# CANARA BANK

# **INVITATION TO TENDER**

### **ONLY FOR EMPANEL CONTRACTORS FOR**

### **ELECTRICAL WORKS**

(CATEGORY A, B, C ONLY)

**OF** 

# **CIRCLE OFFICE KOLKATA**

TENDER FROM ANY OTHER CONTRACTOR WILL BE SUMMARILY REJECTED

**INSTRUCTION TO BIDERS AND** 

**GENERAL CONDITIONS OF CONTRACT** 

**FOR** 

**ELECTRICAL WORKS** 

**AT** 

CANARA BANK – EGRA BRANCH

TENDER NO.: 122/23-24/SP

| NAME OF THE CONTRACTOR: |
|-------------------------|
|                         |
|                         |
|                         |
| ADDRESS:                |
| TIDDICEOUT              |
|                         |
|                         |

# **NOTICE INVITING THE TENDER**

| To,   |     |  |
|---|-----|--|
| M/s   |     |  |
| EGRA BRANCH.  | e o | from panel Contractors for <b>Electrical Works at</b> f cost from the Premises & Estate Section, Circle ursfrom <b>13-02-2024</b> till <b>19-02-2024</b> . |
| Earnest Money Deposit   | :   | NIL  |
| Period of completion  | :   | 20 days  |
| Last date, time and place for<br>Submission of tender                                     | :   | On or before 3.00 pm, 19-02-2024 to<br>The Asst. General Manager,<br>Premises & Estate section<br>Canara Bank, Circle Office<br>Kolkata                    |
| Time and date of opening of tender  | :   | 11.00 am on 20-02-2024   |
| The Bank will not be bound to accept the low any or all the tenders without assigning any |     | et tender and reserves the right to accept or reject ason whatsoever.  |
| Date: 13-02-2024  |     | Asst. General Manager<br>Premises & EstateSection<br>Canara Bank, Circle Office<br>Kolkata<br>   |

### **GENERAL RULES & INSTRUCTIONS TO TENDERERS**

### Name of the work: ElectricalWorks to be carried out at EGRA Branch.

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:

- o 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".
- o All corrections to be initialed.
- o 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.

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 deposite/ submit along with the bids. Retention Money shall be deducted from the final bill at 3% 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, Civil & furnishing 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.

#### 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, octroietc, 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.

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.

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.

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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 reenactment 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       |

|       | II COUEDING OF CHARITITES FOR ELECTRICAL  | AND ALL | ED WORK | · c    |        |  |
|-------|---|---------|---------|--------|--------|--|
|       | II. SCHEDULE OF QUANTITES FOR ELECTRICAL  | AND ALL | ED WORK |        |        |  |
| ITEM  | DESCRIPTION   | QNTY.   | UNIT    | RATE   | AMOUNT |  |
| NO.   |   |         |         | RS. P. | RS. P. |  |
| 2.0   | DISTRIBUTION BOARD  |         |         |        |        |  |
| 2.1   | Supply & erection of 415V, TPN wall mounting DB housed in Horizontal Double door DB box consisting of the following:-                           |         |         |        |        |  |
| 2.2.1 | MDB:  |         |         |        |        |  |
|       | i) Incomer- 1 No - 63A 4P MCB (10KA).   |         |         |        |        |  |
|       | ii) Outgoing- 7 Nos 32 SP MCB (10KA).   |         |         |        |        |  |
|       | (UPS supply and LDB supply)   | 1       | Set     |        |        |  |
| 2.2.2 | PDB / AC DB:  |         |         |        |        |  |
|       | i) Incomer -1 No- 100A 4P MCB Isolator.   |         |         |        |        |  |
|       | ii) Outgoings- 10 nos16/20 SP MCB (10KA).   | 1       | Set     |        |        |  |
|       | ,   | -       |         |        |        |  |
| 3.0   | Supply & erection of 230V SPN Wall mounting DB housed in SPN double door DB box consisting of the following:-                                   |         |         |        |        |  |
| 3.1.1 | LDB:  |         |         |        |        |  |
|       | i) Incomer- 1 No- 32A 2P MCB(10KA)  |         |         |        |        |  |
|       | ii) Outgoing-10 nos6A/10A SP MCB(10KA)  | 1       | Set     |        |        |  |
| 3.1.2 | CDB:  |         |         |        |        |  |
|       | i) 1 no - 25A DP MCB(10KA)  |         |         |        |        |  |
|       | ii) 2 nos 10A SP MCB(10KA)  |         |         |        |        |  |
|       | iii) 6 nos 6A SP MCB(10KA)  | 1       | Set     |        |        |  |
| 3.1.3 | TIMER D.B. FOR UPS BATTERY RM   |         |         |        |        |  |
|       | i) 1 no - 24 Hours Timeswitch( Leg rand / Siemens)  |         |         |        |        |  |
|       | ii) 2 nos. DP contactor, 20A rated( 2 NO)   |         |         |        |        |  |
|       | iii) 2 nos. 16A rated SP MCB (10KA).  |         |         |        |        |  |
|       |   |         | C - 1   |        |        |  |
|       | 2 nos Indicating Lamp( Orange& Red/ Blue) Battery Back up : 1000 hours, Load: 3000 A with LED Display Power                                     | 1       | Set     |        |        |  |
| 4.0   | DISTRIBUTION CABLE / WIRE   |         |         |        |        |  |
| 4.1   | Supply & lay 1.1 KV grade PVCA AL/CU cable on wall having MS /HDP pipe protection near floor level and clamping as required for the following:- |         |         |        |        |  |
| 4.1.1 | 50 Sq mm 4 core Al with 2 nos 10 SWG GI wire  | 40      | Mtr     |        |        |  |
| 4.1.2 | 20 Sq mm 4 core Al with 2 nos 10 SWG GI wire  | 35      | Mtr     |        |        |  |

| 4.1.3 | 10 sq mm 4 core Al with 2 nos 12 SWG GI wire   | 30  | Mtr  |  |
|-------|--|-----|------|--|
| 4.1.4 | 6 sqmm 4 core Al with 2 nos 12 SWG GI wire   | 35  | Mtr  |  |
| 4.1.5 | 2.5 sq mm 2 core CU for UPS Plate Earthing   | 30  | Mtr  |  |
| 4.1.6 | 4 nos. 16 sq. mm. CU flexible wire through GI flexible pipe complete with end termination with CU sockets.  ( Meter loop connection with Main SFU & Busbar)  | 10  | Mtr  |  |
| 5.0   | 16A RAW POWER OUTLET POINT WIRING Wiring for Power outlets from DB with 1.1 KV grade 2x 2.5+1x1.5 PVC insulated copper conductor wire (FRLS) through suitable size PVC conduit complete with 1 no 6/16A socket with 16A control switch in suitable size modular box with front plates (Cabtree Legrand), junction box, circular box elbows etc and all other accessories surfaced on wall above false ceiling and concealed by chase cutting on wall & making connection complete. (Maximum 2 nos. sockets cluster in one circuit connecting by looping method). | 4   | Each |  |
| 6.1   | A.C. POWER POINT WIRING  A.C. power point wiring from PDB with 1.1KV grade 2 nos. single core 4.0 sq. mm + 1 no. 2.5 sq mm ( Green colour for Earthing) PVC insulated copper conductor wire (FRLS )through suitable size PVC pipe on wall / ceiling surface with all wiring accessories. The work includes supply & fixing by chase cutting on wall, North West /Cabtree make Starter 18-25A (MS housed) unit with 25A socket &matching Plug top complete with all interconnections for 1.0/1.5/2 Ton ACs.   | 7   | Each |  |
| 7.0   | Wiring /cabling with 660/1100 V grade PVC insulated multi stranded copper wire/cable(FRLS) through ISI marked minimum 2-20 mm (max) thick PVC conduit with junction box, circular box, elbows, bends, couplers and other accessories concealed (below the false ceiling) or by chase cutting on wall/floor or on surface by bar saddles.   |     | `    |  |
| 7.1.1 | 2X4 + 1X 2.5 sq mm. (FOR Glow sign supply,LDB Supply)  | 150 | Mtr  |  |
| 7.1.2 | 1X6 SQMM CU wire for earthing  | 70  | Mtr  |  |
| 7.1.3 | 2X2.5 + 1x1.5 sq mm. (for UPS & Raw power Circuit &Continous supply for server & CCTV line)  | 230 | Mtr  |  |
| 7.1.4 | 4X6 + 1X 2.5 sq mm. (FOR UPS POWER INPUT WIRING)   | 50  | Mtr  |  |
| 7.1.5 | 2X6 + 1X 2.5 sq mm. (FOR UPS POWER OUTPUT WIRING & Lighting on & Off Invertor line wiring )  | 120 | Mtr  |  |
| 8.0   | POINT WIRING:  |     |      |  |

| 8.1   | Supply & wiring with 3x1.5 sq. mm 1.1 KV grade PVC S/C multistrand CU wire (FRLS) in suitable size PVC conduit & accessories having control board with modular switch mounted on suitable front plate and housed in recessed MS box. The point wiring also include circuit wiring with 1.1 KV grade 2 nos. single core 2.5 sq. mm +1 no. single core ( green colour for Earth) PVC insulated flexible copper conductor wire through suitable size PVC conduit from DB to Switch board, interconnection and mending good all damages to original finish. (Max.8-10 points or 700- 800Watts per Circuit is allowed). |    |       |  |
|-------|--|----|-------|--|
| 8.1.1 | One Light controlled by 6A switch  | 31 | Each  |  |
| 8.1.2 | Two Light controlled by 6A switch  | 7  | Each  |  |
| 8.1.4 | Bracket fan point /Ceiling Fan point with 6A switch  | 15 | Each  |  |
| 8.1.5 | Modular type 6A switch, 1 no. 6A 5 pin socket point mounted on suitable front plate on separate switch board other than light / fan switch board. (Power to be tapped from nearest S.B/ LDB).  | 14 | Each  |  |
| 8.1.6 | Call bell point with bell push and bell (for manager's Chamber).   | 1  | Each  |  |
| 9.0   | COMPUTER POWER OUTLET CLUSTER POINT WIRING   |    |       |  |
| 9.1   | Computer socket outlet cluster point wiring with 1.1KV grade 2x 2.5 + 1x1.5 sq. mm. PVC insulated flexible copper conductor wire(FRLS) through suitable size PVC conduit with all accessories up to connection of 2/3 nos. sockets cluster in one circuit connecting by looping method. The work includes supply and fixing of sockets outlet cluster components as detailed below:-   |    |       |  |
|       | 1 nos 16A modular type switch.   |    |       |  |
|       | 3 nos 6/16A 5 pin modular type socket  |    |       |  |
|       | 1 each no Front plate & MS box.  |    |       |  |
|       | ( for Each Table & counters)   | 14 | Each  |  |
| 10.0  | FAN & EXHAUST FAN  |    |       |  |
| 10.1  | Supply, erection and connection of 400 mm 230V oscillating type full Metal body wall mounted bracket Fan.  | 17 | Each  |  |
| 10.2  | Supply, erection and connection of 225 mm 1400 rpm, 230V Heavy duty exhaust Fan with wire guard net including wall cutting and finishing.  | 3  | Each  |  |
| 11.0  | Call Bell  |    |       |  |
|       | Supply and fixing of call bell with modular type push complete with plate & box to be fixed (1 each in Floor)  | 1  | Each  |  |
| 12.0  | <u>LIGHT FITTINGS</u>  | '  | Lacii |  |
|       | Supply, erection and connection of fluorescent / compact fluorescent / mini halogen fitting with lamp , ballast / Transformer and other accessories for the following as per approved Brand/Make of Materials.   |    |       |  |

| 12.1.1<br>12.1.2<br>12.1.3 | 42W 2 X 2 LED LIGHTS 15 W LED DOWN LIGHTERS 20 W LED TUBE LIGHT  | 23<br>5<br>17 | Each<br>Each<br>Each |  |
|----------------------------|--|---------------|----------------------|--|
| 12.1.14                    | LED LIGHT STRIPS (@5MT= 1 ROLL)  | 6             | ROLLS                |  |
| 12.1.4                     | 5A 12 V DRIVER 12NC  | 10            | SET                  |  |
| 13.0                       | TELEPHONE CABLE Supply, lay and connect PVC insulated CU conductor and armoured 10 pair Telephone cable for the following:-  | 120           | Mtr                  |  |
| 14.0<br>14.1               | TELEPHONE POINT Telephone point wiring with 2 pair PVC insulated CU conductor (0.5mm) telephone wire drawn through PVC conduit.  | 5             | Each                 |  |
| 14.2                       | Supply and erection of modular type telephone outlet RJ11 mounted on suitable front plate housed in recessed MS box.   | 5             | Each                 |  |
| 15.0<br>15.1.1             | EARTHING Supply and election Earth station with 600 x600x3mm GI Plate with earth strip / wire connecting arrangement including excavation and back filling with 25 mm dia GI | 2             | Each                 |  |
| 15.1.2                     | pipe for watering.( for UPS & LIGHT FAN Earthing) Supply and erection of masonry pit for each Earth station having CI/RCC inspection cover.                                  | 2             | Each                 |  |
| 16.0                       | Supply and erection of earth bus on wall ( min. length 0.3 mtr.) on insulator with drilled holes on the bus with GI bolt , nut , washer etc for the following:-              |               |                      |  |
| 16.1.1                     | With (25x6) mm GI flat   | 2             | Each                 |  |
| 16.1.2                     | With (25x3) mm CU flat   | 2             | Each                 |  |
| 17.0                       | Supply and lay GI flat for earthing underground /on wall including connection for the following:-  |               |                      |  |
| 17.1                       | (25x3)mm GI flat   | 70            | Mtr                  |  |
| 19)                        | DISMANTLING WORK: Dismantling of electrical items like light fitings, fan, wires, switches, boards etc along with all allied items like LAN and                              |               |                      |  |
|                            | Telephone wires and all items dismantling as per need of the site.   | 1             | job                  |  |
|                            | NET TOTAL  |               | _                    |  |

| APPF | ROVED MAKE OF MATERIALS  |  |
|------|--|--|
| 1    | Switch fuse units (HRC)  | LEGRAND /SCHNEIDER / HAVELLS / SIEMENS                       |
| 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 / FINOLEX                            |
| 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 / POLYCAB                                  |
| 12   | RCCB / ELCB / MCCB   | LEGRAND /SCHNEIDER / HAVELLS / SIEMENS                       |
| 13   | Moulded case circuit breaker   | LEGRAND /SCHNEIDER / HAVELLS / SIEMENS                       |
| 14   | RCCB / ELCB  | LEGRAND /SCHNEIDER / HAVELLS / SIEMENS                       |
| 15   | Switch fuse with rewirable fuses. (6A & 32A TPN)   | LEGRAND /SCHNEIDER / HAVELLS / SIEMENS                       |
| 16   | Isolator   | LEGRAND /SCHNEIDER / HAVELLS / SIEMENS                       |
| 17   | Changeover switch (on load type)   | LEGRAND /SCHNEIDER / HAVELLS / SIEMENS                       |
| 18   | MCB distribution board   | LEGRAND /SCHNEIDER / HAVELLS / SIEMENS                       |
| 19   | 6/16 Amp modular type switch / flushed type plug socket  | CRABTREE (athena) / LEGRAND (myrius) / SCHNEIDER (unicoplus) |
| 20   | 6/16 Amp modular switch / socket, module plate & mounting M.S. / PVC box.                          | CRABTREE (athena) / LEGRAND (myrius) / SCHNEIDER (unicoplus) |
| 21   | 16/25 Amp., 2 module electronic regulator  | CRABTREE (athena) / LEGRAND (myrius) / SCHNEIDER (unicoplus) |
| 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   | CROMPTON / HAVELL'S/BAJAJ                                    |
| 30   | Exhaust fan  | CROMPTON / BAJAJ / HAVELL'S                                  |
| 31   | Industrial type socket & top   | HAVELL'S / CROMPTON / LEGRAND                                |
| 32   | Telephone wire   | FINOLEX / HAVELLS / POLYCAB                                  |
| 33   | Starters   | NORTH WEST / CRABTREE  |
| 34   | All other items not covered above  | As per sample approved by Employer/Consultant                |