x 6sq mm YFY Cable on one side and wire connection to Bus bars.				
	The SDB in electrical panel as described above and specifications complete.				
c.	The SDB UPS output shall consists of :				
	Located at UPS room .				
Note:-	All MCCB in UPS Distribution Panel Shall be TP + Neutral 200% of rated current with isolation link. There shall be one hole for each cable termination in the busbar link for both phase and neutral.				
	The SDB UPS shall consists of :				
	INCOMER				
	Main Incomer 1no. 100 A TP MCCB (25 KA) and neutral isolation link 200% of rated current. Terminals suitable to receive 5 x 1x 16sq. mm copper cable connection (1 nos per phase and 2 nos. for neutral) on one side and Busbar connection on the other side.				
	BUSBARS				

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	150 amps TP + 2N busbar chamber of suitable length with Copper busbars. All busbars and interconnections shall be of suitable size copper strips current density of copper shall not be more than 1.6 Amps/ sq.mm.				
	INDICATING PANEL				
	3 nos phase indicating lamps (LED type) each backed up with MCB and switch shall be provided for each incomer.				
	OUTGOINGS:-				
	2 Nos. 100 A 4P MCB (10 kA) suitable to receive 4 x 16 sq. mm copper cable. (FOR UPS DB)				
	4Nos. 63 A DP MCB (10 kA) suitable to receive 2 x 16 sq. mm copper cable. (For Server Rack + EMER DB + SPARE)				
	Total complete as described above and specifications complete as required.	Set	1		
C	Cable Tray and Raceways				
1	Fabricating supplying to site of installation on ceiling/ surface 1.6 mm thick G.I. raceways of height 40 mm and 1.6 mm thick openable cover, totally enclosed, between two lengths of channels and junction box shall be nut-bolted together to make it dust and water proof. complete with all fixing accessories as required.The cost shall be including all supporting accessories.				
a.	250 mm (wide) x 40 mm (height)	RM	60		
b.	150 mm (wide) x 40 mm (height)	RM	30		
2	Fabricating supplying to site of installation, 2 mm thick G.I sheet 5 sided junction boxes with 3.0 mm thick MS cover including providing rubber gasket between the cover and the junction box, brass screws height as per site condition and totally enclosed, welded. the channel and junction box shall be seam welded together to make it dust and water proof. Proper cutouts shall be made in the side walls for raceway entry.				
a.	300 mm x 300 mm x 50 mm (height)	Nos.	4		
b.	200 mm x 200 mm x 50 mm (height)	Nos.	4		

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4	Design manufacture , supply and fixing in position the cable trays of the following sizes for supporting 1.1 KV grade armoured/unarmoured aluminium /copper conductor cables. Fabricate the cable trays from perforated 1.6/2mm thick M.S. CRCA sheet duly galvanised with expansion coupler plates duly galvanised, with bolts, washer and nuts. Knock out holes for cable connections as per approved design. The tray should comply with the specification of NEC (National Electric Codes) and NEMA (National Electric Manufacturers Association). The steel should be as per IS:226 and galvanising as per IS :2629/BS 729/ASTM 123. The rate shall also include for supporting steel , fish plates , fixing accessories , nuts bolts, supporting down rods , dash fastener, cutting the RCC etc. complete as required. (The horizontal and vertical bends, T's should be factory fabricated and the rate should include for the same)				
a.	150 mm wide x 40 mm x 1.6 mm thk	RM	50		
b.	300 mm wide x 40 mm x 2.0 mm thk	RM	40		
D	WIRING				
1	Wiring for Light Point with 20 mm PVC pipe with 2 x 2.5 sq. mm + 1 x 1.5 sq.mm insulated copper FRLS wires only ---- 1 x 1.5 sq. mm + 1 x 1.5 sq.mm. for light Points as reqd. complete with modular switch with front plate. All modular boxes should be placed in M.S sheet box at the back.				
a	One light controlled by 6A switch	Nos.	18		
b	Two light controlled by 6A switch	Nos.	10		
c	Three light controlled by 6A switch	Nos.	8		
d	Exhaust fan and Wall bracket point with 6 A sw complete with modular switch plate & M.S conceal box & 3 pin ceiling rose	Nos.	20		
e	Ceiling Fan point complete with modular switch plate & M.S conceal box & 3 pin ceiling rose	Nos.	2		
f	Call bell point with push type switch, modular plate & M.S. conceal box with buzzer or ding dong type bell	Nos.	1		
2	RAW POINT WIRING-The FRLS wiring shall pass through PVC pipe of 20 mm dia with ISI mark to conceal on wall below false ceiling mending good all the damage				

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a	Supply, laying of circuit line 2x2.5 sq.mm +1 x 1.5 Sq.mm PVC insulated copper FRLS wires from MCB type lighting DB to 6 amp plug points (3 nos. 6 Amps plugs to be connected from one circuit line)through HMS grade PVC conduit	Mts.	480		
b	Modular type 6 A switch with 6A 5 pin socket . Mounted on suitable front	Nos.	25		
c	Wiring for Power Point 6/16 A Switch & Socket with 25mm PVC pipe with 2x 4 Sqmm wire + 1x4 Sqmm PVC insulated copper FRLS wires for Power Points as reqd. This line has to be drawn from the power DB. (02 nos. plugs to be connected with one circuit)	Mtr	360		
d	Modular type 6/16 A switch. with 16A ..5 pin socket ,Mounted on suitable front	Nos.	24		
e	Wiring for AC points with 3 x 4 sq mm + 2 x4 sqmm FRLS PVC insulated stranded copper conductor wires in FR PVC conduits in F.ceiling/ walls/ Ceiling as directed including providing 16 amps flush type switches 16 amps 3 pin socket near inline fan, 5 sided G.I. boxes for housing switches and 16 amps 3 pin socket outlet and earthing and complete as required.(including body earth for GI boxes) (3Nos to 4 Nos point in one circuit)	Nos.	6		
f	Wiring for COMPUTER points with 3 x 2.5 sqmm + 1 x 1.5 sqmm PVC insulated ,1100V grade copper conductor FRLS wires in 1.6mm thick FR PVC conduit from UPS DB to computer points.Each point to have 2 nos. 6A 3 pin modular type socket at below the top of table/counter and controlled by one 10/16A modular Switch and one 10A indicator at above the table top in wooden partion with all accessories. Inner / outer plates, metal box etc and to be fixed on wooden partion/ by grouting on wall etc as per site requirement.	Nos.	20		
3	UPS WIRING				
a	Wiring for Power Point 6/16 A Switch & Socket with 25mm PVC pipe with 2x2.5 Sqmm wire + 1x1.5 Sqmm Copper FRLS wires through PVC casing 20 mm dia 16 SWG with ISI mark to lay from UPS MCB DB to plug point board	Mtr	500		
c	Do- but 3 x 6/16 , 6 pin socket with three control switch to provide near HUB Rack and line printer to be connected from UPS power.	Set	1		

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d	Supplying, installation of UPS incoming 32 Amps industrial socket with 32 Amps TPMCB (2 nos. for outgoing and 2 nos. for incoming)	Nos.	4		
E . i	TELEPHONE- LOW VOLTAGE SYSTEM -- EPBX SYSTEM				
1	EPABX System of 32 lines extendable to 48 lines, No. of Junctions - 4, Console Operator-1, ISDN Compatible. Extendable to 64 intercom connection; Internal / External Music on Holding, Operator / Auto-attendant Mode, Remote Programming Day/Night Mode (Manual), Music and Ringing Recordable OGM (outgoing message), Music Duration 20 Seconds Caller ID, Call Transfer, Call Forwarding Manually, Outgoing Call Transfer, Power Failure Transfer, Specific Main Line (CO / Trunk Line) Dialing, Three Way Conference, Do Not Disturb, Auto/Manual Dial-Out Mode Type: Digital, Analog Temperature Range : 0-50 Operating Humidity: 0-95%, Non Condensing	1 no			
2	Battery Backup 12 AH	30 Min			
3	1 pair Cable	100 mtr approx.			
4	10 pair Cable	70 Mtr Appx			
5	5 pair Armored Cable	100 mt. Approx.			
6	20 pair Armored Cable	50 Mtr Appx			
7	10 pair KRONE Distribution Box	1			
9	RJ – 11 I/O Box	As per requirement			
10	3/4" PVC Casing capping with accessories	As per requirement			
11	1" PVC Casing capping with accessories	As per requirement			
12	1 1/2" PVC Casing capping with accessories	As per requirement			
13	2" PVC Casing capping with accessories	As per requirement			
14	PVC Round pipe	As per requirement			
F	FIXTURES WITH ACCESSORIES .				
1	2'-0"x2'-0" 36 W Surface LED (Wipro /PHILIPS/ HAVELLS make)	Nos.	20		
2	Supply and Fixing of 1x20 Watts 4' length Slim Hunging LED Tube Light (Philips/Wipro/ HAVELLS Make)	Nos.	6		

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3	Supply and Fixing of 1x20 Watts 2' length Slim Tube Light for Coffe Lights Philips/Wipro / HAVELLS Make) (toilet)	Nos.	2		
4	Supply and Fixing of Modular Downlighter of 170mm size with 15 watts Led Fixtures. Philips/Wipro / HAVELLS Make	Nos.	20		
5	Supply and Fixing of 9" heavy duty exhaust fan with louvre in toilet / pantry / UPS inclusive of hole cutting in the wall and finished with plastering complete	Nos.	4		
6	Supply and Fixing of Wall Mounted fan with metal blades complete with all fitting and mending good all damages	Nos.	16		
7	Supply and Fixing of Ceiling Hung fan complete with all fitting (regulator) and mending good all damages	Nos.	1		
G	GLOW SIGN BOARD				
1	Supplying, laying of main line with 2 x 2.5 sq. mm + 1 x 1.5 sq. mm through M.S conduit from main panel to glow sign board	Mtr	60		
2	Supplying , fixing of 16 Amps DP MCB at main entrance with Glow sign board timer (24 hours in original housing)	set	1		
H	EARTHING				
1	Providing and fixing in position the following copper / G.I strips in heat shrinkable black colour PVC sleeves for only neutral / dedicated earthing strips and wires including providing, laying in Ground / tray / Conduit pipe with all fixing accessories and effecting proper connections.				
a	G.I tape 25 mm x 6 mm with proper clamps (BODY EARTHING FOR SDB PANEL)	RM	50		
b	Copper tape 25mm x 6 mm with proper clamps	RM	25		
c	Copper wire 8 SWG	RM	180		
d	Copper 12 SWG	RM	80		

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2	Supply, laying, effecting, proper connections, testing & commissioning of the following sizes of 1.1 KV unarmoured PVC insulated PVC sheathed copper conductor cables conforming to IS : 1554 Part I - 1976 with latest amendments laid over MS supports in existing RCC ducts /Laid in ground /laid on Cable Trays including clamping the cables to supports in an approved manner as required complete with all accessories.				
a	1C x 10 sqmm. unarmoured PVC insulated PVC Sheathed copper conductor cable. (For Server rack & UPS Earthing)	RM	50		
b	1 x 6 Sq. mm PVC insulated copper conductor wire (Green Colour) (For ups battery/rack)	RM	40		
3	Supplying and making terminal joints for the following size of 1.1 KV PVC insulated copper conductor armoured cables including providing heavy duty copper terminal crimping lugs, solder, insulation tape, approved sealing epoxy compound, double compression brass cable glands, effecting gland connections and effecting terminal connections to the equipment complete as required.				
	1C x 10 sqmm. unarmoured PVC insulated PVC Sheathed copper conductor cable.	Jt	12		
4	Supply, installation, commissioning and testing of Teksai 343 Cu. Or Equivalent (Pipe-in-Pipe Technology) EC Grade Copper Spec: 3 mtr Long/40 mm dia./2 mm wall thickness /Terminal-32 x 6 mm EC Grade K Type Electrolytic Copper Earthing 92-97% Purity with CI Chamber Cover. (For UPS)	Nos.	2		
5	Supply,installation,commissioning and testing of Teksai 350 GI or Equivalent (Pipe-in-Pipe Technology) Spec:3 mtr Long/50 mm dia/2.89mm wall thickness /Terminal-32 x 10 mm Inner Pipe / Outer pipe 250-100 micron galvanized. With C.I Chamber Cover. Each pit installation test certificate to be submitted after measurement of earth resistance as per the provision in IS3043. (Panel earthing) (For ELECTRICAL PANEL / UPS BODY).	Nos.	2		

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6	Supply, installation, testing and commissioning of sheet metal enclosed 250 x 200 x 150 (D) mm insulated earth distribution board with 1 nos. 32 x 6 mm copper tinned earth bars suitable for 10/12 nos connections complete with all fixing accessories as required.	Nos.	1		
7	Supplying and laying of the following sizes of Medium duty G.I Pipes below paved area including chase cutting and back filling. For earthing				
	75 mm dia	RM	10		
1	CABLES AND CABLE END TERMINATION				
1	Wiring for sub main in FRLS PVC conduit with the following sizes of FRLS insulated, 1100V grade copper conductor wire in surface /recessed on wall/ floor/ ceiling as required.				
a	2 x 10 sq.mm + 1 x10 sq.mm	RM	70		
2	Supply and laying, effecting proper connections, testing & commissioning of the following sizes of 1.1 KV armoured/ unarmoured PVC insulated PVC sheathed aluminium /copper conductor cables conforming to IS :1554 Part I - 1976 with latest amendments laid over MS supports in existing RCC ducts/ laid in ground /laid on Cable Trays including clamping the cables to supports in an approved manner as required complete with all accessories.				
b	4c x 35 sq.mm Al Ar. XLPE cable. (For UPS INCOMER ENCLOSURE)	RM	40		
c	4c x 16 sq.mm Al Ar. XLPE cable. (For Power DB)	RM	50		
d	4 c x 10 sq.mm Al Ar. XLPE cable. (For Light DB)	RM	40		
e	4 c x 10 sq.mm Cu Ar. XLPE cable (For UPS DB)	RM	25		
f	1C x 16 sqmm. unarmoured PVC insulated PVC Sheathed copper conductor cable. (For 20 KVA UPS INCOMER)	RM	25		

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3	Supplying and making terminal joints for the following size of 1.1 KV PVC insulated copper/Aluminium conductor armoured/unarmoured cables including providing heavy duty copper terminal crimping lugs, solder, insulation tape, approved sealing epoxy compound, Single/double compression brass cable glands, effecting gland connections and effecting terminal connections to the equipment complete as required.				
a.	3.5 c x 100 sq.mm Al Ar. XLPE cable. (MAIN INCOMER)	Jt	2		
b	4c x 35 sq.mm Al Ar. XLPE cable. (For UPS INCOMER ENCLOSURE,)	Jt	2		
c	4c x 16 sq.mm Al Ar. XLPE cable. (For AC Outdoor unit & Power DB)	Jt	4		
d	4c x 10 sq.mm Al Ar. XLPE cable. (For LIGHT DB)	Jt	2		
e	4 c x 10 sq.mm Cu Ar. XLPE cable. (For UPS DB)	Jt	2		
f	1C x 16 sqmm. unarmoured PVC insulated PVC Sheathed copper conductor cable. (For 20 KVA UPS INCOMER)	Jt	2		
A	TOTAL EXCLUSIVE OF GST				
B	DISCOUNT IF ANY				
C	TOTAL AFTER DISCOUNT (C = A-B)				
D	GST				
E	TOTAL INCLUSIVE OF GST (E = C+D)				

APPROVED MAKE OF MATERIALS					
1	Switch fuse units (HRC)	LEGRAND / INDO-ASIAN / HAVELLS			
2	Timer (TSQ 100)	L & T / HAVELLS			
3	Voltmeter & Ammeter	A. E. / IMP			
4	Voltmeter & Ammeter selector switches	KAYCEE / L & T			
5	Phase indicating lamp	Vaishno / SIEMENS / ROSS controls			
6	Capacitor	CROMPTON/SIEMENS			
7	HRC fuses	GE power / SIEMENS / L & T / SCHNEIDER			
8	Power Cable : XLPE	GLOSTER/POLYCAB/HAVELLS / NICCO			

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9	HRC fuse base & carriers.	GE power / SIEMENS / L & T / SCHNEIDER		
10	1.1 KV grade PVC insulated armoured aluminium cable (ISI marked)	GLOSTER / NATIONAL / NICCO / HAVELLS		
11	1.1KV / 600V grade PVC insulated & sheathed / insulated copper wire & flexible cords (ISI marked).	FINOLEX / HAVELLS		
12	RCCB / ELCB / MCCB	LEGRAND / INDO-ASIAN / HAVELLS		
13	Moulded case circuit breaker	LEGRAND / INDO-ASIAN / HAVELLS		
14	RCCB / ELCB	LEGRAND / INDO-ASIAN / HAVELLS		
15	Switch fuse with rewirable fuses. (6A & 32A TPN)	LEGRAND / INDO-ASIAN / HAVELLS		
16	Isolator	LEGRAND / INDO-ASIAN / HAVELLS		
17	Changeover switch (on load type)	LEGRAND / INDO-ASIAN / HAVELLS		
18	MCB distribution board	LEGRAND / INDO-ASIAN / HAVELLS		
19	6/16 Amp modular type switch / flushed type plug socket	ANCHOR (Roma) / CRABTREE / INDO-ASIAN		
20	6/16 Amp modular switch / socket, module plate & mounting M.S. / PVC box.	ANCHOR (Roma) / CRABTREE / INDO-ASIAN		
21	16/25 Amp., 2 module electronic regulator	ANCHOR (Roma) / CRABTREE / INDO-ASIAN		
22	Ceiling rose	KAY / EPP / ANCHOR / JJ		
23	Holder	KAY / EPP / ANCHOR / JJ		
24	Alarm bell	KHERAJ / GETCO		
25	Black enamelled Steel conduits (conforming to IS in all respects)	BEC / SUPREME / AKG		
26	Compression type brass gland	DOWELLS / JOHNSON / COMET		
27	Cable termination socket	DOWELL'S		
28	Light fitting & lamps	PHILLIPS / HAVELLS		
29	Ceiling / Wall Mounted Fan (metal blade)	CROMPTON / POLAR / KHAITAN / HAVELL'S		
30	Exhaust fan	CROMPTON / POLAR / KHAITAN / HAVELL'S		
31	Industrial type socket & top	HAVELL'S / CROMPTON / LEGRAND		
32	Telephone wire	FINOLEX / RRR/NATIONAL		
33	Starters	NORTH WEST / CABTREE		
34	All other items not covered above	As per sample approved by Employer/Consultant		

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