



পশ্চিমবঙ্গ সরকার  
**Government of West Bengal**

পুঁত বিভাগ  
**Public Works Department**

**Schedule of Rates**  
For  
**Electrical Works**

**Volume - I**  
**November – 2017**

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**Published by**

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&  
The Superintending Engineer, PWD  
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# PREFACE

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This schedule of rates which has been prepared in pursuance of Paragraph 185 of the Public Works Departments Code (Published in 1963) of the Government of West Bengal and in exercise of the powers delegated under item 16 of Schedule-B, Part-II of the said code is intended to cover items of work which generally involve both original and repairs.

A revised schedule of rates for the Electrical Wing of Public Work Department was published in April 2012 jointly by all the Superintending Engineers

However, for some time past, it was under active consideration of the Electrical Wing of the Department to review and revise the schedule of rates, on the basis of detailed analysis with current market rates, so as to have reasonable rates to execute works in accordance with specifications and relevant Acts, Rules and Code of practice.

Accordingly, after an in-depth study of the prevailing market rates of approved materials and corresponding Labour charges, this Volume-I, the schedule of works with rates of Internal Electrical Installation, above ground and underground cable works, LT overhead line installations have been thoroughly amended. In this volume some obsolete items (e.g. wiring by aluminium wire, Iron clad switches etc.) have been deleted. Some new essential items (e.g. VTPN DBs, SFU, Wiring using Modular type Switches, Cable Jointing, Cable Tray etc.) have been incorporated within the ambit of schedule of works.

The schedule for High Tension / Medium Voltage and Temporary works will be published separately in future.

The specifications, items of work containing in this part have been drawn in accordance with the established practices and covers the practical details with recommended methods and materials.

The rates of materials, shown in the schedule of price for approved materials are taken from price list of materials prevailing at the time of preparation of this book, which will serve as general guidelines for rates while preparing of the estimates. A list of basic materials with price have been included in the Annexure-I. The analysis has been prepared on the basis of the basic material price. But for non-schedule items of works, current market price prevailing at that time need be adopted during the preparation of estimates.

The schedule of rates will be enforced for entire West Bengal with marginal adjustment as District Charges as mentioned below: -

The rates appearing in the schedule are directly applicable for works to be carried out in Kolkata, part of Howrah (Howrah Sadar), part of Hooghly (Chinsurah and Serampur Sub-Divn.) and part of North and South 24-Paraganas (Alipur Sadar, Baruipur, Barasat and Barrackpur Sub-Divn.), i.e., within 50 km from Kolkata.

The percentage of charges as under, are to be added extra to the rate, appearing in the respective schedule for work to be carried out in other Districts and part of some other districts beyond 50 km from Kolkata.

|    |       |  |      |
|----|-------|--|------|
| A. | (i)   | Part of Howrah (Uluberia Sub-Divn.), part of Hoogly (Arambag Sub-Divn.), part of Nadia (Kalyani Sub-Division), part of South and North 24-Pgs. (Bongaon, Basirhat, Canning, Kakdwip & Diamond Harbour Sub-Divn.) | 2 %  |
|    | (ii)  | Burdwan, Purba Midnapore, Paschim Midnapore and Nadia District (except Kalyani Sub-Division)   | 3 %  |
|    | (iii) | Bankura, Purulia, Murshidabad, Birbhum and Malda District  | 5 %  |
|    | (iv)  | North Dinajpur, South Dinajpur, Siliguri Sub-Divn. of Darjeeling District and Jalpaiguri Sadar & Malbazar Sub-Divn. of Jalpaiguri District   | 7 %  |
|    | (v)   | Alipurduar Sub-Divn. of Jalpaiguri District and Coochbehar District  | 10 % |
|    | (vi)  | Darjeeling, Kurseong and Kalimpong Sub-Divn. of Darjeeling District  | 15 % |

## **B. Extras**

- I. For works within the perimeter of jail where works are permitted at restricted hours only, extra rates @ 10 % in respect of all items of the Schedule will be allowed for Kolkata & all districts in addition.
- II. Extra rates, in the form of Riverine Charges, will be allowed in respect of all scheduled items to overcome the difficulties encountered in riverine areas. The Riverine Charges will be applicable to sites connected through ferry crossings only as per the following rates and in addition to District Charges :-

|       |  |              |
|-------|--|--------------|
| (i)   | For crossing a single river                        | 5 % extra    |
| (ii)  | For crossing each additional river                 | 5 % extra    |
| (iii) | <b>GST will be added later as per GST ACT,2017</b> | <b>Extra</b> |

### **The District Charge and Extras are not applicable for supply items.**

The Schedule is meant for use in connection with both original and repairs works under the various Divisions of all Electrical Circles of PWD, including different Districts charges. In case of any ambiguity or dispute in any matter arising out of the schedule, the Superintending Engineer's decision will be final.

Any suggestions for this improvement of the contents are welcome from all quarters. This Schedule of Rates will take effect from the November 2017 and until further order.

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# SCHEDULE OF RATES VOLUME – I

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# General Instructions

**1.1** In this part of the publication, the fundamental principle and procedure for execution of the work have been dealt with. The essential requirements and precautions to be taken in respect of execution of all types and class of Electrical and Lightning Conductor works for ensuring safe, economical, durable and more practical use and applicable of electricity including prevention of fire hazards and protection of structures from lightning, have been incorporated.

**1.2** This booklet shall be a guide to Engineers, Subordinates Officers, Contractors, in respect to preparation of estimates, drawing up schedule of works, execution of works and also settlement of additional item of works arising during execution.

**2.1** While preparing the detailed estimate and the Schedule of Works for calling tenders, all items shall be so styled as to fall within the scope of items incorporated in the 'Schedule of Rates' hereafter called, the Schedule items, as far as possible. But where it is necessary to incorporate one or more items not covered by the 'Schedule of Rates', hereafter called Non-scheduled items, may be provided in the Schedule of Works for which the tender is to be called, provided that such items, incorporated in the Estimate, are technically sanctioned by the Superintending Engineer prior to calling of tender. During preparation of such estimates, discount available in the market should be considered.

Provided, always, in case where such items are in the estimate, technically sanctioned by the officer below the rank of the Superintending Engineer, the details of such items together with the analysis of rates and the complete schedule (in triplicate) shall be submitted to the Superintending Engineer for approval.

**2.2** Schedule of work containing one or more 'Non-scheduled items' shall not be accepted by an officer below the rank of the Superintending Engineer unless the approval of the Superintending Engineer is obtained. The estimated value of items of non-scheduled work and scheduled work in such cases shall be allocated while calling tender.

**3.1** In no case, two or more scheduled items shall be combined. All items are to be stated (described) in such a manner that the correct bill of quantity and actual requirement of the department can be easily understood. An illustration given below will explain the correct procedure.

**3.2 Incorrect procedure :**

Laying UG cable size (25 sqmm to 225 sqmm) from X to Y laid direct in ground with necessary GI pipe protection as required – 1000 mtrs.

Here, it is not possible from the item, for the tenderer to assess what length of cable for each cross-section will be laid. As the cost of laying cable for sizes 25 sqmm to 225 sqmm varies according to light and heavy sections, it is not fair that a uniform rate shall apply.

**3.3** The length and grade of GI pipe required for protection cannot be assessed. Thus, the cost of the item can not correctly be worked out which may lead to unfair competition. The requirements of the Department can hardly be accurately assessed by any tenderer.

Such items must be avoided.

## *Introduction*

## *Scope*

## *Preparation of estimates and Schedule and Dealing with Schedule & Non-Schedule items, prior to calling tender*

## *Prior approval of SE in respect to Non-Scheduled items, for calling tender*

## *Value of Scheduled & Non-scheduled items to be allocated and have the approval of SE*

## *Correct Grouping of items, explained.*

**3.4 Correct Procedure :**

- (a) Laying 2 Core, 1.1 KV Grade PVC/A UG cable (size 50 sqmm to 95 sqmm) from X to Y laid direct in ground at an average depth of 0.75 mtr. below ground level in trench with single layer of bricks (8 Bricks/mtr.) protection on Top – 800 Metre
- (b) Laying 2 Core, 1.1 KV Grade PVC/A UG cable (size 225 sqmm) from X to Y laid direct in ground at an average depth of 0.75 mtr. below ground level in trench with single layer of bricks (8 Bricks/mtr.) protection on Top – 200 Metre
- (c) Providing 50 mm (2") GI pipe (ISI-Medium) protection for crossing roads, drain, vertical rise etc. – 100 Metre

Here, it is possible to assess the correct length and grade of GI pipe. Since the rate of laying UG cable of 50 to 95 sqmm is same, it is not objectionable to include both the cross-section of cables in one item

- 3.5** To be clear and precise, the items of works in the estimate, and schedule shall be adequately described, so that the requirement can be easily ascertained and that there is least possible ambiguity as to the quantity, quality and size etc.

***Price Escalation***

- 3.6** In view of occurrence of time lag between preparation of estimate and receipt and sanction thereto, a provision of 5 % price escalation per annum be made in major estimates, so as to avoid preparation of revised estimates due to in the intervening period. The requisition authority is to be requested to take note of the price escalation clause and to include the additional cost to the estimate before according sanction if the time lag between submission of estimate and sanctioning thereof is more than a year.

***Engineer-in-Charge***

- 4.1** For the purpose of execution of the works as per Terms of Contract incorporated in Form No. 2911, 2911(i) and 2911(ii), the Engineer-in-charge of the work shall normally mean the Engineer-in-Charge in respect of the works within the limit of his power of acceptance.

***Delegation of Power***

- 4.2** An Executive Engineer may also delegate his power of the Engineer-in-Charge in writing to the Assistant Engineer in charge of the Sub-Division in respect of a particular work or all works exceeding their financial limit. The delegation of such power shall be intimated to the contractor also.

***Function of AE on behalf of the Engineer-in-Charge***

- 4.3** Assistant Engineer shall, however, in all works executed within their jurisdiction, shall supervise, issue day to day instructions to the contractor in writing with copies of such correspondences to the Executive Engineer, even when these officers are not delegated with the powers of the Engineer-in Charge.

***Documents to be furnished to AE***

- 5.1** Assistant Engineer is to be provided with the copies of the sanctioned estimate, Plans, copy of Administrative approval, Allotments of funds, complete tender documents and all copies of correspondences between the Executive Engineer and the contractor. The Executive Engineer shall take steps so that these clauses are properly implemented.

***Issue of Work Order to Contractor***

- 5.2** No work shall be allowed to be commenced by a contractor unless his tender is accepted and the work order is issued by the appropriate authority.



- 6.1** It is obligatory under the IE Rules, that all Electrical Installation works shall be executed under qualified Electrical Supervisor holding Electrical Supervisor's Certificate of Competency granted by the State Licensing Board. This is also an important condition on which the contractor has been enlisted in the Public Works Department by the Government. *Possession of Electrical Supervisor's Certificate, is a condition*
- 6.2** Therefore, in order to execute the work by skilled and qualified workmen under the proper guidance and direct supervision of such a qualified Electrical Supervision of Engineer, the procedure as stated in Clause 6.3 be shall adopted. *Reference to Clause to satisfy above condition*
- 6.3** While submitting tender including duplicate or more copies of Tender Form for acceptance by the Assistant Engineer, the Executive Engineer or the Superintending Engineer, as the case may be, the contractor shall submit a statement as below, with each copy of WB Form No. 2911, 2911(i) or 2911(ii) to the tender accepting authority. The statement shall contain the necessary information and declaration by the Contractor as well as by his Supervisor appointed to execute and supervise the work. *Introduction of a statement and its submission with WB Form No. 2911, 2911(i) or 2911(ii)*
- (a) Name of work.  
 (b) Name of the Electrical Engineer / Supervisor.  
 (c) Qualification (i.e., the parts in which the Electrical Supervisor's Certificate of Competency has been issued by the Licensing Board).  
 (d) Registration No. of Supervisor's Certificate.  
 (e) Next date of renewal of Supervisor's Certificate.  
 (f) Contractor's License No. etc.
- 6.4** The contractor shall be represented by his Supervisor or Engineer, holding Electrical Supervisor's Certificate of Competency granted by Licensing Board, West Bengal, for supervision and execution of the work. Such Supervisor or Engineer of the Contractor shall apply to the Assistant Engineer-in Charge of the work for layout immediately on the issue of the acceptance of the tender. *Licensed Supervisor / Engineer to represent Contractor and to apply for layout*
- 6.5** No layout shall be given by any Department officer, other than to a qualified licensed Engineer or Supervisor as stated above. If the Contractors fail to be represented by a Supervisor in the manner stated above or does not immediately apply for layout, the date and time of layout shall be fixed by the Departmental Officer and intimated to the contractor, but no extension of time shall be granted to the contractor for such delay in commencement of work, unless there is sufficient cognizant reason, which shall however be recorded in writing by the officer granting the extension of time. *Fixation of date and time for layout where contractors fails to respond*
- 6.6** While recording measurements, the MB shall be signed by the Contractor's Engineer or Supervisor, with his License No. noted therein, as a token not only of the acceptance of measurement but also of the execution of the work under his supervision. *Supervisor's signature in MB*
- 6.7** No bill shall be paid by an Executive Engineer unless the Contractor's Supervisor signs the MB as stated above.
- 6.8** In case of delay on the part of the contractor to sign the MB the measurement of the work shall not however be deferred. The bill may however be drawn and the amount of the passed bill may be debited to Deposit schedule and credited against the work. *Where delay in signing MB by Contractor occurs*
- 6.9** The payment in such case shall only be made on receipt of the explanation from the contractor. Frequent commission on the part of the contractor to sign the MB, shall be reported to the Superintending Engineer for administrative action. *Acting against declining to sign MB*

|   |             |  |
|---|-------------|--|
| <i>Step against Sub-standard workmanship</i>                      | <b>7.1</b>  | The workmanship is to be given the utmost importance. Good and skilled workmanship is an essential requirement for compliance without which the work shall be dismantled and re-done as directed by him. This shall, however, be decided during the progress of the work or within one month from the date of completion of the work. This, however, shall not be prejudiced to the power of rectification of defective or rejective work in terms of Contracts in WB Form No. 2911, 2911(i) and 2911(ii), as re-embodied in clauses 3, and other relevant rules made there under. |
| <i>Removal of the bad Work-man</i>                                | <b>7.2</b>  | Any workman, who is in the opinion of the Engineer-officers, not efficient or otherwise unsuitable for any reason whatsoever, shall immediately be removed by the contractor, from site of work, on receipt of the intimation in writing by the Engineer-in-Charge. The decision of the Engineer-in-Charge shall be final.   |
| <i>Programme and commencement of work, exceeding Rs. 50,000/-</i> | <b>8.1</b>  | In the case of works, exceeding the estimated values of Rs. 50,000/-, the contractor shall draw out the programme for execution of the work in consultation with Assistant Engineer and shall submit 4 (four) copies of such programme to the Executive Engineer for approval within 5 (five) days from the date of issue of the work order.   |
| <i>Approval of work-programme by the Engineer-in-Charge</i>       | <b>8.2</b>  | The Executive Engineer on receipt of the programme, shall approve, amend or reject the programme and promptly send one copy of the final programme to the contractor, two copies to the Assistant Engineer and retain one copy to his office.  |
| <i>Programme and layout of work of Rs. 50,000/- or below</i>      | <b>9.1</b>  | In the case of work, estimated value of which is Rs. 50,000/- or less, the programme of execution of the work shall be approved and finalized by the Assistant Engineer or in the manner prescribed in Clause 8.2, but the time taken for approval of programme of the work shall not be a cause of extension of time. It is expected that the contractor, on receipt of the acceptance of such work, will send his Supervisor to the Assistant Engineer or to the Sub-Assistant Engineer for layout and programme to execute the work expeditiously.                              |
| <i>Compliance with Acts and Rules</i>                             |             | All Electrical works (both internal and External) shall be carried out in accordance with the provision of :<br><br><b>(i) Indian Electricity Act 1910</b><br><b>(ii) Indian Electricity Rule 1956 and Regulations framed thereunder</b><br><b>(iii) The Electricity Act 2003</b><br><b>(iv) The rules and bye-laws of the Local Electricity Supply Authorities</b>  |
| <i>Failure to comply Rules &amp; Suspension of Work</i>           | <b>9.2</b>  | All Electrical and LC Installation works shall also comply with the General Specifications and shall be subject in all respects to the approval and entire satisfaction of the Engineer-in-Charge.   |
| <i>Use approved materials only</i>                                | <b>9.3</b>  | Failure on the part of the Contractor to comply with the provision of Clauses <b>9.1 &amp; 9.2</b> may render to the suspension of the contractor's work or any other action as deemed fit. The decision of the Superintending Engineer, in this respect, shall be final.  |
| <i>Use approved materials only</i>                                | <b>10.1</b> | (a) Materials which are not in the List of Approved Materials of this Department shall not be used in the work by the contractor. No work below the approved specification shall be executed. All materials, not otherwise specified, shall be in accordance with the <b>latest appropriate Indian Standard Specifications where such exist.</b>   |

- 10.1** (b) If not mentioned otherwise in the items themselves all materials including fittings shall conform to standard laid down by the ISI and bear ISI mark where such standardisation has been made. All other materials must be of best quality conforming to the standard laid down by the BIS and being approved by the Engineer-in-Charge. Under very special circumstances, materials standardised by BIS with ISI mark but not bearing ISI mark may be accepted with prior approval of Engineer-in-Charge with reduction by 20 %.
- Use approved materials only*
- 10.2** All materials brought to site shall be to the approval of Engineer-in-Charge. Materials, which are Sub-standard, shall be rejected. The sub-standard materials brought to site or used in the work shall be removed by the contractor within 24 hours on receipt of the notice to that effect from the Engineer-officer of the Department.
- Rejection of Sub-standard materials and their removal from site*
- 10.3** An appeal may, however, be made by the contractor against such order to the next higher authority, where there is a ground of erroneous decision or any other rightful cause. But the order of the Engineer-officer in respect to clause 10.2, shall be binding upon the contractor until revision of the order is made by the higher authority.
- Appeal by the Contractor in respect to materials*
- 10.4** The final appellate authority, in respect to Specification of works and materials, shall be Superintending Engineer. In case of complicated matter involving (a) financial loss to the Government or the contractor or (b) retardation of the progress of the work, the contractor may prefer an appeal direct to the Superintending Engineer.
- Contractor's appeal to SE to consider the cases involving loss*
- 10.5** A copy of application in such cases shall be submitted by the contractor to the Executive Engineer and the Assistant Engineer and due acknowledgement shall be kept by the contractor.
- 10.6** The orders of the Superintending Engineer shall be binding upon the Contractor and Department, in the case of such appeal arising out of the technical aspect during the execution of work.
- SE's order in respect to the material & work is final*
- 11.1** All materials, which are to be supplied by the Government to the contractor, shall be handed over by the Department in the manner prescribed in Clause 11.6, expeditiously according to the settled programme of the work. The contractor shall, therefore, on receipt of the materials properly store and stack in the manner approved by the Department Officer at the site store. The contractor shall be custodian of such materials and shall be responsible for any loss or damage to the materials.
- Contractor shall be custodian and shall store, stack and guard the Govt. materials*
- 11.2** Departmental Officers may inspect the materials stored at the contractors' store at site during the inspection work.
- Inspection of Site- store*
- 11.3** The contractor shall maintain day-to-day account of the receipt and the issue of Govt. materials. On completion of the work the said account shall be submitted to the Departmental measuring-officer and the balance materials are to be returned to the Department, in the manner as directed.
- Maintaining account of materials and return of excess quantity*
- 11.4** No materials issued to the contractor shall be removed or utilised in any other work than for which it has been indented, without the written order of the Executive Engineer and Assistant Engineer.
- No materials to be removed by Contractor*
- 11.5** If at any time, the quantity of Departmental materials is found short or excess at the contractor's custody by the inspection officer, the matter shall forthwith be reported to the Engineer-in-Charge, who shall expeditiously deal with the matter according to its merit.
- Short and excess of materials, occurring under contractor's custody*

- Different Categories of Departmental materials & procedure of their issue to Contractor***
- 11.6** Issue of Departmental materials may of two categories :
- (A) Materials for which the values are to be recovered from contractor as per tender agreement or otherwise.
- (B) Materials which are issued direct to work (in respect of items whose cost shall not be recovered from contractor, as per Terms of Contract).
- For formalities of Category (A), the materials shall be issued in PWD Challan Form (WB Form No. 28). 1<sup>st</sup> copy of such challan shall be attached with the next bill of the contractor for realisation of cost. 2<sup>nd</sup> copy shall be retained with the office copy of the bill at the Sub-Division and 3<sup>rd</sup> copy shall be retained for Site Account. 4<sup>th</sup> copy for the contract and the 5<sup>th</sup> copy shall be retained for the challan book.
- For formalities of Category (B), 5 copies of Challan or HR as stated in sub-para above shall be prepared by marking “Value not to be recovered”.
- Contractor's responsibility for materials issued***
- 11.7** The materials issued to the Contractor, whatever be their category thereof, the contractor shall remain responsible for their proper storage, safe custody and proper utilization of such materials. The contractor shall also remain responsible for any damages or loss of such materials.
- Return of Scrap or excess materials issued as per Clause 11.6 (B)***
- 11.8** The excess materials including cut lengths of cable, conductors etc. issued to the contractor vide clause 11.6 (B), shall be returned in good condition to the Engineer-Officer, or as directed, through proper challan in quadruplicate after the completion of the works.
- Misuse of materials and the recovery of cost from contractor***
- 11.9** The contractor shall use the Departmental materials as stated in Clause 11.6 (B), cautiously and judiciously so that the minimum quantity is wasted or reduced to scrap. In cases where the scraps, or wasted, are considered in the opinion of the Engineer-officer, materials to be above normal, the value of the excess quantity (after allowing the normal wastage) shall be deducted from the contractors bill. The decision of the Engineer-in-Charge, in such cases, shall be final and binding on the contractor.
- Disposal of surplus materials***
- 11.10** All surplus materials shall quickly be disposed of either by transferring to stock account of the store (after obtaining prior orders of the Superintending Engineer) or to other work direct.
- Return of dismantled materials by the Contractor***
- 11.11** Dismantled materials (both serviceable and unserviceable) shall be sorted, tested and handed over to the Departmental Officer by the contractor in the manner as decided by the Assistant Engineer.
- Recovery of rent or other charges for use of T & P etc. from Contractor***
- 12.1** The contractor may use the T & P and other Govt. testing Instruments providing they are available and permitted by the Engineer-in-Charge. The rent or other charge for the use of such T & P shall be realized from the contractor's bill. Normally the insulation Testing Megger shall not be issued to the contractor by the Department.
- Clearance of site***
- 13.1** The contractor shall clear the site of work and the whole site shall be left clean and tidy to the satisfaction of the Engineer-Officer, within the date of completion of work.
- Incomplete work due to non-clearance of Site***
- 13.2** Failure on the part of the contractor to clear the site, as stated in the aforesaid clauses, shall be treated as the work is incomplete, even though the work for which the contract executed, has been completed and work is in beneficial use.

- 13.3** The cost of restoring the site of work will be realized by the Engineer-in-Charge from the contractor's bill after a due notice is served on the contractor. **Charges for clearance of site**
- 14.1** The following procedures shall be adopted by the Departmental Officer on receipt of the administrative approval of the project, as well as on the receipt of the estimate from the Sponsoring Department, in respect of the work relating to OH Distribution and UG cable. ***Procedure to be followed on receipt of Administrative Approval of project***
- 14.2** Project and route survey map in the scale as deemed convenient shall be prepared. The position of the pillar box etc. and all other equipments shall be marked on the plan which shall be placed before the appropriate Departmental Officer along with the detailed estimate for technical sanction. ***Submission of Detailed Estimate & Plan for Technical Sanction***
- 14.3** The list of the materials (with quantity) which are to be procured by the Department shall be drawn up on receipt of the technical sanction of the estimate or with the approval of the Superintending Engineer. Steps shall be taken for procurement of materials, either by calling tender from the market or direct from the Central Store. Arrangements shall be made for proper storage of materials including guarding. ***Action to be taken to procure materials after obtaining Technical Sanction***
- 14.4** The Schedule for the execution of works and calling tender from the appropriate class of the contractor shall be prepared. The grade and specification of materials shall be invariably specified in the Schedule of work. ***Preparation of Schedule with specification of materials***
- 14.5** When the route length of OH Distribution network exceeds one km., survey, drawing up the list of the materials, Schedule for execution of work shall be done by the Executive Engineer, Planning Electrical Division / circle. When the route length of OH Distribution falls below 1 km., such action shall be taken by the working Division. The same procedure shall also apply in case of UG cable and the procedure shall also apply in case of UG cable and the project estimate of elec. works when the value of such work **exceed Rupees 1.0 (one) lac.** ***Survey, Estimates for OH line Distribution & UG cable works to be done by the Electrical Planning Division / Circle***
- 15.1** Installation, i.e., erection of Transformers, H.T. & L.T. Switchgears, Laying of UG cables, developing Sub-station etc. require highly skilled, experienced workmen. Only those personnel, who are fully conversant with such job, shall be allowed to handle works. Slight error or omission may result in serious accident or future troubles. ***Importance of engaging skilled & experienced workmen to avoid error or omission***
- It must be remembered that the choice of materials, layout of the work and skill and experiences all combine to determine the character and efficiency of the installation.
- 16.1** Accessories and materials for electrical works, with special reference to UG, OH and Internal Installations have been classified into two grades, viz., Grade I & II. The gradation has been made in consideration to the quality. The, materials, as Grade I, are comparatively superior and higher in price. The choice of grade rests with Engineer Officer in consideration to the merit of case. ***Gradation of materials and their choice depends on the merit of case***
- All materials shall be of highest grade of their respective kind and, as far as possible, comply with the specifications laid down in separate book.

- Basis of rates worked out & provided in the Schedule***      **16.2**      The rates provided in the Schedule (both for materials and item of works) have been worked out on the basis of analysis of the current market study. But it is generally accepted that the fixing of price is not strictly possible due to market variation. While preparing Schedule of rates an ambit of minor marginal adjustment to accommodate reasonable fluctuation has been taken into account.
- Scope of Rules and Sub-rules made***      **17.1**      All rules and sub-rules made hereunder, shall apply mutadis-mutandis to the context of the tender agreement made in either of the Form No. WB Form No. 2911, 2911(i) and 2911(ii).
- Reference to SE in case of doubt***      **17.2**      In case of doubt, ambiguity that may arise, reference shall be made to the Superintending Engineer and his decision shall be final and binding.
- 18.0      **Instructions for preparation of Estimates :****
- Classes of estimates – Major and Minor Works***      **18.1**      The estimates are of two classes, viz., Major and Minor Works relating to either Original or Repair works. This has been amply dealt with in the PWD code, Financial Rule, WAD Manual etc. of the Government. In following clauses are dealt with so as to facilitate the checking of the estimates in Divisional and Circle Officers and to minimize the scope of Audit Objection.
- 18.2**      *Detailed estimate amounting to Rs. 20 lacs and above should be referred to SE, Electrical Planning & Monitoring Circle for preparation.*
- 18.3**      *Any changes in estimate if necessary, during execution of work should be referred to the SE, Electrical Planning & Monitoring Circle for obtaining opinion in writing.*
- Allocation of cost in Major Work estimates***      **18.4**      In all estimates there shall be (i) Reference (ii) Report (iii) Details of the items of works. In major works estimate, a board sheet, showing allocation of costs of the various Sub-heads or class of work, shall also be furnished.
- Inclusion of cost in reference of letter***      **18.5**      The reference shall also be include the correct appropriate indication of the letter of memorandum requisitioning the work or project to the Public Works Department It is incorrect to cite the reference between the Assistant Engineer and the Executive Engineer, as reference in the estimate.
- Report prefacing an estimate shall fully explain Physical & Technical aspects of work***      **18.6**      The report prefacing an estimate shall be (1) self Contained (2) self-explanatory in respect to the physical and technical aspect of the project. The works, which are not specifically requisitioned by the sponsoring authority but considered essential in order to have a sound and comprehensive scheme, shall be included in the estimate. Such work shall be provided under separate Sub-head and the cost allocation in the abstract of the estimate. Explanatory note with justification for incorporation of such work shall also be amply stated in the report.
- Information to be incorporated in the report prefacing an estimate***      **18.7**      When it is necessary to consult the officer of the sponsoring department the correct designation of such officer, the date of consultation and the designation of the PWD officer who was present in the consultation shall be indicated in the report. Where conference are held between officer of PWD and other department, reference of the minutes or proceeding shall also be mentioned.

- 18.8** At the preliminary stage an estimate of rough cost for major works may be prepared for submission to the Sponsoring department for obtaining Administrative Approval of the Government. The report in such estimate shall clearly indicate the physical aspect of the work, so that no doubt or misconception may arise regarding the provisions made to meet the requirements of the sponsoring department.
- Estimate of rough cost to be sent to Sponsoring Deptt. for Administrative Approval at preliminary stage*
- 18.9** Detailed estimate on the basis of the rough estimate shall only be made on receipt of the Administrative Approval or signal to go ahead from the competent authority. Standing rules and orders demand that detailed estimate shall be technically sanctioned by the Appropriate Authority before the financial liability is incurred. It is also not regular to submit the detailed estimate for technical sanction after the Work is completed to the Appropriate Authority..
- Detailed estimate to be prepared on receipt of Administrative approval. Such estimate to be submitted before completion the work*
- It is, therefore, instructed that the detailed estimate shall be prepared and submitted to the Appropriate Authority for Technical Sanction before the acceptance of tender and incurring any expenditure.
- Submission of detailed estimate before acceptance of tender for technical sanction*
- 18.10** While preparing a revised estimate, a statement shall be appended with such estimate giving the following information :
- Information to be included in the revised estimate*
- (i) Quantity of Each item in Original Estimate and the Revised Estimate.
- (ii) New items of works with quantity, incorporated in the Revised Estimate.
- Explanatory notes in the report with reasons of revision, and the reference of the Administrative Approval of the project shall also be mentioned.
- 18.11** All estimates shall accompany plans for residential building and non-residential buildings.
- Submission of Plans with estimate*
- 19.0 Instructions for controlling of quality of materials used :**
- Quality control*
- 19.1** *Performance of materials either received from Central Store or used directly through the working contractors should directly be reported to SE, Electrical Resources Circle, PWD with copies to his concerned higher officer.*
- 19.2** After receiving such report necessary action should be taken up with the manufacturer for remedial action.
- 20.0** Some useful formulae and other technical information etc. for the design practice have been incorporated in the ‘Annexure’ of this book.
- 20.1** In view of excessive price rise of Galvanized Iron pipes, it has been decided that for almost all sorts of EI works and LC Installation works PWD approved (ISI-medium) GI pipes will be used and the schedule of rates have been prepared with such pipes. TATA make GI pipes have been considered as Earth Electrodes. However, TATA make GI pipes can also be used under special circumstances, where necessary, with the approval of concerned Superintending Engineer.
- 20.2** The Price of the cable and IC switch (Grade-1) with HRC fuse will be as per prevailing list price of the manufacturers and the rates given in the schedule book, in this context, are only for general guidance in preparation of estimate.

## CONVERSION TABLE

- a) Linear:**  
 Inches x 25.400 = Millimetres.  
 Millimetres x 0.03937 = Inches.  
 1 Metre = 3.281 Ft = 1.094 yard.  
 1 Inch = 25.4 Millimetres.  
 1 Foot = 0.3048 Metre.  
 1 Yard = 0.9144 Metre.  
 1 Mile = 1.6093 Kilometre.  
 1 Centimetre = 0.3937 Inch  
 1 Metre = 39.37 Inches.  
 1 Kilometre = 1093.61 Yards  
                   = 0.621 Mile
- b) Area:**  
 1 Sq. inch. is equal to 6.451 Sq. Cm.  
 1 Sq. Cm           ,,       0.155 Sq. inch.  
 1 Sq. metre       ,,       10.764 Sq. ft.  
 1 Sq. ft.           ,,       0.0929 Sq. metre  
                           ,,       144 Sq. inch.  
 1 Acre             ,,       0.405 Hectare  
 1 Sq. mile        ,,       2.590 Sq. Kilometre
- c) Capacity & Volume:**  
 1 Imp. gallon is equal to 4.456 litre  
 1 cu. inch       ,,       16.387 cm<sup>3</sup>  
 1 cu. ft.         ,,       0.028 m<sup>3</sup>  
 1 m<sup>3</sup>             ,,       35.315 cu.ft.  
 1 lite            ,,       0.035 cu.ft.  
                       ,,       0.22 gallon  
 1 cu.ft.         ,,       28.57 litres
- d) Weight:**  
 1 Ton is equal to 1.016 Tonne  
 1 Ton             ,,       2240 lbs.  
                       ,,       1016 Kg.  
 1 Tonne         ,,       1000 Kg.  
                       ,,       2204.622 lbs.  
 1 lb              ,,       0.454 Kilogram.  
 1 Hundred Wt ,,       50.80 Kilogram.  
                       ,,       0.508 Quintal  
 1 Kilometre    ,,       2.2050 lbs.  
 1 Quintal       ,,       1.968 Cwt.  
 1 Mound        ,,       37 Kg.
- e) Linear density:**  
 1 lb/ft.= 1.488 Kg. /m.  
 1 Kg. /m = 0.672 lb./ft.
- f) Density:**  
 1 lb/ft<sup>3</sup> = 16.019 Kg. /m<sup>3</sup>  
 1 lb/m<sup>3</sup> = 27.680 gm /cm<sup>3</sup>  
 1 lb/in<sup>3</sup> = 27.680 gm/cm<sup>3</sup>  
 1 gm./cm<sup>3</sup> = 0.0360 lb/inch<sup>3</sup>
- g) Temperature:**  
 $^{\circ}\text{C} = (^{\circ}\text{F} - 32) \times 5/9$   
 $^{\circ}\text{F} = (^{\circ}\text{C} \times 9/5 + 32)$
- h) Fuel Consumption:**  
 Mile/Gal. is equal to 0.354 km /Litre  
 km/Litre        ,,       20.825 Mile/Gal.
- i) General:**  
 100 Rft = 30.5 metre  
 100 Sft = 9.29 Sq. metre  
 100 Cft = 2.83 Cu. metre



**SPACE FOR NOTES**

## SCHEDULE OF RATES FOR FIXING OF APPROVED MATERIALS (Main Switches, Fittings, Fans etc.)

*(All materials, except equipments to be fixed up, are to be supplied by the contractor)*

|    |   |                     |  |  |            |
|----|---|---------------------|--|--|------------|
| 1. | Fixing only Sheet Steel Main Switch (Rewirwable type)/ Change over on Flat Iron Frame/Angle Iron Frame on wall        |                     | <u>Price for each</u>                        |  |            |
|    |   |                     | <u>240V SPN/DP</u>                           | <u>415V TP/TPN</u>                             |            |
|    | 16 Amps   | On flat iron frame  | Rs. 130.00                                   |  | Rs. 130.00 |
|    | 32 Amps   | On flat iron frame  | Rs. 130.00                                   |  | Rs. 130.00 |
|    | 63 Amps   | On angle iron frame | Rs. --                                       |  | Rs. 215.00 |
|    | 100/125 Amps  | On angle iron frame | Rs. --                                       |  | Rs. 215.00 |
| 2. | Fixing only TPN switch fuse units in Sheet Steel enclosure with HRC fuses on angle iron frame on wall for 32A to 400A |                     |  |  | Rs. 280.00 |
| 3. | Fixing only SPN MCBDB (4 to 16 way) on flat iron frame on wall  |                     |  |  | Rs. 178.00 |
| 4. | Fixing only TPN MCBDB in Sheet Steel enclosure (4 to 12 way) on flat iron frame on wall                               |                     |  |  | Rs. 230.00 |
| 5. | Fixing only Vertical type TPN MCBDB in Sheet Steel enclosure (4 to 12 way) on angle iron frame on wall                |                     |  |  | Rs. 477.00 |
| 6. | Fixing only MS sheet metal busbar Chamber on angle iron frame on wall   |                     | <u>Price per mtr length of BBC</u>           |  |            |
|    | 2 bars  | 63 Amps             |  |  | Rs. 415.00 |
|    | 4 bars  | 63 Amps             |  |  | Rs. 486.00 |
|    |   | 100/125 Amps        |  |  | Rs. 486.00 |
|    |   | 200 Amps            |  |  | Rs. 486.00 |
|    |   | 315 Amps            |  |  | Rs. 486.00 |
|    |   | 400 Amps            |  |  | Rs. 486.00 |
|    |   | 600 Amps            |  |  | Rs. 486.00 |
|    |   | 1000 Amps           |  |  | Rs. 486.00 |
| 7. | Fixing only starters (for motor control) on flat iron frame / angle iron frame on wall                                |                     | <u>Price for each</u>                        |  |            |
|    |   |                     | <u>On flat iron frame (for lower rating)</u> | <u>On angle iron frame (for higher rating)</u> |            |
|    | (a) Direct on Line starter for motor (upto 5 HP)  |                     | Rs. 130.00                                   | Rs. 215.00                                     |            |
|    | (b) Star-Delta starter for motor (above 5 HP upto 15 HP)  |                     | Rs. 178.00                                   | Rs. 215.00                                     |            |
|    | (c) Auto-Transformer starter for motor (above 5 HP upto 15 HP )   |                     | Rs. 178.00                                   | Rs. 215.00                                     |            |
| 8. | Fixing only Single Phasing Preventor on flat iron frame on wall   |                     |  |  | Rs. 130.00 |

|  | <b>Unit</b> | <b>Rs.</b> | <b>Rate</b> |
|--|-------------|------------|-------------|
| 9. (a) Fixing only Call Bell/Buzzer on single HW board on wall incl. S&F single HW board   | Each        | Rs.        | 67.00       |
| (b) Fixing only 150 mm Alarm Bell on single HW board on wall incl. S&F single HW board   | Each        | Rs.        | 85.00       |
| (c) Fixing only Indicator for Call Bell on HW board incl. S&F HW board etc.  | Each        | Rs.        | 61.00       |
| 10. Fixing only Voltmeter/Ammeter/Energy meter with screws & other fixing materials incl. making necessary holes and connections | Each        | Rs.        | 57.00       |

### **FITTINGS :**

|   |      |     |        |
|---|------|-----|--------|
| 11. Fixing only lamp  | Each | Rs. | 5.00   |
| 12. Fixing only pendent light fitting complete with lamp, shade and 24/0.2 mm (1.5 sqmm) flexible copper wire incl. S&F pendent holder  | Each | Rs. | 48.00  |
| 13. Fixing only bulk head ceiling fitting on wall /ceiling by screws etc.   | Each | Rs. | 56.00  |
| 14. (a) Fixing only single/twin fluorescent light fitting complete with all accessories directly on wall/ceiling by screws etc.   | Each | Rs. | 86.00  |
| (b) Fixing only single /twin fluorescent light fitting complete with all accessories directly on wall/ceiling/HW round block and suitable size of MS fastener   | Each | Rs. | 100.00 |
| (c) Fixing only single/twin fluorescent light fitting complete with all accessories directly on wall/ceiling with HW block and ceiling plates, nipples etc. as required   | Each | Rs. | 147.00 |
| (d) Fixing only single/twin florescent light fitting complete with all accessories Directly on wall/ceiling with HW block and suitable size MS fastener, Ceiling plate, nipples etc. as required  | Each | Rs. | 161.00 |
| 15. Fixing only fluorescent light fitting suspended 25 cm bellow the ceiling with 2 No. 20 mm dia EI conduit (14 SWG) supports incl. S&F EI conduit, ball socket/socket type ceiling plate and connecting the length of PVC insulated wire and painting etc. as required by 2x24/0.20 mm (1.5sqmm) flexible copper wire of 1.10 mt. length.   | Each | Rs. | 214.00 |
| 16. Extra for suspension exceeding 25 cm with S&F additional 2 no. 20 mm dia EI conduit (14 SWG) supports & necy. PVC insulated wire and painting etc. as required by 2x24/0.20 mm (1.5sqmm.) flexible copper wire of 1.10 mt. length.  | RM   | Rs. | 155.00 |
| 17. Fixing only single/twin fluorescent light fitting suspended 25 cm bellow the ceiling with 2 No. 20 mm dia EI conduit (14 SWG) supports fixed with "L" type MS clamp whose one side fixed on ceiling with sutable size 4 nos. fastener and other side connected with the conduit with suitable size of bolts and nuts incl. S&F EI conduit, "L" type (125mmx125mm) 6mm thick and 25mm with MS clamps and connecting the length of PVC insulated wire and mending good damages to original finish and painting etc. by 2x24/0.20 mm (1.5sqmm.) flexible copper wire of 1.10 mt. length. | Each | Rs. | 199.00 |

|         |   |      |     |        |
|---------|---|------|-----|--------|
| 18.     | Fixing only outdoor / street light type fluorescent light fitting or MV light fitting complete with all accessories to be fixed /projected from the wall of the building incl. making holes/providing clamping arrangement & necy. GI reducer as required. S&F 40 mm GI pipe (ISI-Medium) quality 1.5 mts. average length having suitable bend S&F necy. length of 1.5 sqmm PVC insulated single core stranded annealed copper wire and making connections as required and mending good damages to wall incl. painting etc.                       | Each | Rs. | 807.00 |
| 19.     | Fixing only outdoor / street light type fluorescent light fitting complete with all accessories to be fixed/projected from the wall of the building incl. making holes to building, S&F 40 mm dia GI pipe (ISI-Medium) 1.50 mts. average length, with GI socket at one end and thread at the other end & suitable bend to house the fitting & making necy. connections with S&F necy. length of 1.5 sqmm PVC insulated single core stranded annealed copper wire and making connections as required and mending good damages to wall and painting | Each | Rs. | 722.00 |
| 20. (a) | Fixing only Floodlight Fitting with suitable tie clamps and MS plate for mounting on Pole/Tower or similar structure.   | Each | Rs. | 543.00 |
| (b)     | Fixing only Floodlight fittings on top of masonry structure by 3 Nos. 10 mm dia x 87 mm long rag bolts, nuts & double washers complete either 37 mm x 10 mm MS flat support/or by other means as required   | Each | Rs. | 214.00 |

### Fan & Fan Clamps

|         |   |      |     |        |
|---------|---|------|-----|--------|
| 21. (a) | Fixing only ceiling fan complete with blades, canopy, fork, rubber bush etc. incl. S&F connecting wire for down rod upto 30 cm incl. painting the rod with approved paint and making necessary connection as required by 2x1.5 sqmm flexible copper wire. | Each | Rs. | 66.00  |
| (b)     | Extra for supplying additional wire for down rod & painting the rod exceeding 30 cm by 2x1.5 sqmm flexible copper wire.   | RM   | Rs. | 44.00  |
| 22.     | Lowering and refixing only ceiling fan complete with blades, canopy, fork, rubber bush etc. incl. making necessary disconnection and connection as required.  | Each | Rs. | 35.00  |
| 23. (a) | Drilling hole on fan motor and downrod incl. S&F split pin  | Each | Rs. | 21.00  |
| (b)     | Supply & Fixing of split pin  | Each | Rs. | 5.00   |
| 24. (a) | Engraving the deptt. number with 10 mm lettering on the body of fan upto 10 letters incl. hifen, stroke or stop   | Each | Rs. | 26.00  |
| (b)     | Extra for additional one letter incl. hifen, stroke and stop  | Each | Rs. | 3.00   |
| 25.     | Painting of ceiling fan with one coat of primer and two coat of synthetic enamel paint by spray painting after cleaning and removing the old paint.   | Each | Rs. | 69.00  |
| 26. (a) | Painting upto 10 letters of the engraved number with approved black /red paint as required  | Each | Rs. | 11.00  |
| (b)     | Extra painting for additional one letter of the engraved number with hifen, stroke etc. with black or red paint   | Each | Rs. | 1.00   |
| 27.     | Fixing only fan clamp for RC ceiling as per specification after cutting the ceiling & binding with reinforcement and mending good the damages.  | Each | Rs. | 106.00 |

|     |  |      |     |        |
|-----|--|------|-----|--------|
| 28. | Fixing only exhaust fan after making hole in wall and making good damages and smooth cement finish etc. as practicable as possible and providing necy. length of PVC insulated wire and making connection for exhaust of following diameter: |      |     |        |
|     | (a) 23 cm (9")   | Each | Rs. | 247.00 |
|     | (b) 30 cm (12")  | Each | Rs. | 329.00 |
|     | (c) 38 cm (15")  | Each | Rs. | 411.00 |
|     | (d) 45 cm (18")  | Each | Rs. | 493.00 |
|     | (e) 60 cm (24")  | Each | Rs. | 658.00 |
| 29. | Fixing only cabin fan on wall/ceiling by S&F rag bolts, nuts & washers (6 mm dia x 62 mm long) or as reqd. incl. S&F 24/0.20 PVC insulated flexible copper wire 0.5 mt. length   | Each |     | 92.00  |
| 30. | Fixing only louver shutter/cowl on wall with necy. bolts & nuts (6 mm dia x 62 mm long)  |      |     |        |
|     | (a) For 23 cm (9") Exhaust fan   | Each | Rs. | 82.00  |
|     | (b) For 30 cm (12") Exhaust fan  | Each | Rs. | 110.00 |
|     | (c) For 38 cm (15") Exhaust fan  | Each | Rs. | 137.00 |
|     | (d) For 45 cm (18") Exhaust fan  | Each | Rs. | 165.00 |
|     | (e) For 60cm (24") Exhaust fan   | Each | Rs. | 219.00 |

**SCHEDULE OF RATES FOR SUPPLYING AND FIXING APPROVED MATERIALS (Main Switches, Fittings, Fans)**

| Item No.                             | Description of Item  | Rate                     |                           |
|--------------------------------------|--|--------------------------|---------------------------|
| <b><u>Main Switches :</u></b>        |  |                          |                           |
| 1.                                   | (a) Supplying and fixing Sheet steel Main Switches on flat iron frame on wall  | 240V DP with fuse on L&N | 415V TPN with fuse on L&N |
| <b>15/16 A</b>                       | Standard   | Rs. 519.00               | Rs. 1231.00               |
|                                      | Havells  | Rs. 576.00               | Rs. 1399.00               |
|                                      | HPL  | Rs. 577.00               | Rs. 1400.00               |
|                                      | Anchor   | Rs. 445.00               | Rs. 743.00                |
| <b>30/32 A</b>                       | Standard   | Rs. 1128.00              | Rs. 1593.00               |
|                                      | Havells  | Rs. 1277.00              | Rs. 1738.00               |
|                                      | HPL  | Rs. 1228.00              | Rs. 1743.00               |
|                                      | Anchor   | Rs. 705.00               | Rs. 938.00                |
|                                      | (b) Supplying and fixing Sheet steel Main Switches on angle iron frame on wall                                       |                          |                           |
| <b>60/63 A</b>                       | Standard   | Rs. --                   | Rs. 3,180.00              |
|                                      | Havells  | Rs. --                   | Rs. 3,568.00              |
|                                      | HPL  | Rs. --                   | Rs. 3,569.00              |
|                                      | Anchor   | Rs. --                   | Rs. 2,631.00              |
| <b>100/125 A</b>                     | Standard   | Rs. --                   | Rs. 5,503.00              |
|                                      | Havells  | Rs. --                   | Rs. 6,448.00              |
|                                      | HPL  | Rs. --                   | Rs. 6,450.00              |
|                                      | Anchor   | Rs. --                   | Rs. 4,223.00              |
| <b><u>Change Over Switches :</u></b> |  |                          |                           |
| 2.                                   | (a) Supplying and fixing Changeover switch with Sheet Steel enclosure on flat iron frame on wall with nuts bolts etc | 240V DP                  | 415V FP                   |
| <b>16A</b>                           | HPL  | Rs. --                   | Rs. 1,989.00              |
|                                      | Havells  | Rs. --                   | Rs. 1,989.00              |
|                                      | Standard   | Rs. --                   | Rs. 1,856.00              |
| <b>32A</b>                           | HPL  | Rs. 1441.00              | Rs. 2,366.00              |
|                                      | Havells  | Rs. 1403.00              | Rs. 2,362.00              |
|                                      | Standard   | Rs. 1315.00              | Rs. 2,126.00              |
| <b>63A</b>                           | HPL  | Rs. 2627.00              | Rs. --                    |
|                                      | Havells  | Rs. 2545.00              | Rs. --                    |
|                                      | Standard   | Rs. 2431.00              | Rs. --                    |

(b) Supplying and fixing Changeover switch with Sheet Steel enclosure on angle iron frame on wall with nuts bolts etc

|             |          |     |    |     |          |
|-------------|----------|-----|----|-----|----------|
| <b>63A</b>  | HPL      | Rs. | -- | Rs. | 4,763.00 |
|             | Havells  | Rs. | -- | Rs. | 4,760.00 |
|             | Standard | Rs. | -- | Rs. | 4,349.00 |
| <b>100A</b> | HPL      | Rs. | -- | Rs. | 9,322.00 |
|             | Havells  | Rs. | -- | Rs. | 9,323.00 |
|             | Standard | Rs. | -- | Rs. | 8,454.00 |

| Item No.    | Description of Item  | Rate          |
|-------------|--|---------------|
| 3. (a)      | Supplying and fixing 415V, TPN on load front operated Changeover switch with Sheet Steel enclosure on angle iron frame on wall with nuts bolts etc | 415V FP       |
| <b>125A</b> | L&T  | Rs. 8,568.00  |
|             | Havells  | Rs. 9,704.00  |
|             | HPL  | Rs. 9,501.00  |
|             | Standard   | Rs. 9,429.00  |
| <b>160A</b> | L&T  | Rs. 9,395.00  |
|             | Havells  | Rs. 10,035.00 |
|             | HPL  | Rs. 10,399.00 |
|             | Standard   | Rs. 9,749.00  |
| <b>200A</b> | L&T  | Rs. 10,542.00 |
|             | Havells  | Rs. 11,649.00 |
|             | HPL  | Rs. 11,968.00 |
|             | Standard   | Rs. 11,319.00 |
| <b>250A</b> | L&T  | Rs. 14,891.00 |
|             | Havells  | Rs. 15,512.00 |
|             | HPL  | Rs. 16,554.00 |
|             | Standard   | Rs. 15,066.00 |
| <b>320A</b> | L&T  | Rs. 15,588.00 |
|             | Havells  | Rs. 16,170.00 |
|             | HPL  | Rs. 17,308.00 |
|             | Standard   | Rs. 15,569.00 |
| <b>415A</b> | L&T  | Rs. 22,751.00 |
|             | Havells  | Rs. 24,286.00 |
|             | HPL  | Rs. 25,205.00 |
|             | Standard   | Rs. 23,586.00 |
| (b)         | Supplying and fixing 415V, TPN on load front operated Changeover switch open execution type in SS enclosure/cubical with nuts bolts etc            |               |
| <b>125A</b> | L&T  | Rs. 6,321.00  |
|             | Havells  | Rs. 6,950.00  |
|             | HPL  | Rs. 7,077.00  |
|             | Standard   | Rs. 6,751.00  |
| <b>160A</b> | L&T  | Rs. 6,969.00  |
|             | Havells  | Rs. 7,570.00  |
|             | HPL  | Rs. 7,730.00  |
|             | Standard   | Rs. 7,352.00  |
| <b>200A</b> | L&T  | Rs. 8,385.00  |
|             | Havells  | Rs. 9,002.00  |
|             | HPL  | Rs. 9,305.00  |
|             | Standard   | Rs. 8,743.00  |
| <b>250A</b> | L&T  | Rs. 11,808.00 |
|             | Havells  | Rs. 13,287.00 |
|             | HPL  | Rs. 13,370.00 |
|             | Standard   | Rs. 12,902.00 |
| <b>320A</b> | L&T  | Rs. 12,404.00 |
|             | Havells  | Rs. 14,235.00 |
|             | HPL  | Rs. 14,110.00 |
|             | Standard   | Rs. 13,824.00 |



| Item No. | Description of Item   | Rate                   |                         |
|----------|---|------------------------|-------------------------|
| 415A     | L&T   | Rs. --                 | Rs. 18,378.00           |
|          | Havells   | Rs. --                 | Rs. 20,660.00           |
|          | HPL   | Rs. --                 | Rs. 20,562.00           |
|          | Standard  | Rs. --                 | Rs. 20,062.00           |
| 4.       | (a) Supplying and fixing 415V, TPN SFU with sheet steel enclosure on flat iron/angle iron frame on wall with nuts bolts etc incl. S & F 3 nos. DIN type HRC fuse as per rating. |                        |                         |
|          |   | <u>Flat iron frame</u> | <u>Angle iron frame</u> |
| 32A      | Siemens   | Rs. 3904.00            | Rs. 3998.00             |
|          | L&T   | Rs. 3071.00            | Rs. 3165.00             |
|          | Havells   | Rs. 2370.00            | Rs. 2464.00             |
|          | Standard  | Rs. 1890.00            | Rs. 1984.00             |
| 50A      | Siemens   | Rs. 4387.00            | Rs. 4481.00             |
| 63A      | L&T   | Rs. 4038.00            | Rs. 4132.00             |
|          | Havells   | Rs. 2998.00            | Rs. 3092.00             |
|          | Standard  | Rs. 2453.00            | Rs. 2547.00             |
| 80A      | Siemens   | Rs. 6060.00            | Rs. 6154.00             |
| 100A     | Siemens   | Rs. 7245.00            | Rs. 7339.00             |
|          | L&T   | Rs. 6229.00            | Rs. 6323.00             |
|          | Havells   | Rs. 5588.00            | Rs. 5682.00             |
|          | Standard  | Rs. 4564.00            | Rs. 4658.00             |
| 125A     | Siemens   | Rs. 8830.00            | Rs. 8924.00             |
|          | L&T   | Rs. 7321.00            | Rs. 7415.00             |
|          | Havells   | Rs. 6140.00            | Rs. 6234.00             |
|          | Standard  | Rs. 4918.00            | Rs. 5012.00             |
| 160A     | Siemens   | Rs. 9412.00            | Rs. 9506.00             |
|          | L&T   | Rs. 7908.00            | Rs. 8002.00             |
|          | Havells   | Rs. 7728.00            | Rs. 7822.00             |
|          | Standard  | Rs. 5493.00            | Rs. 5587.00             |
| 200A     | Siemens   | Rs. 12230.00           | Rs. 12324.00            |

|                 |          |              |              |
|-----------------|----------|--------------|--------------|
|                 | L&T      | Rs. 10306.00 | Rs. 10400.00 |
|                 | Havells  | Rs. 8741.00  | Rs. 8835.00  |
| <b>250A</b>     | Siemens  | Rs. 13944.00 | Rs. 14038.00 |
|                 | L&T      | Rs. 11920.00 | Rs. 12014.00 |
|                 | Havells  | Rs. 9629.00  | Rs. 9723.00  |
|                 | Standard | Rs. 7846.00  | Rs. 7940.00  |
| <b>315/320A</b> | Siemens  | Rs. 16800.00 | Rs. 16894.00 |
|                 | L&T      | Rs. 13856.00 | Rs. 13950.00 |
|                 | Havells  | Rs. 12359.00 | Rs. 12453.00 |
|                 | Standard | Rs. 9796.00  | Rs. 9890.00  |
| <b>415A</b>     | Siemens  | Rs. 19424.00 | Rs. 24013.00 |
|                 | L&T      | Rs. 16357.00 | Rs. 16451.00 |
|                 | Havells  | Rs. 15075.00 | Rs. 15169.00 |
|                 | Standard | Rs. 12001.00 | Rs. 12095.00 |

| Item No.        | Description of Item  | Rate          |
|-----------------|--|---------------|
|                 | (b) Supplying and fixing 415V, TPN SFU open execution in existing SS enclosure/cubical with nuts bolts etc incl. S & F 3 nos. DIN type HRC fuse as per rating. |               |
| <b>32A</b>      | Siemens  | Rs. 2,347.00  |
|                 | L&T  | Rs. 1,515.00  |
|                 | Havells  | Rs. 1,454.00  |
|                 | Standard   | Rs. 1,179.00  |
|                 | ABB  | Rs. 2,257.00  |
| <b>50A</b>      | Siemens  | Rs. 2,831.00  |
| <b>63A</b>      | L&T  | Rs. 2,402.00  |
|                 | Havells  | Rs. 1,979.00  |
|                 | Standard   | Rs. 1,708.00  |
|                 | ABB  | Rs. 2,867.00  |
| <b>80A</b>      | Siemens  | Rs. 4,503.00  |
| <b>100A</b>     | Siemens  | Rs. 5,433.00  |
|                 | L&T  | Rs. 4,253.00  |
|                 | Havells  | Rs. 4,180.00  |
|                 | Standard   | Rs. 3,525.00  |
|                 | ABB  | Rs. 5,242.00  |
| <b>125A</b>     | Siemens  | Rs. 7,019.00  |
|                 | L&T  | Rs. 5,440.00  |
|                 | Havells  | Rs. 4,740.00  |
|                 | Standard   | Rs. 3,704.00  |
|                 | ABB  | Rs. 6,815.00  |
| <b>160A</b>     | Siemens  | Rs. 7,600.00  |
|                 | L&T  | Rs. 6,001.00  |
|                 | Havells  | Rs. 5,586.00  |
|                 | Standard   | Rs. 4,446.00  |
|                 | ABB  | Rs. 7,494.00  |
| <b>200A</b>     | Siemens  | Rs. 9,832.00  |
|                 | L&T  | Rs. 7,602.00  |
|                 | Havells  | Rs. 6,511.00  |
|                 | ABB  | Rs. 9,170.00  |
| <b>250A</b>     | Siemens  | Rs. 11,546.00 |
|                 | L&T  | Rs. 9,084.00  |
|                 | Havells  | Rs. 7,368.00  |
|                 | Standard   | Rs. 6,065.00  |
|                 | ABB  | Rs. 11,150.00 |
| <b>315/320A</b> | Siemens  | Rs. 14,402.00 |
|                 | L&T  | Rs. 10,975.00 |
|                 | Havells  | Rs. 10,106.00 |
|                 | Standard   | Rs. 7,931.00  |
|                 | ABB  | Rs. 15,970.00 |
| <b>415A</b>     | Siemens  | Rs. 17,026.00 |
|                 | L&T  | Rs. 13,255.00 |
|                 | Havells  | Rs. 12,822.00 |
|                 | Standard   | Rs. 9,432.00  |
|                 | ABB  | Rs. 16,198.00 |

| Item No. | Description of Item   | Rate      |              |
|----------|---|-----------|--------------|
| 5.       | Supplying and fixing sheet steel (16SWG) cable end box on TPN SFU enclosure with nuts bolts etc incl. powder coated painting. |           |              |
|          | <b>63/125A</b>  | Rs.       | 542.00       |
|          | <b>200/250A</b>   | Rs.       | 567.00       |
|          | <b>315/320A</b>   | Rs.       | 582.00       |
|          | <b>415A</b>   | Rs.       | 602.00       |
| 6.       | Supplying and fixing 240/415 V MCB Isolator on din rail of existing DBs and necessary connection.                             |           |              |
|          |   | <b>DP</b> | <b>FP</b>    |
|          | <b><u>Legrand</u></b>   |           |              |
|          | <b>32 A</b>   | Rs.       | 322.00       |
|          | <b>40 A</b>   | Rs.       | 349.00       |
|          | <b>63 A</b>   | Rs.       | 460.00       |
|          | <b>100A</b>   | --        | Rs. 927.00   |
|          | <b>125A</b>   | --        | Rs. 1,102.00 |
|          | <b><u>Schneider</u></b>   |           |              |
|          | <b>40 A</b>   | Rs.       | 354.00       |
|          | <b>63 A</b>   | Rs.       | 472.00       |
|          | <b>80 A</b>   | --        | Rs. 1,194.00 |
|          | <b>100A</b>   | --        | Rs. 1,213.00 |
|          | <b>125A</b>   | --        | Rs. 1,277.00 |
|          | <b><u>Crabtree</u></b>  |           |              |
|          | <b>40 A</b>   | Rs.       | 338.00       |
|          | <b>63 A</b>   | Rs.       | 436.00       |
|          | <b>80 A</b>   | --        | Rs. 1,011.00 |
|          | <b>100A</b>   | --        | Rs. 1,011.00 |
|          | <b>125A</b>   | --        | Rs. 1,095.00 |
|          | <b><u>Seimens</u></b>   |           |              |
|          | <b>25 A</b>   | Rs.       | 322.00       |
|          | <b>40 A</b>   | Rs.       | 338.00       |
|          | <b>63 A</b>   | Rs.       | 402.00       |
|          | <b>80 A</b>   | --        | Rs. 881.00   |
|          | <b>100A</b>   | --        | Rs. 1,381.00 |
|          | <b><u>ABB</u></b>   |           |              |
|          | <b>25 A</b>   | Rs.       | 292.00       |
|          | <b>32 A</b>   | Rs.       | 292.00       |
|          | <b>40 A</b>   | Rs.       | 315.00       |

|             |     |        |     |          |
|-------------|-----|--------|-----|----------|
| <b>63 A</b> | Rs. | 414.00 | Rs. | 756.00   |
| <b>80 A</b> |     | --     | Rs. | 947.00   |
| <b>100A</b> |     | --     | Rs. | 973.00   |
| <b>125A</b> |     | --     | Rs. | 1,015.00 |

**L&T**

|             |     |        |     |        |
|-------------|-----|--------|-----|--------|
| <b>40 A</b> | Rs. | 315.00 | Rs. | 710.00 |
| <b>63 A</b> | Rs. | 402.00 | Rs. | 729.00 |
| <b>80 A</b> |     | --     | Rs. | 832.00 |
| <b>100A</b> |     | --     | Rs. | 855.00 |

| Item No.               | Description of Item | Rate |        |     |        |
|------------------------|---------------------|------|--------|-----|--------|
|                        |                     | DP   |        | FP  |        |
| <b><u>Havells</u></b>  |                     |      |        |     |        |
|                        | 40 A                | Rs.  | 208.00 | Rs. | 676.00 |
|                        | 63 A                | Rs.  | 243.00 | Rs. | 687.00 |
|                        | 80 A                |      | --     | Rs. | 881.00 |
|                        | 100A                |      | --     | Rs. | 881.00 |
|                        | 125A                |      | --     | Rs. | 947.00 |
| <b><u>Standard</u></b> |                     |      |        |     |        |
|                        | 40 A                | Rs.  | 281.00 | Rs. | 642.00 |
|                        | 63 A                | Rs.  | 360.00 | Rs. | 649.00 |
|                        | 100A                |      | --     | Rs. | 862.00 |
|                        | 125A                |      | --     | Rs. | 912.00 |

7. Supplying and fixing 240/415 V MCB of Breaking capacity 10kA & C characteristics on din rail of existing DBs and necessary connection

|                         | <b><u>Legrand</u></b> | Rate       |            |             |             |
|-------------------------|-----------------------|------------|------------|-------------|-------------|
|                         |                       | SP         | DP         | TP          | FP          |
|                         | 6-32 A                | Rs. 190.00 | Rs. 546.00 | Rs. 546.00  | Rs. 1196.00 |
|                         | 40 A                  | Rs. 422.00 | Rs. 938.00 | Rs. 1432.00 | Rs. 1830.00 |
|                         | 63 A                  | Rs. 422.00 | Rs. 938.00 | Rs. 1432.00 | Rs. 1830.00 |
|                         | 100 A                 | Rs. --     | Rs. --     | Rs. 5348.00 | Rs. 6815.00 |
|                         | 125 A                 | Rs. --     | Rs. --     | Rs. 5932.00 | Rs. 7708.00 |
| <b><u>Schneider</u></b> |                       |            |            |             |             |
|                         | 6-32 A                | Rs. 157.00 | Rs. 473.00 | Rs. 734.00  | Rs. 1027.00 |
|                         | 40 A                  | Rs. 318.00 | Rs. 692.00 | Rs. 1070.00 | Rs. 1373.00 |
|                         | 63 A                  | Rs. 365.00 | Rs. 791.00 | Rs. 1142.00 | Rs. 1468.00 |
|                         | 100 A                 | Rs. --     | Rs. --     | Rs. 6425.00 | Rs. 8179.00 |
|                         | 125 A                 | Rs. --     | Rs. --     | Rs. 6920.00 | Rs. 8868.00 |
| <b><u>Crabtree</u></b>  |                       |            |            |             |             |
|                         | 6-32 A                | Rs. 176.00 | Rs. 558.00 | Rs. 850.00  | Rs. 1213.00 |
|                         | 40 A                  | Rs. 378.00 | Rs. 821.00 | Rs. 1227.00 | Rs. 1647.00 |
|                         | 63 A                  | Rs. 435.00 | Rs. 966.00 | Rs. 1383.00 | Rs. 1817.00 |
|                         | 100 A                 | --         | --         | Rs. 4625.00 | Rs. 5993.00 |
|                         | 125 A                 | --         | --         | Rs. 5203.00 | Rs. 6343.00 |
| <b><u>Seimens</u></b>   |                       |            |            |             |             |
|                         | 6-32 A                | Rs. 184.00 | Rs. 520.00 | Rs. 846.00  | Rs. 1106.00 |
|                         | 40 A                  | Rs. 371.00 | Rs. 844.00 | Rs. 1280.00 | Rs. 1655.00 |

|      |     |        |     |        |     |         |     |         |
|------|-----|--------|-----|--------|-----|---------|-----|---------|
| 63 A | Rs. | 393.00 | Rs. | 886.00 | Rs. | 1343.00 | Rs. | 1737.00 |
|------|-----|--------|-----|--------|-----|---------|-----|---------|

**ABB**

|        |     |        |     |        |     |        |     |         |
|--------|-----|--------|-----|--------|-----|--------|-----|---------|
| 6-32 A | Rs. | 171.00 | Rs. | 492.00 | Rs. | 793.00 | Rs. | 1061.00 |
|--------|-----|--------|-----|--------|-----|--------|-----|---------|

|      |     |        |     |        |     |         |     |         |
|------|-----|--------|-----|--------|-----|---------|-----|---------|
| 40 A | Rs. | 347.00 | Rs. | 783.00 | Rs. | 1212.00 | Rs. | 1556.00 |
|------|-----|--------|-----|--------|-----|---------|-----|---------|

|      |     |        |     |        |     |         |     |         |
|------|-----|--------|-----|--------|-----|---------|-----|---------|
| 63 A | Rs. | 352.00 | Rs. | 791.00 | Rs. | 1219.00 | Rs. | 1563.00 |
|------|-----|--------|-----|--------|-----|---------|-----|---------|

|       |  |    |  |    |     |         |     |         |
|-------|--|----|--|----|-----|---------|-----|---------|
| 100 A |  | -- |  | -- | Rs. | 5287.00 | Rs. | 7177.00 |
|-------|--|----|--|----|-----|---------|-----|---------|

|       |  |    |  |    |     |         |     |         |
|-------|--|----|--|----|-----|---------|-----|---------|
| 125 A |  | -- |  | -- | Rs. | 5443.00 | Rs. | 7261.00 |
|-------|--|----|--|----|-----|---------|-----|---------|

**L&T**

|        |     |        |     |        |     |        |     |         |
|--------|-----|--------|-----|--------|-----|--------|-----|---------|
| 6-32 A | Rs. | 160.00 | Rs. | 478.00 | Rs. | 770.00 | Rs. | 1046.00 |
|--------|-----|--------|-----|--------|-----|--------|-----|---------|

|      |     |        |     |        |     |         |     |         |
|------|-----|--------|-----|--------|-----|---------|-----|---------|
| 40 A | Rs. | 371.00 | Rs. | 814.00 | Rs. | 1189.00 | Rs. | 1525.00 |
|------|-----|--------|-----|--------|-----|---------|-----|---------|

|      |     |        |     |        |     |         |     |         |
|------|-----|--------|-----|--------|-----|---------|-----|---------|
| 63 A | Rs. | 371.00 | Rs. | 814.00 | Rs. | 1189.00 | Rs. | 1525.00 |
|------|-----|--------|-----|--------|-----|---------|-----|---------|

**Havells**

|        |     |        |     |        |     |        |     |         |
|--------|-----|--------|-----|--------|-----|--------|-----|---------|
| 6-32 A | Rs. | 168.00 | Rs. | 478.00 | Rs. | 747.00 | Rs. | 1027.00 |
|--------|-----|--------|-----|--------|-----|--------|-----|---------|

|      |     |        |     |        |     |         |     |         |
|------|-----|--------|-----|--------|-----|---------|-----|---------|
| 40 A | Rs. | 328.00 | Rs. | 703.00 | Rs. | 1089.00 | Rs. | 1392.00 |
|------|-----|--------|-----|--------|-----|---------|-----|---------|

|      |     |       |     |        |     |         |     |         |
|------|-----|-------|-----|--------|-----|---------|-----|---------|
| 63 A | Rs. | 36.00 | Rs. | 795.00 | Rs. | 1150.00 | Rs. | 1476.00 |
|------|-----|-------|-----|--------|-----|---------|-----|---------|

|       |  |    |  |    |     |         |     |         |
|-------|--|----|--|----|-----|---------|-----|---------|
| 100 A |  | -- |  | -- | Rs. | 4007.00 | Rs. | 5189.00 |
|-------|--|----|--|----|-----|---------|-----|---------|

|       |  |    |  |    |     |         |     |         |
|-------|--|----|--|----|-----|---------|-----|---------|
| 125 A |  | -- |  | -- | Rs. | 4510.00 | Rs. | 5509.00 |
|-------|--|----|--|----|-----|---------|-----|---------|

| Item No.               | Description of Item | Rate       |            |             |             |
|------------------------|---------------------|------------|------------|-------------|-------------|
|                        |                     | SP         | DP         | TP          | FP          |
| <b><u>Standard</u></b> |                     |            |            |             |             |
|                        | 6-32 A              | Rs. 146.00 | Rs. 471.00 | Rs. 708.00  | Rs. 1046.00 |
|                        | 40 A                | Rs. 305.00 | Rs. 658.00 | Rs. 1017.00 | Rs. 1370.00 |
|                        | 63 A                | Rs. 359.00 | Rs. 776.00 | Rs. 1138.00 | Rs. 1487.00 |
|                        | 100 A               | --         | --         | Rs. 3999.00 | Rs. 5189.00 |
|                        | 125 A               | --         | --         | Rs. 4502.00 | Rs. 5509.00 |

8. Supplying and fixing 240/415 V MCB of Breaking capacity 10kA & C characteristics on din rail of existing DBs and necessary connection

|                         |        |                   |        |                   |         |
|-------------------------|--------|-------------------|--------|-------------------|---------|
| <b><u>Legrand</u></b>   |        | <b><u>SPN</u></b> |        | <b><u>TPN</u></b> |         |
|                         | 6-32 A | Rs.               | 546.00 | Rs.               | 1196.00 |
|                         | 40 A   | Rs.               | 938.00 | Rs.               | 1830.00 |
|                         | 63 A   | Rs.               | 938.00 | Rs.               | 1830.00 |
| <b><u>Schneider</u></b> |        |                   |        |                   |         |
|                         | 6-32 A | Rs.               | 466.00 | Rs.               | --      |
|                         | 40 A   | Rs.               | 684.00 | Rs.               | --      |
|                         | 63 A   | Rs.               | 783.00 | Rs.               | --      |
| <b><u>Crabtree</u></b>  |        |                   |        |                   |         |
|                         | 6-32 A | Rs.               | 540.00 | Rs.               | 1099.00 |
|                         | 40 A   | Rs.               | 760.00 | Rs.               | 1579.00 |
|                         | 63 A   | Rs.               | 886.00 | Rs.               | 1721.00 |
| <b><u>ABB</u></b>       |        |                   |        |                   |         |
|                         | 6-32 A | Rs.               | 490.00 | Rs.               | 1059.00 |
|                         | 40 A   | Rs.               | 776.00 | Rs.               | 1552.00 |
|                         | 63 A   | Rs.               | 783.00 | Rs.               | 1560.00 |
| <b><u>Havells</u></b>   |        |                   |        |                   |         |
|                         | 6-32 A | Rs.               | 467.00 | Rs.               | 958.00  |
|                         | 40 A   | Rs.               | 662.00 | Rs.               | 1370.00 |
|                         | 63 A   | Rs.               | 715.00 | Rs.               | 1427.00 |
| <b><u>Standard</u></b>  |        |                   |        |                   |         |
|                         | 6-32 A | Rs.               | 444.00 | Rs.               | 928.00  |



|             |     |        |     |         |
|-------------|-----|--------|-----|---------|
| <b>40 A</b> | Rs. | 612.00 | Rs. | 1262.00 |
| <b>63 A</b> | Rs. | 692.00 | Rs. | 1400.00 |

9. Supplying and fixing 240/415 V change over (MCB module) of on din rail of existing DBs/ enclosure and necessary connection.

| <u>Legrand</u>     |     | <u>DP</u> | <u>FP</u>   |
|--------------------|-----|-----------|-------------|
| <b>20 A</b>        | Rs. | 2142.00   | --          |
| <b>40 A</b>        |     | --        | Rs. 3198.00 |
| <br><u>Havells</u> |     |           |             |
| <b>25A</b>         | Rs. | 890.00    | Rs. 1563.00 |
| <b>40 A</b>        | Rs. | 1278.00   | Rs. 2371.00 |
| <b>63 A</b>        | Rs. | 1530.00   | Rs. 2866.00 |
| <br><u>HPL</u>     |     |           |             |
| <b>25 A</b>        | Rs. | 856.00    | Rs. 1514.00 |
| <b>40 A</b>        | Rs. | 1192.00   | Rs. 2264.00 |
| <b>63 A</b>        | Rs. | 1474.00   | Rs. 2656.00 |

| Item No. | Description of Item   | Rate      |          |           |         |
|----------|---|-----------|----------|-----------|---------|
|          |   | <u>DP</u> |          | <u>FP</u> |         |
|          | <b><u>Standard</u></b>  |           |          |           |         |
|          | 25 A  | Rs.       | 844.00   | Rs.       | 1506.00 |
|          | 40 A  | Rs.       | 1451.00  | Rs.       | 2287.00 |
|          | 63 A  | Rs.       | 1454.00  | Rs.       | 2713.00 |
| 10.      | Supplying and fixing 415 V Four Pole MCCB of Breaking capacity 25kA/35kA with fixed thermal and fixed magnetic / adjustable thermal and fixed magnetic setting in existing DBs / enclosure and necessary connection |           |          |           |         |
|          | <b><u>Legrand</u></b>   | <u>FP</u> |          |           |         |
|          | 63 A  | Rs.       | 7071.00  |           |         |
|          | 80 A  | Rs.       | 7071.00  |           |         |
|          | 100 A   | Rs.       | 7143.00  |           |         |
|          | 125 A   | Rs.       | 8139.00  |           |         |
|          | 160 A   | Rs.       | 9759.00  |           |         |
|          | 200 A   | Rs.       | 14798.00 |           |         |
|          | 250 A   | Rs.       | 18486.00 |           |         |
|          | <b><u>Schneider</u></b>   |           |          |           |         |
|          | 63 A  | Rs.       | 4934.00  |           |         |
|          | 80 A  | Rs.       | 4934.00  |           |         |
|          | 100 A   | Rs.       | 4934.00  |           |         |
|          | 125 A   | Rs.       | 7032.00  |           |         |
|          | 160 A   | Rs.       | 8784.00  |           |         |
|          | 200 A   | Rs.       | 10886.00 |           |         |
|          | 250 A   | Rs.       | 12897.00 |           |         |
|          | <b><u>Seimens</u></b>   |           |          |           |         |
|          | 63 A  | Rs.       | 6236.00  |           |         |
|          | 80 A  | Rs.       | 6236.00  |           |         |
|          | 100 A   | Rs.       | 6236.00  |           |         |
|          | 125 A   | Rs.       | 8441.00  |           |         |
|          | 160 A   | Rs.       | 10547.00 |           |         |
|          | <b><u>ABB</u></b>   |           |          |           |         |
|          | 63 A  | Rs.       | 3086.00  |           |         |
|          | 80 A  | Rs.       | 3088.00  |           |         |
|          | 100 A   | Rs.       | 3088.00  |           |         |
|          | 125 A   | Rs.       | 3239.00  |           |         |
|          | 160 A   | Rs.       | 6362.00  |           |         |
|          | 200 A   | Rs.       | 6362.00  |           |         |
|          | 250 A   | Rs.       | 7314.00  |           |         |
|          | <b><u>L&amp;T</u></b>   |           |          |           |         |
|          | 63 A  | Rs.       | 4267.00  |           |         |
|          | 80 A  | Rs.       | 4267.00  |           |         |
|          | 100 A   | Rs.       | 4267.00  |           |         |
|          | 125 A   | Rs.       | 5866.00  |           |         |
|          | 160 A   | Rs.       | 7292.00  |           |         |
|          | 200 A   | Rs.       | 10018.00 |           |         |
|          | 250 A   | Rs.       | 11693.00 |           |         |
|          | 250 A   | Rs.       | 4728.00  |           |         |

| Item No. | Description of Item  | Rate                 |                |
|----------|--|----------------------|----------------|
|          |  | <b>FP</b>            |                |
|          | <b>Standard</b>  |                      |                |
|          | 63 A   | Rs.                  | 3543.00        |
|          | 80 A   | Rs.                  | 4015.00        |
|          | 100 A  | Rs.                  | 4015.00        |
|          | 125 A  | Rs.                  | 4457.00        |
|          | 160 A  | Rs.                  | 4884.00        |
|          | 200 A  | Rs.                  | 10437.00       |
|          | 250 A  | Rs.                  | 12379.00       |
|          | <b>Havells</b>   |                      |                |
|          |  | <b>A Frame</b>       | <b>G frame</b> |
|          | 63 A   | Rs. 4728.00          | Rs. 3650.00    |
|          | 80 A   | Rs. 4982.00          | Rs. 4119.00    |
|          | 100 A  | Rs. 4982.00          | Rs. 4119.00    |
|          | 125 A  | Rs. 5973.00          | Rs. 4899.00    |
|          | 160 A  | Rs. 7942.00          | Rs. 5867.00    |
|          | 200 A  | Rs. 10067.00         | Rs. --         |
|          | 250 A  | Rs. 12246.00         | Rs. --         |
| 11.      | Supplying and fixing MCB SS enclosure with IP-20/30 protection, powder coated provision for two/four pole MCB, concealed in wall after cutting the wall & mending good the damages to original finish incl. painting, connection & provision for earthing attachment                                 |                      |                |
|          | <b>2 Way</b>   | Rs.                  | 270.00         |
|          | <b>4 Way</b>   | Rs.                  | 316.00         |
| 12.      | Supplying and fixing MCCB SS enclosure with IP-20/30 protection, powder coated provision for housing Four pole (4P) MCCB, concealed in wall after cutting the wall & mending good the damages to original finish / on flat iron frame incl. painting, connection & provision for earthing attachment |                      |                |
|          | <b>Legrand</b>   | Rs.                  | 584.00         |
|          | <b>L&amp;T</b>   | Rs.                  | 1222.00        |
|          | <b>Havells ( A Frame)</b>  | Rs.                  | 1184.00        |
|          | <b>Havells ( G Frame)</b>  | Rs.                  | 1070.00        |
|          | <b>Standard ( SKB7)</b>  | Rs.                  | 993.00         |
|          | <b>Standard ( SKB8)</b>  | Rs.                  | 1146           |
| 13.      | Supplying and fixing double-door SPN MCB Distribution Board with IP-42/43 protection, concealed in wall after cutting the wall & mending good the damages to original finish incl. Inter connection with suitable size of copper wire and neutral link & provision for earthing attachment.          |                      |                |
|          | <b>Legrand</b>   |                      |                |
|          | 2+4 way  | Enclosure (607710)   | Rs. 1,186.00   |
|          | 2+8 way  | Enclosure (607711)   | Rs. 1,477.00   |
|          | 2+12 way   | Enclosure (607712)   | Rs. 1,757.00   |
|          | 2+16 way   | Enclosure (607713)   | Rs. 2,200.00   |
|          | <b>Schneider</b>   |                      |                |
|          | 2+6 way  | Enclosure (A9HSND06) | Rs. 1,156.00   |

|                 |                      |     |          |
|-----------------|----------------------|-----|----------|
| <b>2+8 way</b>  | Enclosure (A9HSND08) | Rs. | 1,392.00 |
| <b>2+12 way</b> | Enclosure (A9HSND12) | Rs. | 1,673.00 |
| <b>2+18 way</b> | Enclosure (A9HSND18) | Rs. | 2,138.00 |

| Item No.                | Description of Item   | Rate         |
|-------------------------|---|--------------|
| <b><u>Crabtree</u></b>  |   |              |
|                         | 2+2 way Enclosure (DCDKSHODCW04)  | Rs. 1,111.00 |
|                         | 2+4 way Enclosure (DCDKSHODCW06)  | Rs. 1,221.00 |
|                         | 2+6 way Enclosure (DCDKSHODCW08)  | Rs. 1,346.00 |
|                         | 2+10 way Enclosure (DCDKSHODCW12)   | Rs. 1,654.00 |
|                         | 2+14 way Enclosure (DCDKSHODCW16)   | Rs. 2,199.00 |
| <b><u>Seimens</u></b>   |   |              |
|                         | 2+4 way Enclosure (8GB32102RC06)  | Rs. 1,293.00 |
|                         | 2+6 way Enclosure (8GB32102RC08)  | Rs. 1,335.00 |
|                         | 2+8 way Enclosure (8GB32102RC10)  | Rs. 1,563.00 |
|                         | 2+10 way Enclosure (8GB32102RC12)   | Rs. 1,601.00 |
|                         | 2+12 way Enclosure (8GB32102RC14)   | Rs. 1,851.00 |
|                         | 2+14 way Enclosure (8GB32102RC16)   | Rs. 1,917.00 |
| <b><u>ABB</u></b>       |   |              |
|                         | 2+4 way Enclosure (SCHM4)   | Rs. 1,055.00 |
|                         | 2+6 way Enclosure (SCHM6)   | Rs. 1,155.00 |
|                         | 2+8 way Enclosure (SCHM8)   | Rs. 1,362.00 |
|                         | 2+10 way Enclosure (SCHM10)   | Rs. 1,383.00 |
|                         | 2+12 way Enclosure (SCHM12)   | Rs. 1,560.00 |
|                         | 2+14 way Enclosure (SCHM14)   | Rs. 1,708.00 |
| <b><u>L&amp;T</u></b>   |   |              |
|                         | 2+2 way Enclosure (LTSD04N)   | Rs. 978.00   |
|                         | 2+4 way Enclosure (LTSD06N)   | Rs. 1,107.00 |
|                         | 2+6 way Enclosure (LTSD08N)   | Rs. 1,202.00 |
|                         | 2+10 way Enclosure (LTSD12N)  | Rs. 1,479.00 |
|                         | 2+14 way Enclosure (LTSD14N)  | Rs. 1,795.00 |
| <b><u>Havells</u></b>   |   |              |
|                         | 2+4 way Enclosure (DHDPSNODRW04)  | Rs. 935.00   |
|                         | 2+6 way Enclosure (DHDPSNODRW06)  | Rs. 1,073.00 |
|                         | 2+8 way Enclosure (DHDPSNODRW08)  | Rs. 1,197.00 |
|                         | 2+12 way Enclosure (DHDPSNODRW12)   | Rs. 1,436.00 |
|                         | 2+16 way Enclosure (DHDPSNODRW16)   | Rs. 1,894.00 |
| <b><u>Standard</u></b>  |   |              |
|                         | 2+4 way Enclosure (DHDMSNHOSI04)  | Rs. 870.00   |
|                         | 2+6 way Enclosure (DHDMSNHOSI06)  | Rs. 1,008.00 |
|                         | 2+8 way Enclosure (DHDMSNHOSI08)  | Rs. 1,098.00 |
|                         | 2+12 way Enclosure (DHDMSNHOSI12)   | Rs. 1,394.00 |
|                         | 2+16 way Enclosure (DHDMSNHOSI16)   | Rs. 1,720.00 |
| 14.                     | Supplying and fixing double door Horizontal TPN MCB Distribution board with IP-42/43 protection, concealed in wall after cutting the wall & mending good the damages to original finish incl. Inter connection with suitable size of copper wire and neutral link & provision for earthing attachment |              |
| <b><u>Legrand</u></b>   |   |              |
|                         | 4 way Enclosure (607715)  | Rs. 2,851.00 |
|                         | 6 way Enclosure (607716)  | Rs. 3,504.00 |
|                         | 8 way Enclosure (607717)  | Rs. 4,194.00 |
| <b><u>Schneider</u></b> |   |              |
|                         | 4 way Enclosure (A9HTND04)  | Rs. 2,770.00 |
|                         | 6 way Enclosure (A9HTND06)  | Rs. 3,338.00 |
|                         | 8 way Enclosure (A9HTND08)  | Rs. 3,996.00 |
| <b><u>Crabtree</u></b>  |   |              |
|                         | 4 way Enclosure (DCDKTHODCW04)  | Rs. 2,595.00 |
|                         | 6 way Enclosure (DCDKTHODCW06)  | Rs. 3,281.00 |
|                         | 8 way Enclosure (DCDKTHODCW08)  | Rs. 4,186.00 |
| <b><u>Seimens</u></b>   |   |              |
|                         | 4 way Enclosure (8GB32202RC04)  | Rs. 2,492.00 |
|                         | 6 way Enclosure (8GB32202RC06)  | Rs. 3,003.00 |
|                         | 8 way Enclosure (8GB32202RC08)  | Rs. 3,603.00 |

| Item No.                 | Description of Item   | Rate          |
|--------------------------|---|---------------|
| <b><u>ABB</u></b>        |   |               |
|                          | 4 way Enclosure (SHDBM4)  | Rs. 2,292.00  |
|                          | 6 way Enclosure (SHDBM6)  | Rs. 2,802.00  |
|                          | 8 way Enclosure (SHDBM8)  | Rs. 3,356.00  |
| <b><u>L&amp;T</u></b>    |   |               |
|                          | 4 way Enclosure (LTTD04N)   | Rs. 2,348.00  |
|                          | 6 way Enclosure (LTTD06N)   | Rs. 3,002.00  |
|                          | 8 way Enclosure (LTTD08N)   | Rs. 3,603.00  |
| <b><u>Havells</u></b>    |   |               |
|                          | 4 way Enclosure (DHDPTHODRW04)  | Rs. 2,419.00  |
|                          | 6 way Enclosure (DHDPTHODRW06)  | Rs. 2,998.00  |
|                          | 8 way Enclosure (DHDPTHODRW08)  | Rs. 3,832.00  |
| <b><u>Standard</u></b>   |   |               |
|                          | 4 way Enclosure (DSDMTTHODRW04)   | Rs. 2,434.00  |
|                          | 6 way Enclosure (DSDMTTHODRW06)   | Rs. 2,842.00  |
|                          | 8 way Enclosure (DSDMTTHODRW08)   | Rs. 3,552.00  |
| 15.                      | Supplying and fixing double door Vertical TPN MCB Distribution board for MCCB incomer with IP-42/43 protection, on angle iron frame on wall & mending good the damages to original finish incl. Inter connection with suitable size of copper wire and neutral link & provision for earthing attachment |               |
| <b><u>Legrand</u></b>    |   |               |
| <b><u>Up to 160A</u></b> | 4 way Enclosure (607913)  | Rs. 8,627.00  |
|                          | 8 way Enclosure (607914)  | Rs. 10,683.00 |
|                          | 12 way Enclosure (607915)   | Rs. 14,020.00 |
| <b><u>Up to 250A</u></b> | 4 way Enclosure (607922)  | Rs. 15,386.00 |
|                          | 8 way Enclosure (607723)  | Rs. 17,947.00 |
|                          | 12 way Enclosure (607724)   | Rs. 18,883.00 |
| <b><u>Schneider</u></b>  |   |               |
| <b><u>Up to 100A</u></b> | 4 way Enclosure (NBKRENEZVDD04)   | Rs. 6,677.00  |
|                          | 8 way Enclosure (NBKRENEZVDD08)   | Rs. 7,786.00  |
|                          | 12 way Enclosure (NBKRENEZVDD12)  | Rs. 9,961.00  |
| <b><u>Up to 160A</u></b> | 4 way Enclosure (A9HVD04M)  | Rs. 8,456.00  |
|                          | 8 way Enclosure (A9HVD08M)  | Rs. 10,372.00 |
|                          | 12 way Enclosure (A9HVD12M)   | Rs. 13,605.00 |
| <b><u>Up to 250A</u></b> | 8 way Enclosure (A9HVD08H)  | Rs. 17,409.00 |
|                          | 12 way Enclosure (A9HVD12H)   | Rs. 17,409.00 |
| <b><u>Crabtree</u></b>   |   |               |
| <b><u>Up to 160A</u></b> | 4 way Enclosure (DCDLVDCBGSFE04)  | Rs. 7,687.00  |
|                          | 8 way Enclosure (DCDLVDCBGSFE08)  | Rs. 8,631.00  |
|                          | 12 way Enclosure (DCDLVDCBGSFE12)   | Rs. 10,695.00 |
| <b><u>Seimens</u></b>    |   |               |
| <b><u>Up to 160A</u></b> | 4 way Enclosure (8GB31571RC)  | Rs. 6,601.00  |
|                          | 6 way Enclosure (8GB31572RC)  | Rs. 8,163.00  |
|                          | 8 way Enclosure (8GB31573RC)  | Rs. 8,761.00  |
|                          | 12 way Enclosure (8GB31574RC)   | Rs. 11,480.00 |
| <b><u>ABB</u></b>        |   |               |
| <b><u>Up to 160A</u></b> | 4 way Enclosure (SVTDBM4T1)   | Rs. 6,644.00  |
|                          | 6 way Enclosure (SVTDBM6T1)   | Rs. 7,717.00  |
|                          | 8 way Enclosure (SVTDBM8T1)   | Rs. 8,281.00  |
|                          | 12 way Enclosure (SVTDBM12T1)   | Rs. 10,840.00 |

| Item No.                 | Description of Item                      | Rate          |
|--------------------------|--|---------------|
| <b><u>ABB</u></b>        |  |               |
| <b><u>Up to 250A</u></b> | <b>4 way</b> Enclosure (SVTDBM4T3)       | Rs. 12,014.00 |
|                          | <b>6 way</b> Enclosure (SVTDBM6T1)       | Rs. 13,131.00 |
|                          | <b>8 way</b> Enclosure (SVTDBM8T1)       | Rs. 14,034.00 |
|                          | <b>12 way</b> Enclosure (SVTDBM12T1)     | Rs. 14,629.00 |
| <b><u>L&amp;T</u></b>    |  |               |
| <b><u>Up to 160A</u></b> | <b>4 way</b> Enclosure (LTVD04MGN)       | Rs. 8,064.00  |
|                          | <b>6 way</b> Enclosure (LTVD06MGN)       | Rs. 9,100.00  |
|                          | <b>8 way</b> Enclosure (LTVD08MGN)       | Rs. 10,006.00 |
|                          | <b>12 way</b> Enclosure (LTVD12MGN)      | Rs. 12,779.00 |
| <b><u>Havells</u></b>    |  |               |
|                          | <b>4 way</b> Enclosure (DHDLVDRWAOFO04)  | Rs. 7,382.00  |
|                          | <b>8 way</b> Enclosure (DHDLVDRWAOFO08)  | Rs. 9,439.00  |
|                          | <b>12 way</b> Enclosure (DHDLVDRWAOFO12) | Rs. 12,028.00 |
| <b><u>Standard</u></b>   |  |               |
|                          | <b>4 way</b> Enclosure (DSDLVDRBAOFO04)  | Rs. 5,296.00  |
|                          | <b>8 way</b> Enclosure (DSDLVDRBAOFO08)  | Rs. 8,958.00  |
|                          | <b>12 way</b> Enclosure (DSDLVDRBAOFO12) | Rs. 11,556.00 |

16. Supplying and fixing double door sheet steel (16SWG), powder coated cable end box for TPN DB horizontal / vertical enclosure with IP-42/43 protection, on angle iron frame on wall & mending good the damages to original finish with nuts bolts etc incl. provision for earthing attachment

|               | <b><u>Horizontal</u></b> | <b><u>Vertical</u></b> |
|---------------|--------------------------|------------------------|
| <b>4 way</b>  | --                       | Rs. 1072.00            |
| <b>6 way</b>  | Rs. 682.00               | Rs. 1072.00            |
| <b>8 way</b>  | Rs. 836.00               | Rs. 1072.00            |
| <b>12 way</b> | Rs. 1105.00              | Rs. 1072.00            |

17. Supplying & Fixing Industrial Plug & Socket board with 240 V, 20A, SPN & Earth Metal Industrial Plug socket & 20A Industrial top incl. S&F 20 A SP MCB breaking capacity 10kA (C- Curve) in SS enclosure fixed on wall and necessary connection. Each Rs. 904.00

18. Supplying & Fixing Industrial Plug & Socket board with 415 V, 30A, TPN & Earth Metal Industrial Plug socket & 30A Industrial top incl. S&F 32 A TPN/FP MCB breaking capacity 10kA (C- Curve) in SS enclosure fixed on wall and necessary connection. Each Rs. 2,668.00

**Bus-Bar Chambers :**

19. Supplying & fixing sheet metal (16 SWG) Iron Clad Busbar chambers on angle iron frame on wall, incl. earthing attachment and painting as required – (As per Drawing no. 470 of PWD Specification Book – May 1991)

|                   |                  | Dimension of Al. bars [85mm long] | Dimension of Sheet Metal Box | Rate / Mt. of complete chamber |
|-------------------|------------------|-----------------------------------|------------------------------|--------------------------------|
| (a) <b>2 bars</b> | 240 V, 63 A      | 2 x 20x5mm                        | 300x150mm                    | Rs. 1,682.00                   |
| <b>4 bars</b>     | 415 V, 63 A      | 4 x 20x5mm                        | 500x150mm                    | Rs. 2,399.00                   |
|                   | 415 V, 100/125 A | 4 x 25x5mm                        | 500x150mm                    | Rs. 2,482.00                   |
|                   | 415 V, 200 A     | 4 x 50x5mm                        | 500x150mm                    | Rs. 2,782.00                   |
|                   | 415 V, 315 A     | 4 x 50x10mm                       | 500x150mm                    | Rs. 3,360.00                   |
|                   | 415 V, 415 A     | 4 x 65x13mm                       | 500x150mm                    | Rs. 4,149.00                   |

|               |              |           |     |          |
|---------------|--------------|-----------|-----|----------|
| 415 V, 600 A  | 4 x 80x13mm  | 500x150mm | Rs. | 4,600.00 |
| 415 V, 1000 A | 4 x 100x15mm | 500x150mm | Rs. | 5,587.00 |



| Item No.   | Description of Item | Rate                                    |                                    |                                      |
|------------|---------------------|---|------------------------------------|--------------------------------------|
|            |                     | Dimension of<br>Cu. bars<br>[85mm long] | Dimension of<br>Sheet Metal<br>Box | Rate / Mt.<br>of complete<br>chamber |
| (b) 4 bars | 415 V, 100/125 A    | 4 x 15x3mm                              | 500x150mm                          | Rs. 2,648.00                         |
|            | 415 V, 200 A        | 4 x 20x5mm                              | 500x150mm                          | Rs. 3,767.00                         |
|            | 415 V, 315 A        | 4 x 40x5mm                              | 500x150mm                          | Rs. 5,418.00                         |
|            | 415 V, 415 A        | 4 x 50x5mm                              | 500x150mm                          | Rs. 6,271.00                         |
|            | 415 V, 600 A        | 4 x (2x 40x5)<br>mm                     | 500x150mm                          | Rs. 8,587.00                         |
|            | 415 V, 1000 A       | 4 x (2x 80x5)<br>mm                     | 500x150mm                          | Rs. 14,959.00                        |

**Fittings :**

|     |   |  |      |     |          |
|-----|---|--|------|-----|----------|
| 20. | (a) Supplying & Fixing 240 V AC/DC superior type Ding-Dong Call Bell (Anchor) on HW board incl. S&F HW board  |  | each | Rs. | 173.00   |
|     | (b) Supplying & Fixing 240 V AC Buzzer (Ancho) on HW board incl. S&F HW board   |  | each | Rs. | 124.00   |
|     | (c) Supplying & Fixing 240 V AC/DC superior type Multitune ( min 10 nos. tune) Call Bell (Anchor) with selector switch for single/Multi Tunes mode, Battery operated on HW board incl. S&F HW board   |  | each | Rs. | 294.00   |
| 21. | Supply & Fixing EI danger board on wall   |  |      |     |          |
|     | (a) 15 cm x 10 cm (6"x4")   |  | each | Rs. | 55.00    |
|     | (b) 20 cm x 30 cm (8"x12")  |  | each | Rs. | 85.00    |
| 22. | Supply & Fixing angular batten holder (Anchor) on 75mm dia PVC round block / round bakelite on wall/ceiling.  |  | each | Rs. | 38.00    |
| 23. | Supplying & Fixing bulk head light fitting (Havells make) with die cast aluminium housing & frosted glass on wall/ceiling incl. S&F 8watt CFL / 100 watts GLS lamp complete set.  |  | Set  | Rs. | 579.00   |
| 24. | Supplying & Fixing pendent light fitting complete with holder incl. S&F 24/0.20 twin twisted tinned copper conductor flexible cord and suspended below ceiling/beam upto 45 cm  |  | each | Rs. | 35.00    |
| 25. | Supplying & Fixing 24/0.20 twin twisted tinned copper conductor flexible cord incl. making necy. connection   |  | RM   | Rs. | 11.00    |
| 26. | Supplying & Fixing 12" Heavy guage Aluminium conical shade of approved make   |  | each | Rs. | 83.00    |
| 27. | Supplying & Fixing Out door type CFL luminaire (Bajaj make- 524020 / 020168) with epoxy powder coated sheet aluminium housing, aluminium reflector & clear acrylic cover and accessories incl. for 11/18 watts CFL S/L type lamp incl. S&F 15mm dia GI pipe bracket, clamp, nut & bolts etc.. |  | Each | Rs. | 1,188.00 |
| 28. | Supplying & Fixing Out door type CFL luminaire (Havells make- LHRC4185099) with deep drawn aluminium housing anodised inside & clear acrylic cover and accessories incl. for 85 watts CFL lamp incl. S&F 32mm dia GI pipe bracket, clamp, nut & bolts etc.                                    |  | each | Rs. | 1,849.00 |

| Item No.            | Description of Item   | Rate |              |
|---------------------|---|------|--------------|
| <b><u>Fan :</u></b> |   |      |              |
| 29.                 | Supplying & Fixing MS fan clam of two piece type for RC ceiling as per approved specification, fabricated from 40 mm x 9 mm MS flat including making good damages to building roof with satisfactory finishing and painting – (As per Drawing no. 475 of PWD Specification Book – May 1991)   | each | Rs. 242.00   |
| 30.                 | Supplying & Fixing iron beam fan clamp of two piece type, as per approved specification, fabricated from 40 mm x 9 mm MS sheet flat suitable for beam having flange upto 150 mm wide – (As per Drawing no. 476 of PWD Specification Book – May 1991)  | each | Rs. 178.00   |
| 31.                 | Supplying & Fixing of Box type fan clamp of 150mm dia & 80mm depth made of 16 SWG CRCA sheet with one end duly sealed by cover, properly welded, incl. S&F 12mm dia 600mm long MS rod duly bent by heat treatment at the centre position of rod to grip fan bobbin properly, incl. binding the rod and fan box with reinforcement by 22 SWG steel binding wire, incl. supplying & covering the box with alkathene sheet, placed in order to prevent concrete from entering the box. | Each | Rs. 174.00   |
| 32.                 | Supply & Fixing louver shutter on wall with necy. bolts & nuts (6 mm dia x 62 mm long)  |      |              |
|                     | (a) <b>For AI</b>   |      |              |
|                     | 23 cm Exhaust fan (9")  | Each | Rs. 152.00   |
|                     | 30 cm Exhaust fan (12")   | Each | Rs. 193.00   |
|                     | 38 cm Exhaust fan (15")   | Each | Rs. 318.00   |
|                     | 45 cm Exhaust fan (18")   | Each | Rs. 468.00   |
|                     | 60 cm Exhaust fan (24")   | Each | Rs. 718.00   |
|                     | (b) <b>For GI</b>   |      |              |
|                     | 23 cm Exhaust fan (9")  | Each | Rs. 124.00   |
|                     | 30 cm Exhaust fan (12")   | Each | Rs. 156.00   |
|                     | 38 cm Exhaust fan (15")   | Each | Rs. 227.00   |
|                     | 45 cm Exhaust fan (18")   | Each | Rs. 287.00   |
|                     | 60 cm Exhaust fan (24")   | Each | Rs. 468.00   |
| 33.                 | Supply & Fixing GI sheet (20SWG) metal Cowl with MS flat iron frame & GI wire mesh on wall with necy. bolts & nuts (6 mm dia x 62 mm long)  |      |              |
|                     | 30 cm Exhaust fan (12")   | Each | Rs. 559.00   |
|                     | 38 cm Exhaust fan (15")   | Each | Rs. 806.00   |
|                     | 45 cm Exhaust fan (18")   | Each | Rs. 892.00   |
|                     | 60 cm Exhaust fan (24")   | Each | Rs. 1,331.00 |
| 34. (a)             | Supply & Fixing of perforated GI cable tray with perforation not more than 17.5% suspended from ceiling incl. S&F GI connector, 6mm dia MS suspender, bolts & nuts, steel fastener etc. as required of the following size. Incl. AI painting of MS support.   |      |              |
|                     | (i) With out angle iron support   |      |              |
|                     | 100x50x1.25mm (18SWG)   | Each | Rs. 177.00   |
|                     | 150x50x1.25mm (18SWG)   | Each | Rs. 211.00   |
|                     | (ii) With 25x25x3mm angle iron support  |      |              |
|                     | 200x50x1.25mm (18SWG)   | Each | Rs. 287.00   |
|                     | 300x50x1.25mm (18SWG)   | Each | Rs. 367.00   |

| Item No. | Description of Item  | Rate |     |          |
|----------|--|------|-----|----------|
| (b)      | Supply & Fixing of perforated GI cable tray bend with perforation not more than 17.5% suspended from ceiling with two nos. suspenders & 25x25x3mm angle iron for supporting the cross member incl. S&F GI connector, 6mm dia MS suspender, bolts & nuts, steel fastener etc. as required of the following size. Incl. AI painting of MS support.         |      |     |          |
|          | 100x50x1.25mm (18SWG)  | Each | Rs. | 304.00   |
|          | 150x50x1.25mm (18SWG)  | Each | Rs. | 376.00   |
|          | 200x50x1.25mm (18SWG)  | Each | Rs. | 449.00   |
|          | 300x50x1.25mm (18SWG)  | Each | Rs. | 607.00   |
| (c)      | Supply & Fixing of perforated GI cable tray tee with perforation not more than 17.5% suspended from ceiling with two nos. suspenders & 25x25x3mm angle iron for supporting the cross member incl. S&F GI connector, 6mm dia MS suspender, bolts & nuts, steel fastener etc. as required of the following size. Incl. AI painting of MS support.          |      |     |          |
|          | 100x50x1.25mm (18SWG)  | Each | Rs. | 397.00   |
|          | 150x50x1.25mm (18SWG)  | Each | Rs. | 501.00   |
|          | 200x50x1.25mm (18SWG)  | Each | Rs. | 609.00   |
|          | 300x50x1.25mm (18SWG)  | Each | Rs. | 841.00   |
| (d)      | Supply & Fixing of perforated GI cable tray cross member with perforation not more than 17.5% suspended from ceiling with two nos. suspenders & 25x25x3mm angle iron for supporting the cross member incl. S&F GI connector, 6mm dia MS suspender, bolts & nuts, steel fastener etc. as required of the following size. Incl. AI painting of MS support. |      |     |          |
|          | 100x50x1.25mm (18SWG)  | Each | Rs. | 607.00   |
|          | 150x50x1.25mm (18SWG)  | Each | Rs. | 654.00   |
|          | 200x50x1.25mm (18SWG)  | Each | Rs. | 806.00   |
|          | 300x50x1.25mm (18SWG)  | Each | Rs. | 1,113.00 |
| (e)      | Supply & Fixing of perforated GI cable tray reducer with perforation not more than 17.5% suspended from ceiling with two nos. suspenders & 25x25x3mm angle iron for supporting the reducer incl. S&F GI connector, 6mm dia MS suspender, bolts & nuts, steel fastener etc. as required of the following size. Incl. AI painting of MS support.           |      |     |          |
|          | 100x50x1.25mm (18SWG)  | Each | Rs. | 257.00   |
|          | 150x50x1.25mm (18SWG)  | Each | Rs. | 312.00   |
|          | 200x50x1.25mm (18SWG)  | Each | Rs. | 369.00   |
|          | 300x50x1.25mm (18SWG)  | Each | Rs. | 489.00   |

**A. Schedule of Rates for Wiring in PVC Insulated and Sheathed Wire in EI Conduits/ GI Conduits**

| Item No.   | Description of Item   | Unit  | Rate       |            |  |
|--|---|-------|------------|------------|--|
|  |   |       | EI Conduit | GI Conduit |  |
| <b><u>By single core stranded Copper conductor</u></b> |   |       |            |            |  |
| 1.   | Wiring with 1.1 KV grade single core PVC insulated stranded Copper wire in EI conduit/GI conduit and painting   |       |            |            |  |
| (a)  | 2x1.5 sqmm wire in 19 mm conduit incl. S&F 1x14 SWG GI ECC  | RM    | Rs. 136.00 | Rs. 180.00 |  |
| (b)  | 2x2.5 sqmm wire in 19 mm conduit incl. S&F 1x14 SWG GI ECC  | RM    | Rs. 153.00 | Rs. 198.00 |  |
| (c)  | 2x4 sqmm wire in 19 mm conduit incl. S&F 1x14 SWG GI ECC  | RM    | Rs. 174.00 | Rs. 219.00 |  |
| (d)  | 2x6 sqmm wire in 19 mm conduit incl. S&F 1x14 SWG GI ECC  | RM    | Rs. 208.00 | Rs. 252.00 |  |
| (e)  | 3x1.5 sqmm wire in 19 mm conduit incl. S&F 2x10 SWG GI ECC  | RM    | Rs. 156.00 | Rs. 201.00 |  |
| (f)  | 3x2.5 sqmm wire in 19 mm conduit incl. S&F 2x10 SWG GI ECC  | RM    | Rs. 182.00 | Rs. 227.00 |  |
| (g)  | 3x4 sqmm wire in 19 mm conduit incl. S&F 2x10 SWG GI ECC  | RM    | Rs. 213.00 | Rs. 258.00 |  |
| (h)  | 3x6 sqmm wire in 19 mm conduit incl. S&F 2x10 SWG GI ECC  | RM    | Rs. 264.00 | Rs. 309.00 |  |
| (i)  | 4x1.5sqmm wire in 25 mm conduit incl. S&F 2x10 SWG GI ECC   | RM    | Rs. 190.00 | Rs. 239.00 |  |
| (j)  | 4x2.5sqmm wire in 25 mm conduit incl. S&F 2x10 SWG GI ECC   | RM    | Rs. 224.00 | Rs. 273.00 |  |
| (k)  | 4x4.0sqmm wire in 25 mm conduit incl. S&F 2x10 SWG GI ECC   | RM    | Rs. 266.00 | Rs. 315.00 |  |
| (l)  | 4x6.0sqmm wire in 25 mm conduit incl. S&F 2x10 SWG GI ECC   | RM    | Rs. 334.00 | Rs. 383.00 |  |
| 2.   | Distribution wiring in 2x1.5 sqmm single core PVC insulated stranded Copper wire in 19 mm in black stove EI conduit/GI conduit to 3 pin Plug Points incl. S&F 5 A Piano Key type switch with earthing attachment in 16 SWG GI Wire and painting |       |            |            |  |
| (a)  | On Board  | point | Rs. 69.00  | Rs. 69.00  |  |
| (b)  | Average run 1.5 mtr   | point | Rs. 323.00 | Rs. 393.00 |  |
| (c)  | Average run 3 mtr   | point | Rs. 526.00 | Rs. 666.00 |  |

|    |  |       |     |         |     |         |
|----|--|-------|-----|---------|-----|---------|
|    | (d) Average run 4.5 mtr  | point | Rs. | 729.00  | Rs. | 939.00  |
|    | (e) Average run 6 mtr  | point | Rs. | 933.00  | Rs. | 1213.00 |
|    | (f) Average run 7.5 mtr  | point | Rs. | 1136.00 | Rs. | 1486.00 |
| 3. | (a) Distribution wiring in 2x2.5 sqmm single core PVC insulated stranded Copper wire in 19 mm EI conduit/GI conduit from separate way of BDB to 3 Pin 15 A plug point with 1x14 SWG GI ECC (wiring only)                 | RM    | Rs. | 153.00  | Rs. | 198.00  |
|    | (b) Distribution wiring in 2x4 sqmm single core PVC insulated stranded Copper wire in 19 mm EI conduit/GI conduit from separate way of BDB to 3 Pin 15 A plug point with 1x14 SWG GI earth continuity wire (wiring only) | RM    | Rs. | 174.00  | Rs. | 219.00  |

**B. Concealed Wiring With PVC Insulated and Sheathed Wires in Polythene Pipes - Laying & Fixing Polythene Pipe, MS Boxes, Switches etc.**

| Item No. | Description of Item  | Unit | Rate       |
|----------|--|------|------------|
| 1.       | Supplying and fixing polythene pipe complete with fittings as necy. under ceiling/beam, bound with 22 SWG GI binding wire incl. supplying and drawing 1x18 SWG GI Wire as fish wire inside the pipes and fittings and providing 50 mm dia disc of MS sheet (20 SWG) having colour paint at one face fastened at the load point end of the polythene pipe with fish wire (synchronizing with roof/beam casting work of building construction) |      |            |
|          | (a) 13mm dia 3mm thick Polythene Pipe  | RM   | Rs. 33.00  |
|          | (b) 19mm dia 3mm thick Polythene Pipe  | RM   | Rs. 36.00  |
|          | (c) 25mm dia 3mm thick Polythene Pipe  | RM   | Rs. 49.00  |
|          | (d) 32mm dia 3mm thick Polythene Pipe  | RM   | Rs. 53.00  |
|          | (e) 40mm dia 3mm thick Polythene Pipe  | RM   | Rs. 63.00  |
|          | (f) 50mm dia 3mm thick Polythene Pipe  | RM   | Rs. 65.00  |
| 2.       | Cutting channel of 31 mm x 31 mm size on masonry wall incl. S&F heavy gauge polythene pipe dia as stated below, by means of iron hooks and supplying and drawing 18 SWG GI Wire fish wire incl. mending good damages to building works   |      |            |
|          | (a) 13 mm dia 3 mm thick polythene pipe without earth continuity wire  | RM   | Rs. 74.00  |
|          | (b) 13 mm dia 3 mm thick polythene pipe with 1x16 SWG GI earth continuity wire   | RM   | Rs. 75.00  |
| 3.       | Cutting channel of 40 mm x 40 mm size on masonry wall incl. S&F heavy gauge polythene pipe dia as stated below, by means of iron hooks and supplying and drawing 18 SWG GI Wire as fish wire incl. mending good damages to building works  |      |            |
|          | (a) 19 mm dia 3 mm thick polythene pipe without earth continuity wire  | RM   | Rs. 87.00  |
|          | (b) 19 mm dia 3 mm thick polythene pipe with 1x14 SWG GI earth continuity wire   | RM   | Rs. 89.00  |
| 4.       | Cutting channel of 43 mm x 43 mm size on masonry wall incl. S&F heavy gauge polythene pipe dia as stated below, by means of iron hooks and supplying and drawing 18 SWG GI Wire as fish wire incl. mending good damages to building works  |      |            |
|          | (a) 25 mm dia 3 mm thick polythene pipe without earth continuity wire  | RM   | Rs. 111.00 |
|          | (b) 25 mm dia 3 mm thick polythene pipe with 1x14 SWG GI earth continuity wire   | RM   | Rs. 113.00 |
| 5.       | Cutting Channel of size (31 mm x 31 mm) on masonry wall by Electric operated cutting machine incl. supplying & fixing heavy gauge 13 mm, 3 mm thick Polythene pipe by means of anchoring chemical (Hilti/Sika) and GI 'U' hooks of 8 SWG incl. supplying and drawing 18 SWG GI wire as Fish wire and mending good damages to original finish by using own tools and tackles  |      |            |
|          | (a) 13 mm dia 3 mm thick polythene pipe without earth continuity wire  | RM   | Rs. 59.00  |
|          | (b) 13 mm dia 3 mm thick polythene pipe with 1x16 SWG GI earth continuity wire   | RM   | Rs. 60.00  |

| Item No. | Description of Item   | Unit | Rate       |
|----------|---|------|------------|
| 6.       | Cutting Channel of size (40 mm x 40 mm) on masonry wall by Electric operated cutting machine incl. supplying & fixing heavy gauge 19 mm, 3 mm thick Polythene pipe by means of anchoring chemical (Hilti/Sika) and GI 'U' hooks of 8 SWG incl. supplying and drawing 18 SWG GI wire as Fish wire and mending good damages to original finish by using own tools and tackles   |      |            |
| (a)      | 19 mm dia 3 mm thick polythene pipe without earth continuity wire   | RM   | Rs. 63.00  |
| (b)      | 19 mm dia 3 mm thick polythene pipe with 1x14 SWG GI earth continuity wire  | RM   | Rs. 65.00  |
| 7.       | Cutting Channel of size (43 mm x 43 mm) on masonry wall by Electric operated cutting machine incl. supplying & fixing heavy gauge 25 mm, 3 mm thick Polythene pipe by means of anchoring chemical (Hilti/Sika) and GI 'U' hooks of 8 SWG incl. supplying and drawing 18 SWG GI wire as Fish wire and mending good damages to original finish by using own tools and tackles   |      |            |
| (a)      | 25 mm dia 3 mm thick polythene pipe without earth continuity wire   | RM   | Rs. 77.00  |
| (b)      | 25 mm dia 3 mm thick polythene pipe with 1x14 SWG GI earth continuity wire  | RM   | Rs. 79.00  |
| 8.       | Cutting Channel of size (31 mm x 31 mm) on RCC plastered ceiling by Electric operated cutting machine incl. supplying & fixing heavy gauge 13 mm, 3 mm thick Polythene pipe by means of anchoring chemical (Hilti/Sika) and GI 'U' hooks of 8 SWG incl. supplying and drawing 18 SWG GI wire as Fish wire and mending good damages to original finish by using own tools and tackles  |      |            |
| (a)      | 13 mm dia 3 mm thick polythene pipe without earth continuity wire   | RM   | Rs. 60.00  |
| (b)      | 13 mm dia 3 mm thick polythene pipe with 1x16 SWG GI earth continuity wire  | RM   | Rs. 61.00  |
| 9.       | Making holes on RCC ceiling 125 mm depth having dia of following sizes :  |      |            |
| (a)      | 125 mm depth, 25 mm dia   | RM   | Rs. 55.00  |
| (b)      | 125 mm depth, 50 mm dia   | RM   | Rs. 63.00  |
| (c)      | 125 mm depth, 75 mm dia   | RM   | Rs. 76.00  |
| (d)      | 125 mm depth, 100 mm dia  | RM   | Rs. 97.00  |
| 10.      | Supplying & Fixing CRC sheet metal (16 SWG) JB-cum-Switch Board of the following sizes complete with three no. suitable size Copper bar with holes (for Ph, N & E) fixed on bakelite/Hard Rubber insulator over the MS welded chairs incl. bakelite/Perspex/coloured Perspex (wall matching colour) top cover 3 mm thick flushed in wall for housing the board after cutting the brick wall incl. making earthing attachment, painting and mending good damages to building works |      |            |
| (a)      | 150 mm x 100 mm x 65 mm   | each | Rs. 208.00 |

| Item No. | Description of Item  | Unit | Rate       |
|----------|--|------|------------|
|          | (b) 175 mm x 100 mm x 65 mm  | each | Rs. 222.00 |
|          | (c) 200 mm x 150 mm x 65 mm  | each | Rs. 277.00 |
|          | (d) 240 mm x 200 mm x 65 mm  | each | Rs. 318.00 |
|          | (e) 300 mm x 200 mm x 65 mm  | each | Rs. 349.00 |
|          | (f) 415 mm x 240 mm x 65 mm  | each | Rs. 461.00 |
|          | (g) 450 mm x 240 mm x 65 mm  | each | Rs. 506.00 |
| 11.      | Supplying & Fixing sheet metal inspection box (16 SWG) of the following sizes flushed in wall by housing the same after cutting brick wall incl. making earthing attachment, painting and mending good damages to building works |      |            |
|          | (a) 100 mm x 100 mm x 65 mm  | each | Rs. 105.00 |
|          | (b) 150 mm x 100 mm x 65 mm  | each | Rs. 143.00 |
|          | (c) 175 mm x 100 mm x 65 mm  | each | Rs. 157.00 |
|          | (d) 200 mm x 150 mm x 65 mm  | each | Rs. 212.00 |
|          | (e) 240 mm x 200 mm x 65 mm  | each | Rs. 253.00 |
|          | (f) 240 mm x 240 mm x 65 mm  | each | Rs. 286.00 |
|          | (g) 300 mm x 200 mm x 65 mm  | each | Rs. 284.00 |
|          | (h) 415 mm x 200 mm x 65 mm  | each | Rs. 325.00 |
| 12.      | Supply & Fixing bakelite / perspex top cover on existing switch board by <b>Brass</b> screws after making housing for switch by cutting bakelite / perspex cover and making necessary connections as required                    |      |            |
|          | (a) 100 mm x 100 mm x 65 mm  | each | Rs. 35.00  |
|          | (b) 150 mm x 100 mm x 65 mm  | each | Rs. 42.00  |
|          | (c) 175 mm x 100 mm x 65 mm  | each | Rs. 47.00  |
|          | (d) 200 mm x 150 mm x 65 mm  | each | Rs. 60.00  |
|          | (e) 240 mm x 200 mm x 65 mm  | each | Rs. 80.00  |
|          | (f) 240 mm x 240 mm x 65 mm  | each | Rs. 93.00  |
|          | (g) 300 mm x 200 mm x 65 mm  | each | Rs. 91.00  |
|          | (h) 415 mm x 200 mm x 65 mm  | each | Rs. 111.00 |



| Item No. | Description of Item  | Unit | Rate      |
|----------|--|------|-----------|
| 13.      | Supply & Fixing bakelite / perspex top cover on existing Inspection board by <b>Brass</b> screws   |      |           |
|          | (a) 100 mm x 100 mm x 65 mm  | each | Rs. 30.00 |
|          | (b) 150 mm x 100 mm x 65 mm  | each | Rs. 35.00 |
|          | (c) 175 mm x 100 mm x 65 mm  | each | Rs. 38.00 |
|          | (d) 200 mm x 150 mm x 65 mm  | each | Rs. 49.00 |
|          | (e) 240 mm x 200 mm x 65 mm  | each | Rs. 67.00 |
|          | (f) 240 mm x 240 mm x 65 mm  | each | Rs. 78.00 |
|          | (g) 300 mm x 200 mm x 65 mm  | each | Rs. 76.00 |
|          | (h) 415 mm x 200 mm x 65 mm  | each | Rs. 94.00 |
| 14.      | (a) Supply & Fixing 240 V 6 A Piano key type switch (Brand approved by EIC) on existing sheet metal switch board having bakelite/perspex top cover by screws after making housing for switch by cutting bakelite/perspex cover and making necessary connections as required  | Each | Rs. 27.00 |
|          | (b) Supply & Fixing 240 V 16/20 A Piano key type switch (Brand approved by EIC) on existing sheet metal switch board having bakelite/perspex top cover by screws after making housing for switch by cutting bakelite/perspex cover and making necessary connections as required  | Each | Rs. 73.00 |
| 15.      | (a) Supply & Fixing 240 V, 6A plug socket (Brand approved by EIC), without switch & plug top, on existing sheet metal switch board with bakelite/perspex top cover by screws after making housing for plug by cutting bakelite/perspex top cover and making necy. connections with PVC wire and earth continuity wire etc.                     | Each | Rs. 36.00 |
|          | (b) Supply & Fixing 240 V, 20 A plug socket (Brand approved by EIC), without plug top and switch, on existing sheet metal switch board with bakelite/perspex top cover by screws after making housing for combined plug switch by cutting bakelite/perspex top cover and making necy. connections with PVC wire and earth continuity wire etc. | Each | Rs. 73.00 |
| 16.      | (a) Supply & Fixing 240 V, 6 A, 2(Two) way Piano key type switch (Brand approved by EIC) on existing sheet metal switch board having bakelite/perspex top cover by screws after making housing for switch by cutting bakelite/perspex cover and making necessary connections as required   | Each | Rs. 42.00 |
|          | (b) Supply & Fixing 240 V, 20 A, 2(Two) way Piano key type switch (Brand approved by EIC) on existing sheet metal switch board having bakelite/perspex top cover by screws after making housing for switch by cutting bakelite/perspex cover and making necessary connections as required  | Each | Rs. 91.00 |
|          |  |      | 224.00    |

| Item No. | Description of Item   | Unit | Rate       |
|----------|---|------|------------|
| 17.      | (a) Supply & Fixing 240 V, 6 A Piano key type switch (Brand approved by EIC) on sheet metal switch board incl. S & F 100x100x65mm MS (16SWG) switch board and bakelite/perspex top cover of 3mm thick by Brass screws after making housing for switch by cutting bakelite/perspex cover and making necessary connections as required  | Each | Rs. 152.00 |
|          | (b) Supply & Fixing 240 V, 20 A Piano key type switch (Brand approved by EIC) on sheet metal switch board incl. S & F 100x100x65mm MS (16SWG) switch board and bakelite/perspex top cover of 3mm thick by Brass screws after making housing for switch by cutting bakelite/perspex cover and making necessary connections as required   | Each | Rs. 201.00 |
| 18.      | (a) Supply & Fixing Socket type fan regulator (Step type) (Brand approved by EIC) on existing sheet metal switch board with bakelite/perspex top cover by screw after making housing for regulator knob by cutting bakelite/perspex top cover incl. making necy. connections etc.   | Each | Rs. 236.00 |
|          | (b) Supply & Fixing Socket type fan regulator (Step type) (Brand approved by EIC) on existing sheet metal switch board with bakelite/ perspex top cover by screw incl. making necy. connections etc.  | Each | Rs. 218.00 |
| 19.      | (a) Fixing only fan regulator on existing sheet metal switch board with bakelite/perspex top cover by screw after making housing for regulator knob by cutting bakelite/perspex top cover incl. making necy. connections etc.   | Each | Rs. 26.00  |
|          | (b) Fixing only fan regulator on existing sheet metal switch board with bakelite/ perspex top cover by screw incl. making necy. connections etc.  | Each | Rs. 18.00  |
| 20.      | (a) Supplying & Fixing one way CI Round box with cover concealed in ceiling/wall  | Each | Rs. 31.00  |
|          | (b) Supplying & Fixing two way CI Round box with cover concealed in ceiling/wall  | Each | Rs. 32.00  |
| 21.      | Supply & Fixing 240 V, 6A, plug socket with separate 6 A Piano key type switch (Brand approved by EIC) on sheet metal switch board embedded in wall incl. S & F 150x100x65mm MS (16SWG) switch board and bakelite/perspex top cover of 3mm thick by Brass screws after making housing for switch by cutting bakelite/perspex cover and making necessary connections as required.  | Each | Rs. 204.00 |
| 22.      | Supply & Fixing 240 V, 20A, plug socket with separate 20 A Piano key type switch (Brand approved by EIC) on sheet metal switch board embedded in wall incl. S & F 150x100x65mm MS (16SWG) switch board and bakelite/perspex top cover of 3mm thick by Brass screws after making housing for switch by cutting bakelite/perspex cover and making necessary connections as required | Each | Rs. 287.00 |

| Item No. | Description of Item  | Unit | Rate       |
|----------|--|------|------------|
| 23.      | Supply & Fixing 240 V, 4 nos. 6A, plug socket with separate 4 nos. 6 A Piano key type switch, indicator & 16A kit-kat flush type fuse (Brand approved by EIC) on sheet metal switch board embedded in wall incl. S & F 240x200x65mm MS (16SWG) switch board and bakelite/perspex top cover of 3mm thick by Brass screws after making housing for switch by cutting bakelite/perspex cover and making necessary connections as required                             | Each | Rs. 581.00 |
| 24.      | Supply & Fixing 240 V, 4 nos. 6A, plug socket with separate 4 nos. 6 A Piano key type switch, indicator & 16A switch type SP MCB (Brand approved by EIC) on sheet metal switch board embedded in wall incl. S & F 240x200x65mm MS (16SWG) switch board and bakelite/perspex top cover of 3mm thick by Brass screws after making housing for switch by cutting bakelite/perspex cover and making necessary connections as required                                  | Each | Rs. 669.00 |
| 25.      | Supply & Fixing 240 V, 3 nos. 6A, & 1 no. 20A plug socket with separate 3 nos. 6 A & 1 no. 20A Piano key type switch with indicator & 16A kit-kat flush type fuse (Brand approved by EIC) on sheet metal switch board embedded in wall incl. S & F 240x200x65mm MS (16SWG) switch board and bakelite/perspex top cover of 3mm thick by Brass screws after making housing for switch by cutting bakelite/perspex cover and making necessary connections as required | Each | Rs. 663.00 |
| 26.      | Supply & Fixing 240 V, 3 nos. 6A, & 1 no. 20A plug socket with separate 3 nos. 6 A & 1 no. 20A Piano key type switch, indicator & 20A switch type SP MCB (Brand approved by EIC) on sheet metal switch board embedded in wall incl. S & F 240x200x65mm MS (16SWG) switch board and bakelite/perspex top cover of 3mm thick by Brass screws after making housing for switch by cutting bakelite/perspex cover and making necessary connections as required          | Each | Rs. 752.00 |
| 27.      | Supply & Fixing 240 V, 2 nos. 6A, & 2 nos. 20A plug socket with separate 2 nos. 6 A & 2 nos. 20A Piano key type switch, indicator & 16A kit-kat flush type fuse (Brand approved by EIC) on sheet metal switch board embedded in wall incl. S & F 240x200x65mm MS (16SWG) switch board and bakelite/perspex top cover of 3mm thick by Brass screws after making housing for switch by cutting bakelite/perspex cover and making necessary connections as required   | Each | Rs. 734.00 |
| 28.      | Supply & Fixing 240 V, 2 nos. 6A, & 2 nos. 20A plug socket with separate 2 nos. 6 A & 2 nos. 20A Piano key type switch, indicator & 20A switch type SP MCB (Brand approved by EIC) on sheet metal switch board embedded in wall incl. S & F 240x200x65mm MS (16SWG) switch board and bakelite/perspex top cover of 3mm thick by Brass screws after making housing for switch by cutting bakelite/perspex cover and making necessary connections as required        | Each | Rs. 822.00 |
| 29.      | Supply & Fixing 240 V, 3 nos. 20A plug socket with separate 3 nos. 20A Piano key type switch, indicator & 16A kit-kat flush type fuse (Brand approved by EIC) on sheet metal switch board embedded in wall incl. S & F 300x200x65mm MS (16SWG) switch board and bakelite/perspex top cover of 3mm thick by Brass screws after making housing for switch by cutting bakelite/perspex cover and making necessary connections as required                             | Each | Rs. 802.00 |

| Item No. | Description of Item   | Unit | Rate         |
|----------|---|------|--------------|
| 30.      | Supply & Fixing 240 V, 3 nos. 20A plug socket with separate 3 nos. 20A Piano key type switch, indicator & 20A switch type SP MCB (Brand approved by EIC) on sheet metal switch board embedded in wall incl. S & F 300x200x65mm MS (16SWG) switch board and bakelite/perspex top cover of 3mm thick by Brass screws after making housing for switch by cutting bakelite/perspex cover and making necessary connections as required | Each | Rs. 890.00   |
| 31.      | Supply & Fixing 240 V, 4 nos. 20A plug socket with separate 4 nos. 20A Piano key type switch, indicator & 16A kit-kat flush type fuse (approved make) on sheet metal switch board embedded in wall incl. S & F 300x200x65mm MS (16SWG) switch board and bakelite/perspex top cover of 3mm thick by Brass screws after making housing for switch by cutting bakelite/perspex cover and making necessary connections as required    | Each | Rs. 924.00   |
| 32.      | Supply & Fixing 240 V, 4 nos. 20A plug socket with separate 4 nos. 20A Piano key type switch, indicator & 20A switch type SP MCB (approved make) on sheet metal switch board embedded in wall incl. S & F 300x200x65mm MS (16SWG) switch board and bakelite/perspex top cover of 3mm thick by Brass screws after making housing for switch by cutting bakelite/perspex cover and making necessary connections as required         | Each | Rs. 1,012.00 |
| 33.      | (a) Supply & Fixing Telephone ocket RJ11 (Brand approved by EIC) on 100x100x65mm sheet metal switch board incl. S&F MS board with bakelite/perspex top cover by screw after making housing for regulator knob by cutting bakelite/perspex top cover incl. making necy. connections etc.   | Each | Rs. 156.00   |
|          | (b) Supply & Fixing Telephone ocket RJ11 (Brand approved by EIC) on existing sheet metal switch board with bakelite/ perspex top cover by screw incl. making necy. connections etc.   | Each | Rs. 69.00    |

**C. Concealed Wiring With PVC Insulated & Unsheathed Single Core Stranded Copper Wire 'FR'**

| Item No. | Description of Item  | Unit  | Rate         |
|----------|--|-------|--------------|
| 1.       | Supplying and Drawing 1.1 KV single core stranded 'FR' PVC insulated & unsheathed single core stranded copper wire (Brand approved by EIC) of the following sizes in the pre-laid polythene pipe and by the pre-laid GI fish wire and making necy. connection as required  |       |              |
|          | (a) 2 x 22/0.3 (1.5 sqmm)  | RM    | Rs. 34.00    |
|          | (b) 3 x 22/0.3 (1.5 sqmm)  | RM    | Rs. 48.00    |
|          | (c) 4 x 22/0.3 (1.5 sqmm)  | RM    | Rs. 65.00    |
|          | (d) 2 x 36/0.3 (2.5 sqmm)  | RM    | Rs. 51.00    |
|          | (e) 3 x 36/0.3 (2.5 sqmm)  | RM    | Rs. 74.00    |
|          | (f) 4 x 36/0.3 (2.5 sqmm)  | RM    | Rs. 100.00   |
|          | (g) 2 x 56/0.3 (4 sqmm)  | RM    | Rs. 72.00    |
|          | (h) 3 x 56/0.3 (4 sqmm)  | RM    | Rs. 106.00   |
|          | (i) 4 x 56/0.3 (4 sqmm)  | RM    | Rs. 142.00   |
|          | (j) 2 x 84/0.3 (6 sqmm)  | RM    | Rs. 106.00   |
|          | (k) 3 x 84/0.3 (6 sqmm)  | RM    | Rs. 156.00   |
|          | (l) 4 x 84/0.3 (6 sqmm)  | RM    | Rs. 209.00   |
|          | (m) 2 x 80/0.4 (10 sqmm)   | RM    | Rs. 198.00   |
|          | (n) 3 x 80/0.4 (10 sqmm)   | RM    | Rs. 294.00   |
|          | (o) 4 x 80/0.4 (10 sqmm)   | RM    | Rs. 393.00   |
|          | (p) 2 x 126/0.4 (16 sqmm)  | RM    | Rs. 303.00   |
|          | (q) 3 x 126/0.4 (16 sqmm)  | RM    | Rs. 452.00   |
|          | (r) 4 x 126/0.4 (16 sqmm)  | RM    | Rs. 603.00   |
|          | (s) 2x36/0.3 (2.5 sqmm) + 1x22/0.3 (1.5 sqmm) as ECC   | RM    | Rs. 65.00    |
|          | (t) 3x36/0.3 (2.5 sqmm) + 2x22/0.3 (1.5 sqmm) as ECC   | RM    | Rs. 105.00   |
|          | (u) 4x36/0.3 (2.5 sqmm) + 2x22/0.3 (1.5 sqmm) as ECC   | RM    | Rs. 128.00   |
|          | (v) 2x56/0.3 (4 sqmm) + 1x36/0.3 (2.5 sqmm) as ECC   | RM    | Rs. 95.00    |
|          | (w) 3x56/0.3 (4 sqmm) + 2x36/0.3 (2.5 sqmm) as ECC   | RM    | Rs. 154.00   |
|          | (x) 4x56/0.3 (4 sqmm) + 2x36/0.3 (2.5 sqmm) as ECC   | RM    | Rs. 187.00   |
|          | (y) 2x84/0.3 (6 sqmm) + 1x56/0.3 (4 sqmm) as ECC   | RM    | Rs. 139.00   |
|          | (z) 3x84/0.3 (6 sqmm) + 2x56/0.3 (4 sqmm) as ECC   | RM    | Rs. 226.00   |
|          | (a1) 4x84/0.3 (6 sqmm) + 2x56/0.3 (4 sqmm) as ECC  | RM    | Rs. 276.00   |
|          | (b1) 2x80/0.4 (10 sqmm) + 1x84/0.3 (6 sqmm) as ECC   | RM    | Rs. 248.00   |
|          | (c1) 3x80/0.4 (10 sqmm) + 2x84/0.3 (6 sqmm) as ECC   | RM    | Rs. 397.00   |
|          | (d1) 4x80/0.4 (10 sqmm) + 2x84/0.3 (6 sqmm) as ECC   | RM    | Rs. 493.00   |
|          | (e1) 2x126/0.4 (16 sqmm) + 1x80/0.4 (10 sqmm) as ECC   | RM    | Rs. 399.00   |
|          | (f1) 3x126/0.4 (16 sqmm) + 2x80/0.4 (10 sqmm) as ECC   | RM    | Rs. 647.00   |
|          | (g1) 4x126/0.4 (16 sqmm) + 2x80/0.4 (10 sqmm) as ECC   | RM    | Rs. 795.00   |
| 2.       | Distn. wiring in 22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed single core stranded copper wire (Brand approved by EIC) in 19 mm bore, 3 mm thick polythene pipe complete with all accessories embedded in wall to light/fan/call bell points with Piano key type switch (Anchor make) fixed on sheet metal (16 SWG) switch board with bakelite/perspex (wall matching colour) top cover (3 mm thick) flushed in wall incl. mending good damages to original finish |       |              |
|          | (a) 2x22/0.3 (Ph. & N) and 1x22/0.3 as ECC   |       |              |
|          | (i) Average run 6 mtr  | point | Rs. 780.00   |
|          | (ii) Average run 7 mtr   | point | Rs. 874.00   |
|          | (iii) Average run 8 mtr  | point | Rs. 967.00   |
|          | (iv) Average run 9 mtr   | point | Rs. 1,061.00 |
|          | (v) Average run 10 mtr   | point | Rs. 1,154.00 |
|          | (vi) Average run 11 mtr  | point | Rs. 1,248.00 |
|          | (vii) Average run 12 mtr   | point | Rs. 1,341.00 |
|          | (b) 2x22/0.3 (Ph. & N) and 16 SWG GI as ECC  |       |              |
|          | (i) Average run 6 mtr  | point | Rs. 702.00   |
|          | (ii) Average run 7 mtr   | point | Rs. 783.00   |
|          | (iii) Average run 8 mtr  | point | Rs. 863.00   |
|          | (iv) Average run 9 mtr   | point | Rs. 944.00   |
|          | (v) Average run 10 mtr   | point | Rs. 1,024.00 |
|          | (vi) Average run 11 mtr  | point | Rs. 1,105.00 |
|          | (vii) Average run 12 mtr   | point | Rs. 1,185.00 |

| Item No. | Description of Item  | Unit  | Rate         |
|----------|--|-------|--------------|
| 3.       | Distn. wiring in 22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed single core stranded copper wire (Brand approved by EIC) in 19 mm bore, 3 mm thick polythen pipe (for <b>horizontal &amp; vertical run in wall and celing portion through prelaid polythen pipe</b> ) complete with all accessories embedded in wall to light/fan/call bell points with Piano key type switch (Anchor make) fixed on sheet metal (16 SWG) switch board with bakelite/perspex (wall matching colour) top cover (3 mm thick) flushed in wall incl. mending good damages to original finish |       |              |
|          | (a) 2x22/0.3 (Ph. & N) and 1x22/0.3 as ECC   |       |              |
|          | (i) Average run 6 mtr  | point | Rs. 712.00   |
|          | (ii) Average run 7 mtr   | point | Rs. 805.00   |
|          | (iii) Average run 8 mtr  | point | Rs. 899.00   |
|          | (iv) Average run 9 mtr   | point | Rs. 992.00   |
|          | (v) Average run 10 mtr   | point | Rs. 1,086.00 |
|          | (vi) Average run 11 mtr  | point | Rs. 1,179.00 |
|          | (vii) Average run 12 mtr   | point | Rs. 1,273.00 |
|          | (b) 2x22/0.3 (Ph. & N) and 16 SWG GI as ECC  |       |              |
|          | (i) Average run 6 mtr  | point | Rs. 632.00   |
|          | (ii) Average run 7 mtr   | point | Rs. 713.00   |
|          | (iii) Average run 8 mtr  | point | Rs. 793.00   |
|          | (iv) Average run 9 mtr   | point | Rs. 874.00   |
|          | (v) Average run 10 mtr   | point | Rs. 954.00   |
|          | (vi) Average run 11 mtr  | point | Rs. 1,035.00 |
|          | (vii) Average run 12 mtr   | point | Rs. 1,115.00 |
| 4.       | Distn. wiring in 22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed single core stranded copper wire (Brand approved by EIC) in 19 mm bore, 3 mm thick polythen pipe complete with all accessories embedded in wall to 240 V 5A 3 pin plug point incl. S&F 240 V 5A 3 pin flush type plug socket & piano key type switch (Anchor make) incl. S&F earth continuity wire, fixed on sheet metal (16 SWG) switch board with bakelite/perspex (wall matching colour) top cover (3 mm thick) flushed in wall incl. mending good damages to original finish                         |       |              |
|          | (a) 2x22/0.3 (Ph. & N) and 1x22/0.3 as ECC   |       |              |
|          | (i) On Board   | point | Rs. 76.00    |
|          | (ii) Average run 1.5 mtr   | point | Rs. 379.00   |
|          | (iii) Average run 3 mtr  | point | Rs. 532.00   |
|          | (iv) Average run 4.5 mtr   | point | Rs. 684.00   |
|          | (v) Average run 6 mtr  | point | Rs. 836.00   |
|          | (vi) Average run 7.5 mtr   | point | Rs. 988.00   |
|          | (b) 2x22/0.3 (Ph. & N) and 16 SWG GI as ECC  |       |              |
|          | (i) On Board   | point | Rs. 75.00    |
|          | (ii) Average run 1.5 mtr   | point | Rs. 348.00   |
|          | (iii) Average run 3 mtr  | point | Rs. 469.00   |
|          | (iv) Average run 4.5 mtr   | point | Rs. 589.00   |
|          | (v) Average run 6 mtr  | point | Rs. 710.00   |
|          | (vi) Average run 7.5 mtr   | point | Rs. 831.00   |
| 5.       | Distn. wiring with 2 x 36/0.3 (2.5 sqmm) single core stranded copper conductor PVC insulated and unsheathed copper wire (Brand approved by EIC) in 19mm dia 3 mm thick polythene pipe with 1x22/0.3 (1.5sqmm) PVC insulated and unsheathed coper wire as ECC, complete with all accessories embedded in wall (for 15 A plug point/exhaust fan point)   |       |              |
|          |  | RM    | Rs. 162.00   |

**D. Wiring With PVC Insulated & Unsheathed Single Core Stranded Copper Wire 'FR' – in PVC Casing-Capping (Precision Make) on wall/ceiling**

| Item No. | Description of Item  | Unit  | Rate         |
|----------|--|-------|--------------|
| 1.       | Wiring in 1.1 KV grade single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) of following sizes in 25mm PVC casing-capping (Precision make) incl. necy. PVC clips, fittings etc.  |       |              |
|          | (a) 2 x 22/0.3 (1.5 sqmm)  | RM    | Rs. 71.00    |
|          | (b) 2 x 22/0.3 (1.5 sqmm) + 1 x 22/0.3 (1.5 sqmm)  | RM    | Rs. 85.00    |
|          | (c) 2 x 36/0.3 (2.5 sqmm) + 1 x 22/0.3 (1.5 sqmm)  | RM    | Rs. 102.00   |
|          | (d) 2 x 56/0.3 (4 sqmm) + 1 x 22/0.3 (1.5 sqmm)  | RM    | Rs. 123.00   |
|          | (e) 2 x 56/0.3 (4 sqmm) + 1 x 36/0.3 (2.5 sqmm)  | RM    | Rs. 132.00   |
| 2.       | Distribution wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in suitable size PVC casing-capping (Precision make) with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, incl. necy. PVC clips, fittings etc. to light/fan/call bell point with piano key type switch (Anchor make) fixed on sheet steel fabricated switch board with Perspex/bakelite top cover on wall incl. necy. connections and making earthing attachment and mending good damages to building works. <b>[PVC casing-capping and Switch board both on surface]</b>     |       |              |
|          | (a) Average run 5 mtr  | Point | Rs. 577.00   |
|          | (b) Average run 6 mtr  | Point | Rs. 650.00   |
|          | (c) Average run 8 mtr  | Point | Rs. 796.00   |
|          | (d) Average run 9 mtr  | Point | Rs. 870.00   |
|          | (e) Average run 10 mtr   | Point | Rs. 943.00   |
|          | (f) Average run 11 mtr   | Point | Rs. 1,016.00 |
|          | (g) Average run 12 mtr   | Point | Rs. 1,089.00 |
| 3.       | Distribution wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in suitable size PVC casing-capping (Precision make) with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, incl. necy. PVC clips, fittings etc. to light point with 2 no. 2 way piano key type switch fixed on sheet steel fabricated switch board with Perspex/bakelite top cover on wall incl. necy. connections and making earthing attachment and mending good damages to building works. <b>[PVC casing-capping and Switch board both on surface]</b>                     |       |              |
|          | (a) Average run 9 mtr  | point | Rs. 981.00   |
|          | (b) Average run 10 mtr   | point | Rs. 1,064.00 |
|          | (c) Average run 11 mtr   | point | Rs. 1,146.00 |
|          | (d) Average run 12 mtr   | point | Rs. 1,229.00 |
| 4.       | Distribution wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in suitable size PVC casing-capping (Precision make) with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, incl. necy. PVC clips, fittings etc. to light/fan/call bell point with piano key type switch (Anchor make) fixed on sheet steel fabricated switch board with Perspex/bakelite top cover on wall incl. necy. connections and making earthing attachment and mending good damages to building works <b>[PVC casing-capping on surface and Switch board concealed]</b> |       |              |
|          | (a) Average run 5 mtr  | point | Rs. 609.00   |
|          | (b) Average run 6 mtr  | point | Rs. 686.00   |
|          | (c) Average run 8 mtr  | point | Rs. 839.00   |
|          | (d) Average run 9 mtr  | point | Rs. 916.00   |

| Item No. | Description of Item  | Unit  | Rate         |
|----------|--|-------|--------------|
|          | (e) Average run 10 mtr   | point | Rs. 993.00   |
|          | (f) Average run 11 mtr   | point | Rs. 1,069.00 |
|          | (g) Average run 12 mtr   | point | Rs. 1,146.00 |
| 5.       | Distribution wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in suitable size PVC casing-capping (Precision make) with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, incl. necy. PVC clips, fittings etc. to light point with 2 no. 2 way piano key type switch fixed on sheet steel fabricated switch board with Perspex/bakelite top cover on wall incl. necy. connections and making earthing attachment and mending good damages to building works <b>[PVC casing-capping on surface and Switch board concealed]</b>   |       |              |
|          | (a) Average run 9 mtr  | point | Rs. 1,027.00 |
|          | (b) Average run 10 mtr   | point | Rs. 1,113.00 |
|          | (c) Average run 11 mtr   | point | Rs. 1,199.00 |
|          | (d) Average run 12 mtr   | point | Rs. 1,286.00 |
| 6.       | Distribution Wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in suitable size PVC casing-capping (Precision make) with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, incl. necy. PVC clips, fittings etc. to 5A 3 pin flush type plug socket with piano key type switch (Anchor make) fixed on sheet steel fabricated CRC MS switch board with bakelite/perspex (wall matching color) top cover of 3 mm thick flushed in wall by housing the board after cutting brick wall incl. necy. connection making earthing attachment, painting and mending good damages to building works <b>[PVC casing-capping and plug box both on surface]</b>          |       |              |
|          | (a) On Board   | point | Rs. 67.00    |
|          | (b) Average run 1.5 mtr  | point | Rs. 268.00   |
|          | (c) Average run 3 mtr  | point | Rs. 377.00   |
|          | (d) Average run 4.5 mtr  | point | Rs. 487.00   |
|          | (e) Average run 6 mtr  | point | Rs. 596.00   |
|          | (f) Average run 7.5 mtr  | point | Rs. 706.00   |
| 7.       | Distribution Wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in suitable size PVC casing-capping (Precision make) with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, incl. necy. PVC clips, fittings etc. to 5A 3 pin flush type plug socket with piano key type switch (Anchor make) fixed on sheet steel fabricated CRC MS switch board with bakelite/perspex (wall matching color) top cover of 3 mm thick flushed in wall by housing the board after cutting brick wall incl. necy. connection making earthing attachment, painting and mending good damages to building works <b>[PVC casing-capping on surface and Switch board concealed]</b> |       |              |
|          | (a) On Board   | point | Rs. 67.00    |
|          | (b) Average run 1.5 mtr  | point | Rs. 298.00   |
|          | (c) Average run 3 mtr  | point | Rs. 408.00   |
|          | (d) Average run 4.5 mtr  | point | Rs. 517.00   |
|          | (e) Average run 6 mtr  | point | Rs. 627.00   |
|          | (f) Average run 7.5 mtr  | point | Rs. 736.00   |



| Item No. | Description of Item   | Unit  | Rate         |
|----------|---|-------|--------------|
| 8.       | Distribution wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in suitable size PVC casing-capping (Precision make) [for horizontal run & ceiling portion] and partly in 19mm bore, 3mm thick polythene concealed pipe [for vertical run embedded in wall only], with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, incl. necy. PVC clips, fittings etc. to light/fan/call bell points with piano key type switch (Anchor make) fixed on sheet steel fabricated switch board with Perspex/bakelite top cover on wall incl. necy. connections and making earthing attachment and mending good damages to building works <b>[PVC casing-capping on Wall and vertical run &amp; switch box both concealed]</b> |       |              |
|          | (a) Average run 5 mtr   | point | Rs. 572.00   |
|          | (b) Average run 6 mtr   | point | Rs. 634.00   |
|          | (c) Average run 8 mtr   | point | Rs. 759.00   |
|          | (d) Average run 9 mtr   | point | Rs. 821.00   |
|          | (e) Average run 10 mtr  | point | Rs. 883.00   |
|          | (f) Average run 11 mtr  | point | Rs. 946.00   |
|          | (g) Average run 12 mtr  | point | Rs. 1,008.00 |
| 9.       | Distribution wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (approved make) for ECC in 19 mm bore, 3 mm thick polythene pipe complete with all accessories embedded in wall for horizontal & vertical runs and in suitable size PVC casing-capping (Precision make) for ceiling portion only, incl. necy. PVC clips, fittings etc. to light/fan/call bell point with piano key type switch (Anchor make) fixed on sheet steel fabricated switch board with Perspex/bakelite top cover on wall incl. necy. connections and making earthing attachment and mending good damages to building works <b>[only PVC casing-capping on ceiling and remaining portion concealed]</b>            |       |              |
|          | (a) Average run 5 mtr   | point | Rs. 740.00   |
|          | (b) Average run 6 mtr   | point | Rs. 843.00   |
|          | (c) Average run 8 mtr   | point | Rs. 1,048.00 |
|          | (d) Average run 9 mtr   | point | Rs. 1,151.00 |
|          | (e) Average run 10 mtr  | point | Rs. 1,253.00 |
|          | (f) Average run 11 mtr  | point | Rs. 1,356.00 |
|          | (g) Average run 12 mtr  | point | Rs. 1,459.00 |
| 10.      | Supplying and fixing PVC casing-capping [Precision Make] on wall or ceiling, incl. necy. PVC fittings etc. and mending good damages to building works   |       |              |
|          | (a) 20x10mm Size  | RM    | Rs. 32.00    |
|          | (b) 25x10mm Size  | RM    | Rs. 35.00    |

**E. Wiring With PVC Insulated & Unsheathed Single Core Stranded Copper Wire 'FR' – in PVC Rigid Conduit 'FR' (ISI Marked) on wall/ceiling**

| Item No. | Description of Item   | Unit  | Rate         |
|----------|---|-------|--------------|
| 1.       | (a) Distribution wiring in 1.1 KV single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in 20mm size PVC rigid conduit 'FR' (Precision make) incl. necy. fittings as required  |       |              |
|          | (i) 2 x 22/0.3 (1.5 sqmm) + 1 x 22/0.3 (1.5 sqmm) ECC   | RM    | Rs. 102.00   |
|          | (ii) 2 x 36/0.3 (2.5 sqmm) + 1 x 22/0.3 (1.5 sqmm) ECC  | RM    | Rs. 119.00   |
|          | (iii) 2 x 56/0.3 (4 sqmm) + 1 x 36/0.3 (2.5 sqmm) ECC   | RM    | Rs. 149.00   |
|          | (iv) 2 x 84/0.3 (6 sqmm) + 1 x 56/0.3 (4 sqmm) ECC  | RM    | Rs. 193.00   |
|          | (v) 3 x 22/0.3 (1.5 sqmm) + 1 x 22/0.3 (1.5 sqmm) ECC   | RM    | Rs. 116.00   |
|          | (vi) 3 x 36/0.3 (2.5 sqmm) + 2 x 22/0.3 (1.5 sqmm) ECC  | RM    | Rs. 156.00   |
|          | (b) Distribution wiring in 1.1 KV single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in 25mm size PVC rigid conduit 'FR' (Precision make) incl. necy. fittings as required  |       |              |
|          | (i) 3 x 56/0.3 (4 sqmm) + 2 x 36/0.3 (2.5 sqmm) ECC   | RM    | Rs. 219.00   |
|          | (ii) 4 x 36/0.3 (2.5 sqmm) + 2 x 22/0.3 (1.5 sqmm) ECC  | RM    | Rs. 192.00   |
|          | (iii) 4 x 56/0.3 (4 sqmm) + 2 x 36/0.3 (2.5 sqmm) ECC   | RM    | Rs. 252.00   |
|          | (iv) 3 x 84/0.3 (6 sqmm) + 2 x 56/0.3 (4 sqmm) ECC  | RM    | Rs. 290.00   |
|          | (v) 4 x 84/0.3 (6 sqmm) + 2 x 56/0.3 (4 sqmm) ECC   | RM    | Rs. 340.00   |
| 2.       | Distribution wiring in 2 x 22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in 20mm size PVC rigid conduit 'FR' (Precision make), with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, to light/fan/call bell points with Piano Key type switch fixed on MS CRC sheet metal (16 SWG) switch board cum JB on wall complete with 2 no. suitable size "Ph & N" copper bar incl. bakelite/Perspex (wall matching color) top cover 3 mm thick and incl. 175mmx100mmx65mm inspection box, making earthing attachment, painting the MS box and mending good the damages to original finish |       |              |
|          | (a) Average run 5 mtr   | point | Rs. 612.00   |
|          | (b) Average run 6 mtr   | point | Rs. 691.00   |
|          | (c) Average run 8 mtr   | point | Rs. 849.00   |
|          | (d) Average run 9 mtr   | point | Rs. 928.00   |
|          | (e) Average run 10 mtr  | point | Rs. 1,007.00 |
|          | (f) Average run 11 mtr  | point | Rs. 1,086.00 |
|          | (g) Average run 12 mtr  | point | Rs. 1,165.00 |

| Item No. | Description of Item   | Unit  | Rate         |
|----------|---|-------|--------------|
| 3.       | Distribution wiring in 2 x 22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in 20mm size PVC rigid conduit 'FR' (Precision make), with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, to light points with 2 no. 2 way Piano Key type switch fixed on MS CRC sheet metal (16 SWG) switch board cum JB on wall complete with 2 no. suitable size "Ph & N" copper bar incl. bakelite/Perspex (wall matching color) top cover 3 mm thick and incl. 175mm x 100mm x 62.5mm inspection box making earthing attachment, painting the MS box and mending good the damages to original finish  |       |              |
|          | (a) Average run 9 mtr   | point | Rs. 1,039.00 |
|          | (b) Average run 10 mtr  | point | Rs. 1,128.00 |
|          | (c) Average run 11 mtr  | point | Rs. 1,216.00 |
|          | (d) Average run 12 mtr  | point | Rs. 1,305.00 |
| 4.       | Distribution wiring in 1.1 KV grade 22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in 20mm size PVC rigid conduit 'FR' (Precision make), with 1.1 KV grade 1 x 22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire as ECC, to 5A 3 pin flush type plug socket & Piano Key type switch fixed on MS CRC sheet metal (16 SWG) switch board cum JB on wall incl. bakelite/Perspex (wall matching color) top cover 3 mm thick and incl. painting the MS box and mending good the damages to original finish   |       |              |
|          | (a) On Board  | point | Rs. 67.00    |
|          | (b) Average run 1.5 mtr   | point | Rs. 277.00   |
|          | (c) Average run 3 mtr   | point | Rs. 405.00   |
|          | (d) Average run 4.5 mtr   | point | Rs. 528.00   |
|          | (e) Average run 6 mtr   | point | Rs. 651.00   |
|          | (f) Average run 7.5 mtr   | point | Rs. 775.00   |
| 5.       | Distribution wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) partly in 20mm size PVC rigid conduit 'FR' (Precision make) [for ceiling portion only] and in 19mm bore, 3mm thick polythene pipe [for horizontal & vertical run embedded in wall], with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, to light/fan/call bell points with Piano Key type switch fixed on MS CRC sheet metal (16 SWG) switch board on wall complete with 2 no. "Ph & N" copper bar incl. bakelite/ Perspex top cover 3 mm thick and incl. 175x100x65mm inspection box, making earthing attachment, painting the MS box and mending good the damages to original finish <b>[only PVC Rigid Conduit on ceiling and remaining portion concealed]</b> |       |              |
|          | (a) Average run 5 mtr   | point | Rs. 693.00   |
|          | (b) Average run 6 mtr   | point | Rs. 793.00   |
|          | (c) Average run 8 mtr   | point | Rs. 992.00   |
|          | (d) Average run 9 mtr   | point | Rs. 1,092.00 |
|          | (e) Average run 10 mtr  | point | Rs. 1,191.00 |
|          | (f) Average run 11 mtr  | point | Rs. 1,291.00 |
|          | (g) Average run 12 mtr  | point | Rs. 1,391.00 |

| Item No. | Description of Item   | Unit  | Rate         |
|----------|---|-------|--------------|
| 6.       | Distribution wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (approved make) partly in 20mm size PVC rigid conduit 'FR' (Brand approved by EIC) [for horizontal run & above false ceiling portion only] and in 19mm bore, 3mm thick polythene pipe [for vertical run embedded in wall], with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, to light/fan/call bell points with Piano Key type switch fixed on MS CRC sheet metal (16 SWG) switch board on wall complete with 2 no. "Ph & N" copper bar incl. bakelite/ Perspex top cover 3 mm thick and incl. 175x100x65mm inspection box, making earthing attachment, painting the MS box and mending good the damages to original finish <b>[PVC Rigid Conduit only for horizontal run &amp; above false ceiling and vertical run concealed]</b> |       |              |
|          | (a) Average run 5 mtr   | point | Rs. 685.00   |
|          | (b) Average run 6 mtr   | point | Rs. 770.00   |
|          | (c) Average run 8 mtr   | point | Rs. 939.00   |
|          | (d) Average run 9 mtr   | point | Rs. 1,023.00 |
|          | (e) Average run 10 mtr  | point | Rs. 1,108.00 |
|          | (f) Average run 11 mtr  | point | Rs. 1,192.00 |
|          | (g) Average run 12 mtr  | point | Rs. 1,277.00 |
| 7.       | Supplying and fixing PVC Rigid Conduit 'FR' [Precision Make] on wall, ceiling with saddles and other accessories as required and mending good damages to building works   |       |              |
|          | (a) 20mm size   | RM    | Rs. 51.00    |
|          | (b) 25mm size   | RM    | Rs. 69.00    |

**F. Supply & Fixing GI Modular Boxes, Switches etc.**

| Item No. | Description of Item  | Unit | Rate       |
|----------|--|------|------------|
| 1.       | Supplying & Fixing GI Modular Switch Board of the following sizes complete with three no. suitable size Copper bar with holes (for Ph, N & E) fixed on bakelite/Hard Rubber insulator over the MS welded chairs incl. top cover flushed in wall for housing the board after cutting the brick wall incl. making earthing attachment, painting and mending good damages to building works |      |            |
|          | (a) 4 Module   | Set  | Rs. 261.00 |
|          | (b) 6 Module   | Set  | Rs. 332.00 |
|          | (c) 8 Module   | Set  | Rs. 406.00 |
|          | (d) 12 Module  | Set  | Rs. 523.00 |
|          | (e) 2 Row 12 Module  | Set  | Rs. 629.00 |
|          | (f) 2 Row 18 Module  | Set  | Rs. 778.00 |
| 2.       | Supplying & Fixing GI Modular Switch Board of the following sizes complete with top cover plate flushed in wall for housing the board after cutting the brick wall incl. making earthing attachment, painting and mending good damages to building works   |      |            |
|          | (a) 2 Module   | Set  | Rs. 172.00 |
|          | (b) 4 Module   | Set  | Rs. 218.00 |
| 3.       | (a) Supply & Fixing 240 V 6 A Modular type switch (Brand approved by EIC) on existing GI Modular type switch board having top cover plate and making necessary connections as required   | Each | Rs. 82.00  |
|          | (b) Supply & Fixing 240 V 16 A Piano key type switch (Brand approved by EIC) on GI Modular type switch board having top cover plate and making necessary connections as required   | Each | Rs. 119.00 |
| 4.       | (a) Supply & Fixing 240 V, 6A, 5 pin Modular type plug socket (Brand approved by EIC), without switch & plug top, on existing GI Modular type switch board with top cover plate and making necy. connections with PVC Cu wire and earth continuity wire etc.   | Each | Rs. 120.00 |
|          | (b) Supply & Fixing 240 V, 16 A, 3 pin Modular type plug socket (Brand approved by EIC), without plug top and switch, on existing GI Modular type switch board with top cover plate and making necy. connections with PVC Cu wire and earth continuity wire etc.   | Each | Rs. 162.00 |
|          | (c) Supply & Fixing 240 V, 25 A, 3 pin Modular type plug socket (Brand approved by EIC), without plug top and switch, on existing GI Modular type switch board with top cover plate and making necy. connections with PVC Cu wire and earth continuity wire etc.   | Each | Rs. 195.00 |
| 5.       | (a) Supply & Fixing 240 V, 25 A, 3 pin Modular type plug socket (Brand approved by EIC), without plug top and switch with 2 Module GI Modular type switch board with top cover plate flushed in wall and making necy. connections with PVC Cu wire and earth continuity wire etc.  | Each | Rs. 353.00 |
|          | (b) Supply & Fixing 240 V, 25 A, 3 pin Modular type plug top with indicator (Brand approved by EIC) & necy. Connections.   | Each | Rs. 129.00 |
| 6.       | (a) Supply & Fixing 240 V, 10 A, 2(Two) way Modular type switch (approved make) on existing GI Modular switch board having top cover plate and making necessary connections as required  | Each | Rs. 108.00 |

| Item No. | Description of Item  | Unit | Rate         |
|----------|--|------|--------------|
|          | (b) Supply & Fixing 240 V, 16 A, 2(Two) way Modular type switch (Brand approved by EIC) on existing GI Modular switch board having top cover plate and making necessary connections as required  | Each | Rs. 151.00   |
| 7.       | (a) Supply & Fixing Modular type RJ45 suitable for CAT6 cable (Brand approved by EIC) on existing PVC board and top cover plate on wall and making necessary connections as required   | Each | Rs. 107.00   |
|          | (b) Supply & Fixing Telephone socket (RJ11) Modular type (Brand approved by EIC) on existing GI Modular board having top cover plate and making necessary connections as required  | Each | Rs. 96.00    |
| 8.       | (a) Supply & Fixing RJ45 suitable for CAT6 cable (Brand approved by EIC) with PVC board and top cover plate on wall and making necessary connections & testing as required   | Each | Rs. 197.00   |
|          | (b) Supply & Fixing Telephone socket (RJ11) Modular type (Brand approved by EIC) with PVC board and top cover plate on wall and making necessary connections & testing as required   | Each | Rs. 163.00   |
| 9.       | (a) Supply & Fixing 240 V, 6 A, 3 pin Modular type plug socket (Brand approved by EIC) with 6A Modular type switch, without plug top on 4 Module GI Modular type switch board with 3 Module top cover plate flushed in wall incl. S&F switch board and cover plate and making necy. connections with PVC Cu wire and earth continuity wire etc.  | Each | Rs. 377.00   |
|          | (b) Supply & Fixing 240 V, 16 A, 3 pin Modular type plug socket (Brand approved by EIC) with 16A Modular type switch, without plug top on 4 Module GI Modular type switch board with top cover plate flushed in wall incl. S&F switch board and cover plate and making necy. connections with PVC Cu wire and earth continuity wire etc.   | Each | Rs. 456.00   |
| 10.      | Supply & Fixing 240V, Modular Socket (2 Module) type fan regulator (Step type) (Brand approved by EIC) on existing Modular GI switch board with top cover plate incl. making necy. connections etc.  | Each | Rs. 387.00   |
| 11.      | Fixing only Modular type fan regulator on existing Modular GI switch board with top cover plate incl. making necy. connections etc.  | Each | Rs. 14.00    |
| 12.      | Supply & Fixing 240 V, 4 nos. 6 A, 3 pin Modular type plug socket with 4 nos. 6A Modular type switch (Brand approved by EIC), 16A Modular switch type MCB (C-Curve) and Indicator without plug top on 2 row 18 Module GI Modular type switch board with 2 row 18 Module top cover plate flushed in wall incl. S&F switch board and cover plate and making necy. connections with PVC Cu wire and earth continuity wire etc.      | Each | Rs. 1,691.00 |
| 13.      | Supply & Fixing 240 V, 3 nos. 16 A, 3 pin Modular type plug socket with 3 nos. 16A Modular type switch (Brand approved by EIC), 20A Modular switch type SP MCB (C-Curve) and Indicator without plug top on 2 row 12 Module GI Modular type switch board with 2 row 12 Module top cover plate flushed in wall incl. S&F switch board and cover plate and making necy. connections with PVC Cu wire and earth continuity wire etc. | Each | Rs. 1,620.00 |

| Item No. | Description of Item  | Unit | Rate         |
|----------|--|------|--------------|
| 14.      | Supply & Fixing 240 V, 3 nos. 16 A, 3 pin Modular type plug socket with 3 nos. 16A Modular type switch (Brand approved by EIC), 20A Modular switch type SP MCB (C-Curve) and Indicator without plug top on 12 Module GI Modular type switch board with 12 Module top cover plate flushed in wall incl. S&F switch board and cover plate and making necy. connections with PVC Cu wire and earth continuity wire etc.             | Each | Rs. 1,458.00 |
| 15.      | Supply & Fixing 240 V, 4 nos. 16 A, 3 pin Modular type plug socket with 4 nos. 16A Modular type switch (Brand approved by EIC), 20A Modular switch type SP MCB (C-Curve) and Indicator without plug top on 2 row 18 Module GI Modular type switch board with 2 row 18 Module top cover plate flushed in wall incl. S&F switch board and cover plate and making necy. connections with PVC Cu wire and earth continuity wire etc. | Each | Rs. 2,007.00 |
| 16.      | Supply & Fixing 240 V, 25 A, 3 pin Modular type plug socket with 20/25A Modular switch (Brand approved by EIC) type SP MCB (C-Curve) and 4 Module GI Modular type switch board with 4 Module top cover plate flushed in wall incl. S&F switch board and cover plate and making necy. connections with PVC Cu wire and earth continuity wire etc.   | Each | Rs. 535.00   |
| 17.      | Supply & Fixing 240 V, 25 A, Modular type starter (Brand approved by EIC) with 25A Modular switch type DP MCB (C-Curve) and 4 Module GI Modular type switch board with 4 Module top cover plate flushed in wall incl. S&F switch board and cover plate and making necy. connections with PVC Cu wire and earth continuity wire etc.  | Each | Rs. 784.00   |
| 18.      | Supply & Fixing 240 V, 25A Modular type socket, 25 A, Modular type starter (Brand approved by EIC) with 25A Modular switch type DP MCB (C-Curve) and 6 Module GI Modular type switch board with 6 Module top cover plate flushed in wall incl. S&F switch board and cover plate and making necy. connections with PVC Cu wire and earth continuity wire etc.   | Each | Rs. 1,047.00 |
| 19.      | (a) Supply & Fixing 240 V, 25A Modular switch type SP MCB (C-Curve) (Brand approved by EIC) on existing GI Modular type switch board with top cover plate and making necy. connections with PVC Cu wire and earth continuity wire etc.   | Each | Rs. 159.00   |
|          | (b) Supply & Fixing 240 V, 25A Modular switch type DP MCB (C-Curve) (Brand approved by EIC) on existing GI Modular type switch board with top cover plate and making necy. connections with PVC Cu wire and earth continuity wire etc.   | Each | Rs. 302.00   |
| 20.      | Supply & Fixing 240 V, 25A Modular starter (Brand approved by EIC) on existing GI Modular type switch board with top cover plate and making necy. connections with PVC Cu wire and earth continuity wire etc.  | Each | Rs. 307.00   |
| 21.      | Supplying & Drawing LAN cable (CAT6) (Brand approved by EIC) in prelaid PVC rigid conduit/ in polythene pipe embeded in wall.  | Each | Rs. 28.00    |
| 22.      | Supplying & Drawing 2-pair Telephone cables with high density polyethylene insulated solid annealed high conductivity bare copper of dia 0.5mm in prelaid PVC rigid conduit/ in polythene pipe embeded in wall.  | Each | Rs. 16.00    |

**G. Concealed Wiring With PVC Insulated & Unsheathed Single Core Stranded Copper Wire 'FR' and Modular type Switches.**

| Item No. | Description of Item   | Unit  | Rate         |
|----------|---|-------|--------------|
| 1.       | Distn. wiring in 22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed single core stranded copper wire (Brand approved by EIC) in 19 mm bore, 3 mm thick polythen pipe complete with all accessories embedded in wall to light/fan/call bell points with Modular type switch (Brand approved by EIC) fixed on Modular GI switch board with top cover plate flushed in wall incl. mending good damages to original finish  |       |              |
|          | 2x22/0.3 (Ph. & N) and 1x22/0.3 as ECC  |       |              |
|          | (i) Average run 6 mtr   | point | Rs. 893.00   |
|          | (ii) Average run 7 mtr  | point | Rs. 993.00   |
|          | (iii) Average run 8 mtr   | point | Rs. 1,093.00 |
|          | (iv) Average run 9 mtr  | point | Rs. 1,193.00 |
|          | (v) Average run 10 mtr  | point | Rs. 1,292.00 |
|          | (vi) Average run 11 mtr   | point | Rs. 1,392.00 |
|          | (vii) Average run 12 mtr  | point | Rs. 1,492.00 |
| 2.       | Distn. wiring in 22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed single core stranded copper wire (Brand approved by EIC) in 19 mm bore, 3 mm thick polythen pipe (for horizontal & vertical run in wall and ceiling portion through prelaidd polythen pipe) complete with all accessories embedded in wall to light/fan/call bell points with Modular type switch (Brand approved by EIC) fixed on Modular GI switch board with top cover plate flushed in wall incl. mending good damages to original finish |       |              |
|          | 2x22/0.3 (Ph. & N) and 1x22/0.3 as ECC  |       |              |
|          | (i) Average run 6 mtr   | point | Rs. 828.00   |
|          | (ii) Average run 7 mtr  | point | Rs. 928.00   |
|          | (iii) Average run 8 mtr   | point | Rs. 1,027.00 |
|          | (iv) Average run 9 mtr  | point | Rs. 1,127.00 |
|          | (v) Average run 10 mtr  | point | Rs. 1,227.00 |
|          | (vi) Average run 11 mtr   | point | Rs. 1,326.00 |
|          | (vii) Average run 12 mtr  | point | Rs. 1,426.00 |
| 3.       | Distn. wiring in 22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed single core stranded copper wire (Brand approved by EIC) in 19 mm bore, 3 mm thick polythen pipe complete with all accessories embedded in wall to 240 V 6A 5 pin plug point incl. S&F 240 V 6A 3 pin Modular type plug socket & Modular type switch (Brand approved by EIC) incl. S&F earth continuity wire, fixed on 4 Module GI switch board with 3/4 Module top cover plate flushed in wall incl. mending good damages to original finish |       |              |
|          | 2x22/0.3 (Ph. & N) and 1x22/0.3 as ECC  |       |              |
|          | (i) On Board  | point | Rs. 249.00   |
|          | (ii) Average run 1.5 mtr  | point | Rs. 639.00   |
|          | (iii) Average run 3 mtr   | point | Rs. 788.00   |
|          | (iv) Average run 4.5 mtr  | point | Rs. 938.00   |
|          | (v) Average run 6 mtr   | point | Rs. 1,087.00 |
|          | (vi) Average run 7.5 mtr  | point | Rs. 1,237.00 |



**H. Wiring With PVC Insulated & Unsheathed Single Core Stranded Copper Wire 'FR' – in PVC Casing-Capping (Precision Make) on wall/ceiling with Modular type Switch**

| Item No. | Description of Item   | Unit  | Rate         |
|----------|---|-------|--------------|
| 1.       | Distribution wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in suitable size PVC casing-capping (Precision make) with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, incl. necy. fittings etc. to light/fan/call bell point with Modular type switch (Brand approved by EIC) fixed on Modular GI / PVC switch board with top cover plate on wall incl. mending good damages to original finish. <b>[PVC casing-capping and Switch board both on surface]</b>              |       |              |
|          | (a) Average run 5 mtr   | Point | Rs. 659.00   |
|          | (b) Average run 6 mtr   | Point | Rs. 733.00   |
|          | (c) Average run 8 mtr   | Point | Rs. 879.00   |
|          | (d) Average run 9 mtr   | Point | Rs. 952.00   |
|          | (e) Average run 10 mtr  | Point | Rs. 1,025.00 |
|          | (f) Average run 11 mtr  | Point | Rs. 1,098.00 |
|          | (g) Average run 12 mtr  | Point | Rs. 1,171.00 |
| 2.       | Distribution wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in suitable size PVC casing-capping (Precision make) with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, incl. necy. fittings etc. to light point with 2 no. 2 way Modular type switch (Brand approved by EIC) fixed on Modular GI / PVC switch board with top cover plate on wall incl. mending good damages to original finish. <b>[PVC casing-capping and Switch board both on surface]</b>                |       |              |
|          | (a) Average run 9 mtr   | point | Rs. 1,090.00 |
|          | (b) Average run 10 mtr  | point | Rs. 1,173.00 |
|          | (c) Average run 11 mtr  | point | Rs. 1,255.00 |
|          | (d) Average run 12 mtr  | point | Rs. 1,338.00 |
| 3.       | Distribution wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in suitable size PVC casing-capping (Precision make) with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, incl. necy. fittings etc. to light/fan/call bell point with <b>Modular type</b> switch (Brand approved by EIC) fixed on Modular GI switch board with top cover plate flushed in wall incl. mending good damages to original finish <b>[PVC casing-capping on surface and Switch board concealed]</b> |       |              |
|          | (a) Average run 5 mtr   | point | Rs. 750.00   |
|          | (b) Average run 6 mtr   | point | Rs. 827.00   |
|          | (c) Average run 8 mtr   | point | Rs. 980.00   |
|          | (d) Average run 9 mtr   | point | Rs. 1,057.00 |
|          | (e) Average run 10 mtr  | point | Rs. 1,134.00 |
|          | (f) Average run 11 mtr  | point | Rs. 1,210.00 |
|          | (g) Average run 12 mtr  | point | Rs. 1,287.00 |

| Item No. | Description of Item   | Unit  | Rate         |
|----------|---|-------|--------------|
| 4.       | Distribution wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in suitable size PVC casing-capping (Precision make) with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, incl. necy. fittings etc. to light point with 2 no. 2 way <b>Modular type</b> switch (Brand approved by EIC) with Modular GI switch board & top cover plate and 2 no. suitable size "Ph & N" copper bar & earthing attachment flushed in wall incl. mending good damages to original finish. <b>[PVC casing-capping on surface and Switch board concealed]</b>       |       |              |
|          | (a) Average run 9 mtr   | Point | Rs. 1,137.00 |
|          | (b) Average run 10 mtr  | Point | Rs. 1,223.00 |
|          | (c) Average run 11 mtr  | Point | Rs. 1,309.00 |
|          | (d) Average run 12 mtr  | Point | Rs. 1,395.00 |
| 5.       | Distribution Wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in suitable size PVC casing-capping (Precision make) with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, incl. necy. fittings etc. with S & F 6A 5 pin <b>Modular type</b> plug socket and switch (Brand approved by EIC) fixed on 4 Module GI / PVC switch board with 3/4 Module top cover plate on wall incl. necy. connection making earthing attachment, painting and mending good damages to building works <b>[PVC casing-capping and plug box both on surface]</b>     |       |              |
|          | (a) On Board  | Point | Rs. 216.00   |
|          | (b) Average run 1.5 mtr   | Point | Rs. 478.00   |
|          | (c) Average run 3 mtr   | Point | Rs. 588.00   |
|          | (d) Average run 4.5 mtr   | Point | Rs. 697.00   |
|          | (e) Average run 6 mtr   | Point | Rs. 807.00   |
|          | (f) Average run 7.5 mtr   | Point | Rs. 916.00   |
| 6.       | Distribution Wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in suitable size PVC casing-capping (Precision make) with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, incl. necy. fittings etc. with S & F 6A 5 pin Modular type plug socket and switch (Brand approved by EIC) fixed on 4 Module GI switch board with 3/4 Module top cover plate flushed in wall incl. necy. connection making earthing attachment, painting and mending good damages to building works <b>[PVC casing-capping on surface and Switch board concealed]</b> |       |              |
|          | (a) On Board  | point | Rs. 216.00   |
|          | (b) Average run 1.5 mtr   | point | Rs. 509.00   |
|          | (c) Average run 3 mtr   | point | Rs. 618.00   |
|          | (d) Average run 4.5 mtr   | point | Rs. 728.00   |
|          | (e) Average run 6 mtr   | point | Rs. 837.00   |
|          | (f) Average run 7.5 mtr   | point | Rs. 947.00   |

| Item No. | Description of Item  | Unit  | Rate         |
|----------|--|-------|--------------|
| 7.       | <p>Distribution wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated &amp; unsheathed copper wire (Brand approved by EIC) in suitable size PVC casing-capping (Precision make) [for horizontal run &amp; ceiling portion] and partly in 19mm bore, 3mm thick polythene concealed pipe [for vertical run embedded in wall only], with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated &amp; unsheathed copper wire for ECC, incl. necy. fittings etc. to light/fan/call bell points with <b>Modular type</b> switch (Brand approved by EIC) fixed on Modular GI switch board with top cover plate and 2 no. suitable size "Ph &amp; N" copper bar &amp; earthing attachment flushed in wall incl. mending good damages to original finish <b>[PVC casing-capping on Wall and vertical &amp; switch box both concealed]</b></p>  |       |              |
|          | (a) Average run 5 mtr  | point | Rs. 706.00   |
|          | (b) Average run 6 mtr  | point | Rs. 780.00   |
|          | (c) Average run 8 mtr  | point | Rs. 926.00   |
|          | (d) Average run 9 mtr  | point | Rs. 999.00   |
|          | (e) Average run 10 mtr   | point | Rs. 1,072.00 |
|          | (f) Average run 11 mtr   | point | Rs. 1,145.00 |
|          | (g) Average run 12 mtr   | point | Rs. 1,219.00 |
| 8.       | <p>Distribution wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated &amp; unsheathed copper wire with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated &amp; unsheathed copper wire (Brand approved by EIC) for ECC in 19 mm bore, 3 mm thick polythene pipe complete with all accessories embedded in wall for horizontal &amp; vertical runs and in suitable size PVC casing-capping (Precision make) for ceiling portion only, incl. necy. fittings etc. to light/fan/call bell point with <b>Modular type</b> switch (Brand approved by EIC) fixed on Modular GI switch board with top cover plate and 2 no. suitable size "Ph &amp; N" copper bar &amp; earthing attachment flushed in wall incl. mending good damages to original finish <b>[only PVC casing-capping on ceiling and remaining portion concealed]</b></p> |       |              |
|          | (a) Average run 5 mtr  | point | Rs. 807.00   |
|          | (b) Average run 6 mtr  | point | Rs. 907.00   |
|          | (c) Average run 8 mtr  | point | Rs. 1,106.00 |
|          | (d) Average run 9 mtr  | point | Rs. 1,206.00 |
|          | (e) Average run 10 mtr   | point | Rs. 1,306.00 |
|          | (f) Average run 11 mtr   | point | Rs. 1,405.00 |
|          | (g) Average run 12 mtr   | point | Rs. 1,505.00 |

**1. Wiring With PVC Insulated & Unsheathed Single Core Stranded Copper Wire 'FR' – in PVC Rigid Conduit 'FR' (ISI Marked) on wall/ceiling with Modular type Switch.**

| Item No. | Description of Item  | Unit  | Rate         |
|----------|--|-------|--------------|
| 1.       | Distribution wiring in 2 x 22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in 20mm size PVC rigid conduit 'FR' (Precision make), with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, to light/fan/call bell points with <b>Modular type</b> switch (Brand approved by EIC) fixed on Modular GI switch board with top cover plate and 2 no. suitable size "Ph & N" copper bar & earthing attachment fixed on wall incl. mending good damages to original finish.              |       |              |
|          | (a) Average run 5 mtr  | point | Rs. 716.00   |
|          | (b) Average run 6 mtr  | point | Rs. 801.00   |
|          | (c) Average run 8 mtr  | point | Rs. 970.00   |
|          | (d) Average run 9 mtr  | point | Rs. 1,055.00 |
|          | (e) Average run 10 mtr   | point | Rs. 1,140.00 |
|          | (f) Average run 11 mtr   | point | Rs. 1,224.00 |
|          | (g) Average run 12 mtr   | point | Rs. 1,309.00 |
| 2.       | Distribution wiring in 2 x 22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in 20mm size PVC rigid conduit 'FR' (Precision make), with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, to light points with 2 no. 2 way <b>Modular type</b> switch (Brand approved by EIC) fixed on Modular GI switch board complete with 2 no. suitable size "Ph & N" copper bar with top cover plate making earthing attachment fixed on wall incl. mending good damages to original finish. |       |              |
|          | (a) Average run 9 mtr  | point | Rs. 1,203.00 |
|          | (b) Average run 10 mtr   | point | Rs. 1,297.00 |
|          | (c) Average run 11 mtr   | point | Rs. 1,391.00 |
|          | (d) Average run 12 mtr   | point | Rs. 1,486.00 |
| 3.       | Distribution wiring in 1.1 KV grade 22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) in 20mm size PVC rigid conduit 'FR' (Precision make), with 1.1 KV grade 1 x 22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire as ECC, to 6A 3 pin <b>Modular type</b> plug socket & switch (Brand approved by EIC) on 4 Module GI switch board with 3/4 Module top cover plate on wall incl. necy. connection making earthing attachment, painting and mending good damages to building works.         |       |              |
|          | (a) On Board   | point | Rs. 216.00   |
|          | (b) Average run 1.5 mtr  | point | Rs. 454.00   |
|          | (c) Average run 3 mtr  | point | Rs. 547.00   |
|          | (d) Average run 4.5 mtr  | point | Rs. 633.00   |
|          | (e) Average run 6 mtr  | point | Rs. 719.00   |
|          | (f) Average run 7.5 mtr  | point | Rs. 805.00   |

| Item No. | Description of Item   | Unit  | Rate         |
|----------|---|-------|--------------|
| 4.       | Distribution wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) partly in 20mm size PVC rigid conduit 'FR' (Precision make) [for ceiling portion only] and in 19mm bore, 3mm thick polythene pipe [for horizontal & vertical run embedded in wall], with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, to light/fan/call bell points with <b>Modular type</b> switch (Brand approved by EIC) fixed on Modular GI switch board complete with 2 no. suitable size "Ph & N" copper bar with top cover plate making earthing attachment fixed on wall incl. mending good damages to original finish. <b>[only PVC Rigid Conduit on ceiling and remaining portion concealed]</b>  |       |              |
|          | (a) Average run 5 mtr   | point | Rs. 775.00   |
|          | (b) Average run 6 mtr   | point | Rs. 874.00   |
|          | (c) Average run 8 mtr   | point | Rs. 1,074.00 |
|          | (d) Average run 9 mtr   | point | Rs. 1,173.00 |
|          | (e) Average run 10 mtr  | point | Rs. 1,273.00 |
|          | (f) Average run 11 mtr  | point | Rs. 1,373.00 |
|          | (f) Average run 12 mtr  | point | Rs. 1,472.00 |
| 5.       | Distribution wiring in 1.1 KV grade 2x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire (Brand approved by EIC) partly in 20mm size PVC rigid conduit 'FR' (Precision make) <b>[for horizontal run &amp; above false ceiling portion only]</b> and in 19mm bore, 3mm thick polythene pipe [for vertical run embedded in wall], with 1x22/0.3 (1.5 sqmm) single core stranded 'FR' PVC insulated & unsheathed copper wire for ECC, to light/fan/call bell points with Modular type switch (Brand approved by EIC) fixed on Modular GI switch board complete with 2 no. suitable size "Ph & N" copper bar with top cover plate making earthing attachment fixed on wall incl. mending good damages to original finish. <b>[PVC Rigid Conduit only for horizontal run &amp; above false ceiling and vertical run concealed]</b> |       |              |
|          | (a) Average run 5 mtr   | point | Rs. 844.00   |
|          | (b) Average run 6 mtr   | point | Rs. 929.00   |
|          | (c) Average run 8 mtr   | point | Rs. 1,100.00 |
|          | (d) Average run 9 mtr   | point | Rs. 1,186.00 |
|          | (e) Average run 10 mtr  | point | Rs. 1,271.00 |
|          | (f) Average run 11 mtr  | point | Rs. 1,357.00 |
|          | (f) Average run 12 mtr  | point | Rs. 1,442.00 |

**SCHEDULE OF RATES FOR LAYING OF XLPE/PVC  
INSULATED AND ARMOURED CABLES**

| <b>Item No.</b> | <b>Description of Item</b>  | <b>Unit</b> | <b>Rate</b> |
|-----------------|---|-------------|-------------|
| 1.              | Drawing only 1.1 KV grade XLPE/PVC insulated & armoured cable (to be supplied by the deptt.) on HW batten incl. painting  |             |             |
| (a)             | On 19 mm HW batten with earthing attachment in 1 x 10 SWG GI (Hot Dip) Wire (for 2 core 2.5 sqmm to 2 core 10 sqmm)   | RM          | Rs. 49.00   |
| (b)             | On 19 mm HW batten with earthing attachment in 2 x 10 SWG GI (Hot Dip) Wire (for 3 core 2.5 sqmm to 3 core 10 sqmm)   | RM          | Rs. 53.00   |
| (c)             | On 25 mm HW batten with earthing attachment in 1 x 10 SWG GI (Hot Dip) Wire (for 2 core 16 sqmm)  | RM          | Rs. 51.00   |
| (d)             | On 25 mm HW batten with earthing attachment in 2 x 10 SWG GI (Hot Dip) Wire (for 3 core 16 sqmm and 4 core 2.5 to 4 core 16 sqmm)   | RM          | Rs. 55.00   |
| 2.              | <b><u>Laying on Wall / surface with Saddles / clamps</u></b>  |             |             |
| (a)             | Laying of cable upto 2 core 25 sqmm on wall/surface incl. S & F MS saddles with earthing attachment in 10 SWG GI (Hot Dip) Wire, making holes etc. as necy. mending good damages and painting                                   | RM          | Rs. 57.00   |
| (b)             | Laying of cable upto 3/4 core 25 sqmm on wall/surface incl. S & F MS saddles with earthing attachment in 10 SWG GI (Hot Dip) Wire, making holes etc. as necy. mending good damages and painting                                 | RM          | Rs. 60.00   |
| (c)             | Laying of cable from 3/3½ core 35 sqmm to 50 sqmm on wall/surface incl. S & F MS saddles with earthing attachment in 2 x 10 SWG GI (Hot Dip) Wire, making holes etc. as necy., mending good damages and painting                | RM          | Rs. 71.00   |
| (d)             | Laying of cable above 3½ core 50 sqmm and upto 3½ core 90 sqmm on wall/surface including S & F MS clams with earthing attachment in 2 x 10 SWG GI (Hot Dip) Wire, making hole etc. as necy., mending good damages and painting  | RM          | Rs. 83.00   |
| (e)             | Laying of cable above 3½ core 90 sqmm and upto 3½ core 150 sqmm on wall/surface including S & F MS clams with earthing attachment in 2 x 10 SWG GI (Hot Dip) Wire, making hole etc. as necy., mending good damages and painting | RM          | Rs. 86.00   |
| 3.              | <b><u>Laying through RCC/Hume/GI Pipe</u></b>   |             |             |
| (a)             | Laying only Cable upto 50 sqmm through existing RCC/Hume/ GI Pipe/open masonry trench for single, 2, 3, 3½ & 4 core   | RM          | Rs. 43.00   |
| (b)             | Laying only Cable above 50 sqmm but not exceeding 400sqmm through existing RCC/ Hume/GI Pipe/open masonry trench for single, 2, 3, 3½ and 4 core  | RM          | Rs. 60.00   |
| 4.              | <b><u>Laying on Pole with Clamps</u></b>  |             |             |
|                 | Fixing of Cable along the lenth of O.H. pole incl. S & F MS pole clamps fabricated from 25 mm x 6 mm MS flat incl. painting   | RM          | Rs. 67.00   |

| Item No.                                       | Description of Item  | Unit | Rate       |
|--|--|------|------------|
| <b><u>Laying through Underground Trech</u></b> |  |      |            |
| 1. (a)   | Laying of one No. cable upto 35 sqmm in underground trench 460 mm wide x 760 mm average depth, with brick protection on the top of the cable with 8 (eight) Nos. bricks per metre, including filling the space between the brick & cable and also the trench with shifted soil, leveling up and restoring surface duly rammed  | RM   | Rs. 162.00 |
| (b)  | Laying of one No. cable above 35 sqmm and upto 185 sqmm in underground trench 460mm wide x 760mm average depth, with brick protection on the top of the cable with 8 (eight) Nos. bricks per Mtr. including filling the space between the bricks and cable and also the trenchwith shifted soil, leveling up and restoring surface duly rammed   | RM   | Rs. 172.00 |
| (c)  | Laying of one No. cable above 185 sqmm in underground trench 460mm wide x 760mm average depth, with brick protection on the top of the cable with 8 (eight) Nos. bricks per Mtr. including filling the space between the bricks and cable and also the trenchwith shifted soil, leveling up and restoring surface duly rammed  | RM   | Rs. 187.00 |
| 2. (a)   | Laying of two cables upto 35 sqmm in an underground trench in single tier formation (horizontal), the trench size : 680 mm x 760 mm average depth, with brick protection on the top of each cable 8 (eight) Nos. bricks per Mtr. and 4 (four) Nos. bricks per Mtr. as separator between the bricks and cables and also trench to be filled up with shifted soil, levelling up and restoring surface duly rammed                          | RM   | Rs. 301.00 |
| (b)  | Laying of two cables above 35 sqmm and upto 185 sqmm in an underground trench in single tier formation (horizontal), the trench size : 680 mm x 760 mm average depth, with brick protection on the top of each cable 8 (eight) Nos. bricks per Mtr. and 4 (four) Nos. bricks per Mtr. as separator between the bricks and cables and also trench to be filled up with shifted soil, levelling up and restoring surface duly rammed       | RM   | Rs. 315.00 |
| (c)  | Laying of two cables above 185 sqmm in an underground trench in single tier formation (horizontal), the trench size : 680 mm x 760 mm average depth, with brick protection on the top of each cable 8 (eight) Nos. bricks per Mtr. and 4 (four) Nos. bricks per Mtr. as separator between the bricks and cables and also trench to be filled up with shifted soil, levelling up and restoring surface duly rammed                        | RM   | Rs. 337.00 |
| 3. (a)   | Laying of three cables upto 35 sqmm in an underground trench in single tier formation (horizontal) the trench size : 915 mm x 760 mm average depth with brick protection on the top of each cable with 8 nos. bricks per Mtr. and 4 nos. bricks per mtr. as separator between the cables including filling the space between the bricks and cables and also the trench with shifted soil, levelling up and restoring surface duly rammed | RM   | Rs. 438.00 |

| <b>Item No.</b>                                   | <b>Description of Item</b>  | <b>Unit</b> | <b>Rate</b> |
|---|---|-------------|-------------|
| 3. (b)  | Laying of three cables above 35 sqmm and upto 185 sqmm in an underground trench in single tier formation (horizontal) the trench size : 915 mm x 760 mm average depth with brick protection on the top of each cable with 8 nos. bricks per Mtr. and 4 nos. bricks per mtr. as separator between every two cables including filling the space between the bricks and cables and also the trench with shifted soil, levelling up and restoring surface duly rammed | RM          | Rs. 458.00  |
| (c)   | Laying of three cables above 185 sqmm in an underground trench in single tier formation (horizontal) the trench size : 915 mm x 760 mm average depth with brick protection on the top of each cable with 8 nos. bricks per Mtr. and 4 nos. bricks per mtr. as separator between every two cables including filling the space between the bricks and cables and also the trench with shifted soil, levelling up and restoring surface duly rammed                  | RM          | Rs. 487.00  |
| <b><u>Laying through Masonry Trench</u></b>       |   |             |             |
| 4. (a)  | Laying of one cable upto 150 sqmm through existing covered masonry trench incl. taking out RC covers, setting them in order, mending good the damages filling the trench with fine dry sand incl. supplying sand  | RM          | Rs. 96.00   |
| (b)   | Laying of one cable above 150 sqmm and upto 300 sqmm through existing covered masonry trench incl. taking out RC covers, setting them in order, mending good the damages filling the trench with fine dry sand incl. supplying sand   | RM          | Rs. 136.00  |
| (c)   | Laying of one cable above 300 sqmm through existing covered masonry trench incl. taking out RC covers, setting them in order, mending good the damages filling the trench with fine dry sand incl. supplying sand   | RM          | Rs. 156.00  |
| <b><u>Laying through Floor/ Pavement/Wall</u></b> |   |             |             |
| 5.  | Laying of cable as below, after cutting floor/pavement/wall/ and making holes incl., embedding the cable at an average depth as below and mending good the damages to original finish incl. removing the rubbish  |             |             |
| (i)   | From 2.5 sqmm to 35 sqmm at an average depth of 75 mm in floor/pavement/wall etc.   | RM          | Rs. 127.00  |
| (ii)  | Above 35 sqmm to 95 sqmm at an average depth of 100 mm in floor/pavement/wall etc.  | RM          | Rs. 159.00  |
| (iii)   | Above 95 sqmm at an average depth of 100 mm in floor/pavement/wall etc.   | RM          | Rs. 181.00  |
| <b><u>Laying on Cable Tray</u></b>                |   |             |             |
| 6.  | Laying of cable as below, on existing Cable Tray and binding with suitable size GI wire.  |             |             |
| (i)   | Up to 50 sqmm   | RM          | Rs. 11.00   |
| (ii)  | From 70sqmm to 150sqmm  | RM          | Rs. 15.00   |
| (iii)   | Above 150 sqmm  | RM          | Rs. 19.00   |



| Item No.                         | Description of Item  | Unit | Rate       |
|----------------------------------|--|------|------------|
| <b><u>Compression Glands</u></b> |  |      |            |
| 7.                               | Supplying and fixing compression type gland complete with brass gland, brass ring & rubber ring for dust & moisture-proof entry of XLPE/PVC armoured cables as below : |      |            |
| (a) For 2 core                   | upto 4 sqmm  | Each | Rs. 63.00  |
|                                  | upto 6 sqmm  | Each | Rs. 68.00  |
|                                  | upto 10 sqmm   | Each | Rs. 115.00 |
|                                  | upto 16 sqmm   | Each | Rs. 115.00 |
|                                  | upto 25 sqmm   | Each | Rs. 132.00 |
|                                  | upto 35 sqmm   | Each | Rs. 162.00 |
|                                  | upto 50 sqmm   | Each | Rs. 177.00 |
| (b) For 3 core                   | upto 4 sqmm  | Each | Rs. 115.00 |
|                                  | upto 6 sqmm  | Each | Rs. 115.00 |
|                                  | upto 10 sqmm   | Each | Rs. 115.00 |
|                                  | upto 16 sqmm   | Each | Rs. 132.00 |
|                                  | upto 25 sqmm   | Each | Rs. 152.00 |
|                                  | upto 35 sqmm   | Each | Rs. 162.00 |
|                                  | upto 50 sqmm   | Each | Rs. 197.00 |
|                                  | upto 70 sqmm   | Each | Rs. 212.00 |
|                                  | upto 95 sqmm   | Each | Rs. 234.00 |
|                                  | upto 120 sqmm  | Each | Rs. 274.00 |
|                                  | upto 150 sqmm  | Each | Rs. 307.00 |
|                                  | upto 185 sqmm  | Each | Rs. 355.00 |
|                                  | upto 240 sqmm  | Each | Rs. 430.00 |
|                                  | upto 300 sqmm  | Each | Rs. 478.00 |
|                                  | upto 400 sqmm  | Each | Rs. 556.00 |
| (c) For 4 core                   | upto 4 sqmm  | Each | Rs. 115.00 |
|                                  | upto 6 sqmm  | Each | Rs. 115.00 |
|                                  | upto 10 sqmm   | Each | Rs. 132.00 |
|                                  | upto 16 sqmm   | Each | Rs. 132.00 |
|                                  | upto 25 sqmm   | Each | Rs. 162.00 |
|                                  | upto 35 sqmm   | Each | Rs. 162.00 |
|                                  | upto 50 sqmm   | Each | Rs. 197.00 |
|                                  | upto 70 sqmm   | Each | Rs. 212.00 |
|                                  | upto 95 sqmm   | Each | Rs. 234.00 |
|                                  | upto 120 sqmm  | Each | Rs. 307.00 |
|                                  | upto 150 sqmm  | Each | Rs. 355.00 |
|                                  | upto 185 sqmm  | Each | Rs. 391.00 |
|                                  | upto 240 sqmm  | Each | Rs. 478.00 |
|                                  | upto 300 sqmm  | Each | Rs. 516.00 |
|                                  | upto 400 sqmm  | Each | Rs. 629.00 |
| (d) For 3½ core                  | upto 25 sqmm   | Each | Rs. 152.00 |
|                                  | upto 35 sqmm   | Each | Rs. 162.00 |
|                                  | upto 50 sqmm   | Each | Rs. 197.00 |
|                                  | upto 70 sqmm   | Each | Rs. 212.00 |
|                                  | upto 95 sqmm   | Each | Rs. 274.00 |
|                                  | upto 120 sqmm  | Each | Rs. 274.00 |
|                                  | upto 150 sqmm  | Each | Rs. 307.00 |
|                                  | upto 185 sqmm  | Each | Rs. 394.00 |
|                                  | upto 240 sqmm  | Each | Rs. 430.00 |
|                                  | upto 300 sqmm  | Each | Rs. 517.00 |
|                                  | upto 400 sqmm  | Each | Rs. 556.00 |

| Item No.                                 | Description of Item  | Unit | Rate         |
|--|--|------|--------------|
| <b><u>Finishing cable ends</u></b>       |  |      |              |
| 8. (a)                                   | Finishing of the XLPE/PVC insulated armoured cable ends by soldering with cable sockets and insulated tapes etc., including supplying sockets, soldering materials, tapes etc. and making connection to switch, BDB and BBC etc. |      |              |
|  | (i) 3½ core 120 sqmm cable   | Set  | Rs. 336.00   |
|  | (ii) 3½ core 150 sqmm cable  | Set  | Rs. 424.00   |
|  | (iii) 3½ core 185 sqmm cable   | Set  | Rs. 564.00   |
|  | (iv) 3½ core 240 sqmm cable  | Set  | Rs. 761.00   |
|  | (v) 3½ core 300 sqmm cable   | Set  | Rs. 958.00   |
|  | (vi) 3½ core 400 sqmm cable  | Set  | Rs. 1,371.00 |
| 8. (b)                                   | Finishing the end of following XLPE/PVC armoured cables by crimping method incl. supplying and fixing solderless socket (Dowels make), tapes, anticorrosive paste & jointing materials :   |      |              |
|  | (i) 2 core 4 sqmm cable  | Set  | Rs. 31.00    |
|  | (ii) 2 core 6 sqmm cable   | Set  | Rs. 32.00    |
|  | (iii) 2 core 10 sqmm cable   | Set  | Rs. 34.00    |
|  | (iv) 2 core 16 sqmm cable  | Set  | Rs. 58.00    |
|  | (v) 2 core 25 sqmm cable   | Set  | Rs. 68.00    |
|  | (vi) 2 core 35 sqmm cable  | Set  | Rs. 91.00    |
|  | (vii) 2 core 50 sqmm cable   | Set  | Rs. 98.00    |
|  | (viii) 4 core 2.5 sqmm cable   | Set  | Rs. 56.00    |
|  | (ix) 4 core 4 sqmm cable   | Set  | Rs. 60.00    |
|  | (x) 4 core 6 sqmm cable  | Set  | Rs. 62.00    |
|  | (xi) 4 core 10 sqmm cable  | Set  | Rs. 67.00    |
|  | (xii) 4 core 16 sqmm cable   | Set  | Rs. 95.00    |
|  | (xiii) 4 core 25 sqmm cable  | Set  | Rs. 115.00   |
|  | (xiv) 3½ core 25 sqmm cable  | Set  | Rs. 110.00   |
|  | (xv) 3½ core 35 sqmm cable   | Set  | Rs. 158.00   |
|  | (xvi) 3½ core 50 sqmm cable  | Set  | Rs. 209.00   |
|  | (xvii) 3½ core 70 sqmm cable   | Set  | Rs. 263.00   |
|  | (xviii) 3½ core 95 sqmm cable  | Set  | Rs. 310.00   |
|  | (xix) 3½ core 120 sqmm cable   | Set  | Rs. 381.00   |
|  | (xx) 3½ core 150 sqmm cable  | Set  | Rs. 434.00   |
|  | (xxi) 3½ core 185 sqmm cable   | Set  | Rs. 546.00   |
|  | (xxii) 3½ core 240 sqmm cable  | Set  | Rs. 711.00   |
|  | (xxiii) 3½ core 300 sqmm cable   | Set  | Rs. 882.00   |
|  | (xxiv) 3½ core 400 sqmm cable  | Set  | Rs. 1,266.00 |
| <b><u>Finishing Copper Wire ends</u></b> |  |      |              |
| 9.                                       | Finishing of the PVC insulated wire ends by socketting with pin/ ring type copper sockets and insulated tapes etc., including supplying sockets, tapes.  |      |              |
|  | (i) 2.5sqmm  | Set  | Rs. 6.00     |
|  | (ii) 4 sqmm  | Set  | Rs. 7.00     |
|  | (iii) 6 sqmm   | Set  | Rs. 9.00     |
|  | (iv) 10sqmm  | Set  | Rs. 11.00    |
|  | (v) 16sqmm   | Set  | Rs. 17.00    |

| Item No. | Description of Item   | Unit | Rate         |
|----------|---|------|--------------|
| 10.      | Straigh through Jointing of cable of different size by compound jointing kit including S&F ferrul, tapes and jointing materials (Brand approved by EIC) |      |              |
|          | (i) 2 core 4-10 sqmm cable  | Set  | Rs. 1,004.00 |
|          | (ii) 2 core 16-25 sqmm cable  | Set  | Rs. 1,042.00 |
|          | (iii) 3½ / 4 core 4-6 sqmm cable  | Set  | Rs. 1,004.00 |
|          | (iv) 3½ / 4 core 10-16 sqmm cable   | Set  | Rs. 1,044.00 |
|          | (v) 3½ / 4 core 25-35 sqmm cable  | Set  | Rs. 1,186.00 |
|          | (vi) 3½ / 4 core 50 sqmm cable  | Set  | Rs. 1,480.00 |
|          | (vii) 3½ / 4 core 70 sqmm cable   | Set  | Rs. 1,514.00 |
|          | (viii) 3½ / 4 core 95 sqmm cable  | Set  | Rs. 1,685.00 |
|          | (ix) 3½ / 4 core 120-150 sqmm cable   | Set  | Rs. 2,139.00 |
|          | (x) 3½ / 4 core 185 sqmm cable  | Set  | Rs. 2,386.00 |
|          | (xi) 3½ / 4 core 240 sqmm cable   | Set  | Rs. 2,885.00 |
|          | (xii) 3½ / 4 core 300 sqmm cable  | Set  | Rs. 3,511.00 |
|          | (xiii) 3½ / 4 core 400 sqmm cable   | Set  | Rs. 4,185.00 |

### **GI Pipe Protection**

|     |  |              |          |
|-----|--|--------------|----------|
| 11. | Supplying & fixing medium gauge GI Pipe ( ISI-Medium)<br>Protection with necessary fittings and jointing metarials as required |              |          |
|     |  | <b>ISI-M</b> |          |
|     | (a) 25 mm dia  | Rs.          | 173.00   |
|     | (b) 32 mm dia  | Rs.          | 218.00   |
|     | (c) 40 mm dia  | Rs.          | 246.00   |
|     | (d) 50 mm dia  | Rs.          | 330.00   |
|     | (e) 65 mm dia  | Rs.          | 416.00   |
|     | (f) 80 mm dia  | Rs.          | 529.00   |
|     | (g) 100 mm dia   | Rs.          | 751.00   |
|     | (h) 125 mm dia   | Rs.          | 961.00   |
|     | (i) 150 mm dia   | Rs.          | 1,137.00 |

***SCHEDULE OF RATES FOR EARTHING INSTALLATIONS***

| <b>Item No.</b>  | <b>Description of Item</b>   | <b>Unit</b> | <b>Rate</b>  |
|--|--|-------------|--------------|
| <b><u>Soil Excavation :</u></b>                              |  |             |              |
| 1.   | Excavation of soil for installation of Earth Electrode and filling & ramming.  |             |              |
| (a)  | <b>For Soft Soil</b>   | Cu mtr.     | Rs. 215.00   |
| (b)  | <b>For Morrur Soil</b>   | Cu mtr.     | Rs. 286.00   |
| <b><u>Earthing Installation – with Pipe Electrode :</u></b>  |  |             |              |
| 2.   | Earthing with 50 mm dia GI pipe 3.64 mm thick x 3.04 Mts. long and 1 x 4 SWG GI (Hot Dip) wire (4 Mts. long), 13 mm dia x 80 mm long GI bolts, double nuts, double washers incl. S & F 15 mm dia GI pipe protection (1 Mts. long) to be filled with bitumen partly under the ground level and partly above ground level driven to an average depth of 3.65 Mts. below the ground level as below:   |             |              |
| (a)  | By ISI-Medium GI pipe  | Set         | Rs. 1,369.00 |
|  | By TATA-Medium GI pipe   | Set         | Rs. 1,524.00 |
| <b><u>Earthing Installation by GI pipe –</u></b>             |  |             |              |
| <b><u>(For Sub-station Neutral/Equipment earthing) :</u></b> |  |             |              |
| (b)  | Earthing with 80 mm dia GI pipe (TATA-Medium)x 3.0 Mts. long and 1 x 19/8 stranded GI (Hot Dip) wire (4 Mts. long), 25 mm dia x 150 mm long galvanized bolt, double nuts, double washers including socketing at both ends of stranded GI (Hot Dip) wire by crimping sockets/ thimbles and S & F 40 mm dia GI pipe (ISI-Medium) protection (3 Mts. long) to be filled with bitumen partly under the ground level and partly above ground level to an average depth of 3.65 Mts  | Set         | Rs. 3,770.00 |
| (c)  | Earthing with 65 mm dia GI pipe (TATA-Medium)x 3.0 Mts. long and 1 x 19/10 stranded GI (Hot Dip) wire (4 Mts. long), 20 mm dia x 125 mm long galvanized bolt, double nuts, double washers including socketing at both ends of stranded GI (Hot Dip) wire by crimping sockets/ thimbles and S & F 40 mm dia GI pipe (ISI-Medium) protection (3 Mts. long) to be filled with bitumen partly under the ground level and partly above ground level to an average depth of 3.65 Mts | Set         | Rs. 3,146.00 |
| (d)  | Earthing with 65 mm dia GI pipe (TATA-Medium)x 3.0 Mts. long and 1 No. 50 mm x 6 mm galvanized (Hot Dip) steel strip (4 Mts. long), 20 mm dia x 125 mm long galvanized bolt, double nuts, double washers including finishing both ends by making holes etc. and S & F 65 mm dia GI pipe (ISI-Medium) protection (3 Mts. long) to be filled with bitumen partly under the ground level and partly above ground level to an average depth of 3.65 Mts                            | Set         | Rs. 3,868.00 |
| (e)  | Earthing with 80 mm dia GI pipe (TATA-Medium)x 3.0 Mts. long and 1 No. 65 mm x 8 mm galvanized (Hot Dip) steel strip (4 Mts. long), 20 mm dia x 125 mm long galvanized bolt, double nuts, double washers including finishing both ends by making holes etc. and S & F 80 mm dia GI pipe (ISI-Medium) protection (3 Mts. long) to be filled with bitumen partly under the ground level and partly above ground level to an average depth of 3.65 Mts                            | Set         | Rs. 5,349.00 |

| Item No. | Description of Item   | Unit | Rate       |
|----------|---|------|------------|
| 3. (a)   | Extra for providing masonry enclosure on the top of the earth electrode of overall size 86.36 cm x 86.36 cm x 46 cm deep (below Ground level) complete with cemented brick work(1:6) of 25 cm width duly plastered with cement mortar (inside) CI hinged inspection cover of size 36.56 cm x 35.56 cm with locking arrangement, GI reducer including drilling of 46 nos. 12 mm dia holes on the GI pipe | Item | Rs. 915.00 |
| (b)      | Extra for treatment of soil by using salt & charcoal or coke for plate electrode  | Item | Rs. 531.00 |

#### **Earth Busbar :**

|        |  |     |            |
|--------|--|-----|------------|
| 4. (a) | Supplying & fixing earth busbar of galvanized (Hot Dip) MS flat 25 mm x 6 mm on wall having clearance of 6 mm from wall including providing drilled holes on the busbar complete with GI bolts, nuts, washers, spacing insulators etc. as required | Mtr | Rs. 156.00 |
| (b)    | Supplying & fixing earth busbar of galvanized (Hot Dip) MS flat 40 mm x 6 mm on wall having clearance of 6 mm from wall including providing drilled holes on the busbar complete with GI bolts, nuts, washers, spacing insulators etc. as required | Mtr | Rs. 194.00 |
| (c)    | Supplying & fixing earth busbar of galvanized (Hot Dip) MS flat 50 mm x 6 mm on wall having clearance of 6 mm from wall including providing drilled holes on the busbar complete with GI bolts, nuts, washers, spacing insulators etc. as required | Mtr | Rs. 216.00 |
| (d)    | Supplying & fixing earth busbar of galvanized (Hot Dip) MS flat 65 mm x 8 mm on wall having clearance of 6 mm from wall including providing drilled holes on the busbar complete with GI bolts, nuts, washers, spacing insulators etc. as required | Mtr | Rs. 316.00 |

#### **Earth Continuity Conductor :**

|       |  |     |           |
|-------|--|-----|-----------|
| 5.    | Connecting the equipments to earth busbar including S & F GI (Hot Dip) wire of size as below on wall/floor with staples buried inside wall/floor as required and making connection to equipments with bolts, nuts, washers, cable lugs etc. as required and mending good damages |     |           |
| (a)   | Solid GI wire  |     |           |
| (i)   | No. 4 SWG  | Mtr | Rs. 18.00 |
| (ii)  | No. 6 SWG  | Mtr | Rs. 13.00 |
| (iii) | No. 8 SWG  | Mtr | Rs. 9.00  |
| (iv)  | No. 10 SWG   | Mtr | Rs. 6.00  |
| (v)   | No. 12 SWG   | Mtr | Rs. 4.00  |
| (vi)  | No. 14 SWG   | Mtr | Rs. 2.00  |
| (b)   | Stranded GI wire   |     |           |
| (i)   | 7/14 SWG   | Mtr | Rs. 16.00 |

| Item No.   | Description of Item  | Unit | Rate          |
|--|--|------|---------------|
| <b><u>Equipment earthing :</u></b>   |  |      |               |
|  | (c) Connecting the equipments body to earth busbar including S&F 20 mm x 3 mm galvanised (Hot Dip) MS flat on wall/floor with GI saddles as required and connection to equipments incl. drilling holes, with bolts, nuts, washers etc.   | Mtr  | Rs. 92.00     |
|  | (d) Connecting the equipments body to earth busbar including S & F 25 mm x 6 mm galvanised (Hot Dip) MS flat on wall/floor with GI saddles as required and connection to equipments incl. drilling holes, with bolts, nuts, washers etc.   | Mtr  | Rs. 138.00    |
|  | (e) Connecting the equipments body to earth busbar incl. S & F 50 mm x 6 mm Galvanized (Hot Dip) MS flat on wall/floor with GI saddle as required and connection to equipments with incl. drilling holes, bolts, nuts, washers etc.  | Mtr  | Rs. 198.00    |
| <b><u>Earthing connection from earth electrode to Transformer Neutral/Earth Busbar</u></b> |  |      |               |
| 6.   | (a) Extra for connecting the neutral of Transformer/Earth busbar to earth electrode including S & F 19/8 Stranded GI (Hot Dip) wire on wall/floor with GI saddles & insulating the same by one layer of PVC tape over one layer of ampere tape   | Mtr  | Rs. 201.00    |
|  | (b) Extra for connecting the neutral of Transformer/Earth busbar to earth electrode including S & F 19/10 Stranded GI (Hot Dip) wire on wall/floor with GI saddles & insulating the same by one layer of PVC tape over one layer of ampere tape  | Mtr  | Rs. 161.00    |
|  | (c) Extra for connecting the neutral of Transformer/Earth busbar to earth electrode including S & F 50 mm x 6 mm Galvanized (Hot Dip) steel strip on wall/floor with GI saddles & insulating the same by one layer of PVC strip over one layer of ampere tape  | Mtr  | Rs. 224.00    |
|  | (d) Extra for connecting the neutral of Transformer/Earth busbar to earth electrode including S & F Galvanized (Hot Dip) Steel strip 65 mm x 8 mm on wall/floor with GI saddles & insulating the same by one layer of PVC strip over one layer of ampere tape  | Mtr  | Rs. 324.00    |
| <b><u>Earthing Installation – with Copper Plate electrode :</u></b>                        |  |      |               |
| 7.   | Earthing with Copper plate (610x610x3mm size) having weight of 9.84 Kg and 1 No. 25x5mm Copper strip (3.20 mt long) & 1 no. 6 sqmm PVC insulated stranded Copper wire (4 Mt long) incl. S & F 15 mm dia GI pipe (ISI-Medium) protection (4 mt. long) to be filled with bitumen, partly under the ground level & partly above ground level to an average depth of 3.65 Mts. below the ground level and restoring the surface duly rammed incl. providing 3.0 mt long, 25 mm dia GI pipe (ISI-Medium) for periodic treatment, incl. providing masonry enclosure on the top of the earth electrode of overall size 86.36x86.36x46cm deep (below Ground level) complete with cemented brick work (1:6) of 25 cm width, duly plastered with cement mortar (inside) CI hinged inspection cover of size 36.56x35.56cm with locking arrangement, GI reducer and treatment of soil by using salt & charcoal or coke for plate electrode | Set  | Rs. 10,466.00 |

**SCHEDULE OF RATES FOR OH LINE INSTALLATION  
(LT DISTRIBUTION)**

**(A) Erection of Poles :**

| Item No. | Description of Item  | Unit | Rate         |
|----------|--|------|--------------|
| 1.       | Erection of Single Steel tubular pole of length as given below with/without sole plate & Cap etc. in CC foundation (Proportion and dimension indicated below), having 600x600x150 mm thick CC (4:2:1) base block below sole plate/pole with hard jhama metal including CC (6:3:1) muffing <b>0.30 mts. dia and 0.30 mts.</b> above ground level including 3 mm thick neat cemented finish and GI earth bolt after making drilled holes etc. on pole & carriage of pole upto 1.6 Km from Store to work-site including filling up the excavated earth pit with shifted soil and ramming properly   |      |              |
|          | (a) Upto 9.0 mtr.            Size 0.6x0.6x1.70 mts   | Set  | Rs. 2,835.00 |
|          | (b) Above 9.0 mtr.        Size 0.6x0.6x1.91 mts  | Set  | Rs. 3,355.00 |
| 2.       | Erection of H-pole (DP) structure with upto 9 mts. long steel tubular poles (0.9 mt. to 1.5 mt. apart) in CC (6:3:1) foundation (as to similar dimation in item A-1 above) including 600x600x150 mm thick CC (4:2:1) base block below sole plate/pole with hard jhama metal including CC (6:3:1) muffing <b>0.30 mt. dia &amp; 0.30 mt.</b> above ground level neatly cemented finish 3 mm thick and providing Galv. MS Channels, cross arms and cross bracings made out of Galv. angle, flats etc. anti climbing devices, danger board & earth bolts etc. & carrying of the pole upto 1.6 Km. from Store to work-site including filling up the excavated earth pit with shifted soil and ramming properly | Set  | Rs. 8,907.00 |
| 3.       | (a) (i) Extra on items 1& 2 above, for providing CC (6:3:1) base block (around the pole) dimension <b>0.60x0.60x0.76 mt.</b> above ground level, neatly cemented finish (3 mm thick), at the base pole (in lieu of CC muffing) suitable for alkathene/ polythene pipe entry as directed for street light wiring, incl. S & F <b>25cmx25cmx10cm GI Loop box</b> , 16SWG & incl. drilled hole in pole  | Item | Rs. 1,325.00 |
|          | (ii) Extra on items 1& 2 above, for providing CC (6:3:1) base block (around the pole) dimension <b>0.45x0.45x0.60 mt.</b> above ground level, neatly cemented finish (3 mm thick), at the base pole (in lieu of CC muffing) suitable for alkathene/ polythene pipe entry as directed for street light wiring, incl. S & F <b>20cmx15cmx10cm GI Loop box</b> , 16SWG & incl. drilled hole in pole   | Item | Rs. 740.00   |
|          | (b) (i) Extra on items 1& 2 above, for providing CC (6:3:1) base block (around the pole) dimension <b>0.60x0.60x0.76 mt.</b> above ground level, neatly cemented finish (3 mm thick), at the base pole (in lieu of CC muffing) incl. drilled hole in pole suitable for alkathene/polythene pipe entry, for street light wiring, <b>without Loop Box</b>  | Item | Rs. 1,039.00 |
|          | (ii) Extra on items 1& 2 above, for providing CC (6:3:1) base block (around the pole) dimension <b>0.45x0.45x0.60 mt.</b> above ground level, neatly cemented finish (3 mm thick), at the base pole (in lieu of CC muffing) incl. drilled hole in pole suitable for alkathene/polythene pipe entry, for street light wiring, <b>without Loop Box</b>   | Item | Rs. 498.00   |

| Item No.   | Description of Item   | Unit                       | Rate         |
|------------|---|----------------------------|--------------|
| 4.         | Painting of Steel Tubular Pole of lengths and no. of coats of paint, as given below with ready mixed paint/primer of approved make, and brand incl. preparation of surface by sand paper/emery paper, cleaning etc. for receiving fresh coat of paint   |                            |              |
|            | (a) <u>Upto 9.0 mtr. long pole</u>  |                            |              |
|            | (i) 1st coat of aluminium paint over 1 coat of RO priming   | per pole                   | Rs. 226.00   |
|            | (ii) 2nd coat of aluminium paint over 1st coat  | per pole                   | Rs. 103.00   |
|            | (b) <u>Above 9.0 mtr. long pole</u>   |                            |              |
|            | (i) 1st coat of aluminium paint over 1 coat of RO priming   | per pole                   | Rs. 415.00   |
|            | (ii) 2nd coat of aluminium paint over 1st coat  | per pole                   | Rs. 204.00   |
| 5.         | Painting of H-pole (DP) structure with upto 9 mts. long steel tubular poles complete with MS channels, cross arms & cross bracings etc. with 2 coats of aluminium paint after one coat of RO primer of approved make & brand incl. preparation of surface by sand paper/emery paper, cleaning etc. for receiving fresh coat of paint  | per<br>H-pole<br>structure | Rs. 908.00   |
| 6.         | Painting Block Letters or Digits within a circle/square as required, with "Black Japan" paint of approved make & brand, the size of letters and digits as given below   |                            |              |
|            | (a) Size 40 mm and upto 50 mm   | Each                       | Rs. 12.00    |
|            | (b) Size 50 mm and upto 75 mm   | Each                       | Rs. 13.00    |
| 7. A.      | Painting of Steel Tubular Pole of lengths and no. of coats of paint, as given below with ready mixed paint/primer of approved make, and brand incl. preparation of surface by sand paper/emery paper, cleaning etc. for receiving fresh coat of paint   |                            |              |
|            | (a) <u>Upto 9.0 mtr. long pole</u>  |                            |              |
|            | (i) One coat of red lead/Zinc chromate priming  | per pole                   | Rs. 196.00   |
|            | (ii) 1st coat of synthetic enamel paint over the primer   | per pole                   | Rs. 150.00   |
|            | (iii) 2nd coat of synthetic enamel paint over the 1st coat  | per pole                   | Rs. 137.00   |
|            | (b) <u>Above 9.0 mtr. long pole</u>   |                            |              |
|            | (i) One coat of red lead/Zinc chromate priming  | per pole                   | Rs. 351.00   |
|            | (ii) 1st coat of synthetic enamel paint over the primer   | per pole                   | Rs. 281.00   |
|            | (iii) 2nd coat of synthetic enamel paint over the 1st coat  | per pole                   | Rs. 256.00   |
| 7. B.      | Painting of any steel/ iron surface with no. of coats of paints as given below with ready mixed paint/primer of approved make and brand incl. preparation of surface by sand paper/emery paper, cleaning etc. for receiving fresh coat of paint   |                            |              |
|            | (a) 1st coat of aluminium paint over one coat of RO priming   | SqMtr.                     | Rs. 93.00    |
|            | (b) 2nd coat of aluminium paint over 1st coat   | SqMtr.                     | Rs. 43.00    |
|            | (c) One coat of red lead/Zinc chromate priming  | SqMtr.                     | Rs. 81.00    |
|            | (d) 1st coat of synthetic enamel paint over the primer  | SqMtr.                     | Rs. 62.00    |
|            | (e) 2nd coat of synthetic enamel paint over the 1st coat  | SqMtr.                     | Rs. 57.00    |
| <b>(B)</b> | <b><u>Erection of Stays :</u></b>   |                            |              |
| 1.         | Supplying and Erection of Galv. Stay set complete with 7/8 SWG GI (Hot Dip) Stranded stay wire (45 ton quality), 1.8 mtr.x 16 mm dia Galv. (Hot Dip) stay rod 150 mmx150 mm x8 mm thick Galv. (Hot Dip) MS anchor plate, 356 mmx13 mm dia Galv. bow (with ratchet type nut), thimble, Galv. Box type Stay Clamp in CC foundation (6:3:1) having hard jhama metal incl. providing earth connection | Set                        | Rs. 1,567.00 |



| Item No.   | Description of Item  | Unit | Rate         |
|--|--|------|--------------|
| 2.   | Supplying and Erection of Galv. Stay set complete with 7/10 SWG GI (Hot Dip) Stranded stay wire (45 ton quality), 1.8 mtr.x 16 mm dia Galv. stay rod 100 mmx100 mm x6 mm thick Galv. MS anchor plate, 356 mmx13 mm dia Galv. bow (with ratchet type nut), thimble, Galv. Box type Stay Clamp in CC foundation (6:3:1) having hard jhama metal incl. providing earth connection | Set  | Rs. 1,345.00 |
| 3.   | Supplying and Erection of Galv. Stay set complete with 7/12 SWG GI (Hot Dip) Stranded stay wire (45 ton quality), 1.8 mtr.x 16 mm dia Galv. stay rod 100 mmx100 mm x6 mm thick Galv. MS anchor plate, 356 mmx13 mm dia Galv. bow (with ratchet type nut), thimble, Galv. Box type Stay Clamp in CC foundation (6:3:1) having hard jhama metal incl. providing earth connection | Set  | Rs. 1,248.00 |
| <b>(C) <u>Erection of Galv. (Hot Dip) Cross arms/ 'D' Iron Clamp :</u></b> |  |      |              |
| 1.   | Supplying & Erection of 40x40x6x300 mm long Galv. (Hot Dip) angle iron cross-arm for carrying insulators incl. painting  | Each | Rs. 304.00   |
| 2.   | Supplying & Erection of 40x40x6x400 mm long Galv. angle iron cross-arm for carrying insulators incl. painting  | Each | Rs. 322.00   |
| 3.   | Supplying & Erection of 50x50x6x300 mm long Galv. angle iron cross-arm for carrying insulators incl. painting  | Each | Rs. 330.00   |
| 4.   | Supplying & Erection of 50x50x6x600 mm long Galv. angle iron cross-arm for carrying insulators incl. painting  | Each | Rs. 281.00   |
| 5.   | Supplying & Erection of 75x40x5x400 mm long Galv. angle iron cross-arm for carrying insulators incl. painting  | Each | Rs. 316.00   |
| 6.   | Supplying & Erection of 75x40x5x600 mm long Galv. angle iron cross-arm for carrying insulators incl. painting  | Each | Rs. 398.00   |
| 7.   | Supplying & Erection of Galv. 'D' iron complete with suitable pole clamp 75mmx88mm porcelain shackle insulator & 15 mm dia Galv. bolts & nuts. incl. painting  | Each | Rs. 123.00   |
| 8.   | Supplying & Erection of Galv. 'D' iron complete with suitable pole clamp 100mmx114mm porcelain shackle insulator & 19 mm dia Galv. bolts & nuts. incl. painting  | Each | Rs. 133.00   |
| <b>(D) <u>Erection of Insulators :</u></b>                                 |  |      |              |
| 1.   | Supplying & Erection of 75x88 mm porcelain shackle insulator complete with 190x30x5 mm Galv. (Hot Dip) strips with 15.88 mm dia Galv. bolts, nuts, etc. for conductor upto 7/3.10 mm, 32 sqmm of AAC/equivalent size of ACSR   | Each | Rs. 71.00    |
| 2.   | Supplying & Erection of 100x114 mm porcelain shackle insulator complete with 230x40x6 mm Galv. (Hot Dip) strips with 19 mm dia Galv. bolts, nuts, etc. for conductor upto 7/3.10 mm, 32 sqmm of AAC/equivalent size of ACSR  | Each | Rs. 85.00    |
| 3.   | Supplying & Erection for extra porcelain shackle insulator of sizes as below :   |      |              |
| (a)  | 75x88 mm for conductor upto 7/3.10 mm, 32 sqmm of AAC/equivalent size of ACSR  | Each | Rs. 37.00    |
| (b)  | 100x114 mm for conductor above 7/3.10 mm, 32 sqmm of AAC/equivalent size of ACSR   | Each | Rs. 44.00    |

| Item No.  | Description of Item  | Unit | Rate       |
|---|--|------|------------|
| 4.  | Supplying & Erection of 100x63 mm porcelain Pin insulator complete with Galv. spindle and nut and washers etc. for conductor upto 7/4.39 mm, 65 sqmm of AAC/equivalent size of ACSR  | Each | Rs. 56.00  |
| <b>(E) <u>Erection of Conductor :</u></b>   |  |      |            |
| 1.  | Erection of 7/2.21 mm to 7/2.79 mm all Al. Conductor incl. S&F 9 SWG, dead soft Al. binding wire and jumpering etc. incl. carriage of conductor upto 1.6 km. from Store to site of work  | RM   | Rs. 7.00   |
| 2.  | Erection of 6/1/2.11 mm to 7/4.39 mm all Al. Conductor incl. S&F 6 SWG, dead soft Al. binding wire and jumpering etc. incl. carriage of conductor upto 1.6 km. from Store to site of work  | RM   | Rs. 7.00   |
| 3.  | Erection of 6/1/2.11 mm to 6/1/3.35 mm [i.e., 13 sqmm to 30 sqmm] all Al. Conductor steel reinforced (ACSR) incl. S&F 6 SWG dead soft Al. binding wire and jumpering etc., carriage of conductor upto 1.6 km from Store to site of work        | RM   | Rs. 7.00   |
| <b>(F) <u>Erection of Earth Wire, Safety Devices, Cradle guard, Lightning arrestors, Fuses etc. :</u></b> |  |      |            |
| 1.  | Supplying & Erection of No. 6 SWG GI (Hot Dip) continuous earth wire with Galv. (Hot Dip) earth clamp  | RM   | Rs. 16.00  |
| 2.  | Supplying & Erection of No. 6 SWG GI (Hot Dip) continuous earth wire without Galv. (Hot Dip) earth clamp   | RM   | Rs. 14.00  |
| 3.  | Supplying & Erection of cradle guard complete with 2x6 SWG GI (Hot Dip) wire and interlacing with No. 6 SWG GI (Hot Dip) wire at every metre run, incl. providing straining arrangement, earthing attachment, as required (without cross-arms) | RM   | Rs. 35.00  |
| 4.  | Supplying & Fixing "Hexagonal Type" safety device with 4 SWG Hard drawn all Al. conductor for upto 6 conductors incl. earth wire in vertical disposition   | RM   | Rs. 89.00  |
| 5.  | Supplying & fixing "Box Type" safety device with 4 SWG Hard drawn all Al. conductor complete with porcelain tube (Heavy) for conductors in horizontal disposition as below :   |      |            |
|   | (a) For conductors upto 4 Nos. incl earth wire   | Set  | Rs. 108.00 |
|   | (b) For conductors above 4 No. and upto 7 No. incl earth wire  | Set  | Rs. 216.00 |
| 6.  | Supplying & Fixing "Horn Gap" type lightning arrestor complete with 100x63 mm porcelain pin insulator & brass metal part (heavy type) incl. making connection to OH line and earth   | Set  | Rs. 178.00 |
| 7.  | Supplying & Fixing Aerial fuses to OH line incl. making connection (GEC type)  |      |            |
|   | (a) 15 A rated   | Each | Rs. 28.00  |
|   | (b) 30 A rated   | Each | Rs. 32.00  |
|   | (c) 60 A rated   | Each | Rs. 46.00  |

| Item No.   | Description of Item  | Unit       | Rate         |
|--|--|------------|--------------|
| <b>(G) <u>Erection of Conductor Jointing &amp; Tapping Accessories :</u></b> |  |            |              |
| 1.   | Supplying & Fixing twisting Al. joint sleeves to AAC incl. supplying suitable Al. sleeves for 7/2.21 mm to 7/4.39 mm   | Each joint | Rs. 115.00   |
| 2.   | Supplying & Fixing twisting Al. joint sleeves for ACSR incl. supplying suitable Al. sleeves (2 no.) for 6/1/2.30 mm to 6/1/3.66 mm   | Each joint | Rs. 196.00   |
| 3.   | Supplying & Fixing parallel-groove (2 Bolt type) clamp for AAC/ACSR (Alined type)  | Each       | Rs. 70.00    |
| 4.   | Supplying & Fixing universal parallel-groove (1 Bolt type) clamp for AAC/ACSR (Alined type)  | Each       | Rs. 57.00    |
| <b>(H) <u>Street lights :</u></b>  |  |            |              |
| 1.   | Distribution wiring for street light on pole with 2x1/1.40 PVC insulated and sheathed (single core) in 15 mm dia GI pipe (ISI Medium), without control switch incl. S&F 30.48 cm outdoor type dispersive light fitting with GI Pipe bracket and providing 25x6 mm Galv. MS flat clamps with bolts, nuts etc. and incl. painting (Av. run 3m)   | Set        | Rs. 1,736.00 |
| 2.   | Distribution wiring for steel light on pole for outdoor fluorescent/SV/MV light fitting with 2x1/1.40 PVC insulated and sheathed wire (single core) in 15 mm dia GI Pipe (ISI-Medium), without control switch, incl. fitting and fixing the light fitting by providing 32 mm dia GI Pipe bracket of length 1.05 mts, on pole incl. S&F suitable MS flat clamps with bolts, nuts etc. as required and painting  | Set        | Rs. 999.00   |
| 3.   | Fixing outdoor type fluorescent/SV/MV light fitting on pole including S&F 40 mm dia x 1.68 mts. long GI Pipe (ISI-Medium) bracket with 40 mmx10 mm thick, MS clamp etc. and providing wiring with 2x1/1.40 PVC insulated & sheathed wire (single core) partly in GI conduit & partly through above bracket from OH line to the fitting, without control switch, incl. making connections and painting  | Set        | Rs. 1,400.00 |
| 4.   | Fixing outdoor type fluorescent/SV/MV light fitting on pole including S&F 40 mm dia x 1.68 mts. long GI Pipe (ISI-Medium) bracket with 40 mmx10 mm thick, MS clamp etc. and providing wiring with 2x1/1.40 PVC insulated and sheathed wire (single core) from loop box at the base of pole to light fitting through pole & bracket (without control switch) including making connections & painting  | Set        | Rs. 1,335.00 |
| 5.   | Supplying & Fixing GI waterproof type looping cable box size 200x150x100 mm deep having 4 mm thick comprising of one 250 V 15 A kit-kat fuse unit, one NL on porcelain insulator, one compression type brass cable gland for upto 2- core 16 sqmm PVC/A cable and having lined with rubber gasketed GI top cover with brass machine screws etc., earthing terminal with lug, on steel tubular pole near base, including S&F 40x6 mm thick, MS clamps with bolts, nuts etc. including painting with anticorrosive paint | Set        | Rs. 458.00   |

| Item No.   | Description of Item  | Unit | Rate         |
|------------|--|------|--------------|
| <b>(I)</b> | <b><u>Service Connection with 'L' Type/<br/>Vertical type GI Pipe Bracket :</u></b>  |      |              |
| 1.         | Supplying & fixing 50mm dia x 5.24 metre long (incl. bends) GI pipe vertical type service bracket on wall for carrying 2 wires and an earth wire complete with Galv. MS clamps for stay, insulators and earth wire, 7/14 SWG stranded GI (Hot Dip) Stay wire with 230x31 mm dia straining screws, 75x88 mm porcelain shackle insulators with Galv. (Hot Dip) strips, bolts, bush etc. incl. painting | Set  | Rs. 2,321.00 |
| 2.         | Supplying & fixing 50mm dia x 5.64 metre long (incl. bends) GI pipe vertical type service bracket on wall for carrying 4 wires and an earth wire complete with Galv. MS clamps for stay, insulators and earth wire, 7/14 SWG stranded GI (Hot Dip) Stay wire with 230x31 mm dia straining screws, 75x88 mm porcelain shackle insulators with Galv. (Hot Dip) strips, bolts, bush etc. incl. painting | Set  | Rs. 2,515.00 |
| 3.         | Supplying & Fixing 50 mm dia 3.20 metre long (incl. bends) 'L' Type service bracket on wall for carrying 4 wires and an earth wire complete with Galv. clamp for stay, insulators etc.. 7/14 SWG stranded Galv. (Hot Dip) wire for stay with 230x13 mm dia straining screws, 75x88 mm porcelain shackle insulators with Galv. (Hot Dip) strips etc. and painting                                     | Set  | Rs. 1,670.00 |
| 4.         | Supplying & Fixing 40 mm dia 3.20 metre long (incl. bends) 'L' Type service bracket on wall for carrying 2 wires and an earth wire complete with Galv. clamp for stay, insulators etc., 7/14 SWG stranded Galv. (Hot Dip) wire for stay with 230x13 mm dia straining serews, 75x88 mm porcelain shackle insulators with Galv. (Hot Dip) strips etc. and painting                                     | Set  | Rs. 1,609.00 |
| 5.         | Supplying & Fixing 40 mm dia 3.20 metre long Vertical Type service bracket for carrying 2 wires and an earth wire complete with Galv. clamp for stay, insulators etc., 7/14 SWG stranded Galv. (Hot Dip) wire for stay with 230x13 mm dia straining serews, 75x88 mm porcelain shackle insulators with Galv. (Hot Dip) strips etc. and painting  | Set  | Rs. 1,609.00 |

***SCHEDULE OF RATES FOR OVERHEAD LINE  
INSTALLATION - REPAIR***

| <b>Item No.</b> | <b>Description of Item</b>   | <b>Unit</b> | <b>Rate</b>  |
|-----------------|--|-------------|--------------|
| 1.              | Re-straining 10 SWG to 12 SWG HDDB wire including S & F binding wire with 14 SWG soft copper wire  | RM          | Rs. 6.00     |
| 2.              | Re-straining upto 7/0.173 AAC including S & F binding wire with 9 SWG soft Al. wire  | RM          | Rs. 6.00     |
| 3.              | Re-straining upto 6/1.166 ACSR conductor including S & F binding wire with 9 SWG soft Al. wire   | RM          | Rs. 7.00     |
| 4.              | Re-straining 8 SWG to 6 SWG GI continuous earth wire without earth clamp   | RM          | Rs. 6.00     |
| 5.              | Replacing Galv. (Hot Dip) MS earth clamp 380x25x3 mm size complete with bolts and nuts etc. as required on pole (as per specification) for fastening earth wire incl. painting   | Each        | Rs. 67.00    |
| 6.              | Replacing Galv. (Hot Dip) MS earth clamp 380x40x6 mm size complete with bolts and nuts etc. as required on pole (as per specification) for fastening stay wire incl. painting  | Each        | Rs. 97.00    |
| 7.              | Providing anti-climbing device with galv. Barbed wire, 4 barbs/76 mm apart around pole/stay upto required height (approximately 1.2 mt.)   | Each        | Rs. 74.00    |
| 8.              | Replacing staywire with 7/8 SWG GI (Hot Dip) stranded Wire (45 Ton quality) incl. S & F GI thimble and making off binding at both ends   | Each        | Rs. 636.00   |
| 9.              | Replacing staywire with 7/10 SWG GI (Hot Dip) stranded Wire (45 Ton quality) incl. S & F GI thimble and making off binding at both ends  | Each        | Rs. 477.00   |
| 10.             | Replacing staywire with 7/12 SWG GI (Hot Dip) stranded Wire (45 Ton quality) incl. S & F GI thimble and making off binding at both ends  | Each        | Rs. 380.00   |
| 11.             | Providing CC (6:3:1) muffing 0.3 mtr dia upto the height of 0.3 mtr. above the ground level around the pole base complete with 3 mm thick neatly finished cement plaster all-round after dismantling the unserviceable muffing if necessary  | Each        | Rs. 250.00   |
| 12.             | Providing CC (6:3:1) muffing 600x600x760 mm in size or equivalent size of cylindrical muffing above ground level around the pole base complete with 3 mm thick neatly finished cement plaster all round after dismantling the unserviceable muffing if necessary                                   |             |              |
|                 | (a) Without Loop Box   | Each        | Rs. 1,134.00 |
|                 | (b) With 250x250x100mm 16 SWG GI Loop Box  | Each        | Rs. 1,434.00 |
| 13.             | Providing CC (6:3:1) muffing 450x450x600 mm in size or equivalent size of cylindrical muffing above ground level around the pole base complete with 3 mm thick neatly finished cement plaster all round after dismantling the unserviceable muffing if any incl. fixing only loop box if necessary |             |              |
|                 | (a) Without Loop Box   | Each        | Rs. 629.00   |
|                 | (b) With 200x150x100mm 16 SWG GI Loop Box  | Each        | Rs. 872.00   |

| Item No. | Description of Item   | Unit     | Rate       |
|----------|---|----------|------------|
| 14.      | Dismantling steel tubular/Rail/Strut embedded in CC foundation incl. excavation, filling of holes, restoring surface, loading at site and delivering, unloading, sorting, stacking properly at any place as per direction upto a lead of 1.6 km   | Per pole | Rs. 649.00 |
| 15.      | Dismantling of OH line comprising of copper/AAC/ACSR conductor, cross arms / 'D' iron clamps / brackets / 'V' brackets etc. insulators, earthwire, cradle guard, safety devices, staywire etc., incl. sorting out, rolling the conductors, stacking, loading at site and delivering, unloading , measuring the conductors, sorting, stacking properly at any place as per direction upto a lead of 1.6 km   |          |            |
|          | (a) OH line comprising of single phase, neutral & earth wire  | Per span | Rs. 408.00 |
|          | (b) OH line comprising of 3 phase, neutral, street light phase & earth wire   | Per span | Rs. 601.00 |
| 16.      | Supplying and Fixing GI water proof looping cable box having hinged GI Top Cover having 4 mm thick with rubber gasket lining, railway type mechanical locking arrangement, earthing terminal with lug etc. of the following sizes as indicated below, Comprising of one 250 V, 15 A Kit-Kat fuse unit, one NL on porcelain insulator etc. and housing the same in pole muffing incl. addition and alteration to the existing CC muffing (6:3:1) after dismantling the damaged looping cable box etc. where necy. incl. painting |          |            |
|          | (a) 200 x 150 x 100mm   | Each     | Rs. 498.00 |
|          | (b) 250 x 250 x 100mm   | Each     | Rs. 563.00 |

**SCHEDULE OF RATES FOR INSTALLATION OF LIGHTNING CONDUCTOR**

| <b>Item No.</b> | <b>Description of Item</b>  | <b>Unit</b>                | <b>Rate</b> |
|-----------------|---|----------------------------|-------------|
| 1.              | S & F Lightning conductor Air-terminals made of 15 mm dia 1500 mm long GI pipe (ISI Medium) having five prongs of 4 SWG GI (Hot Dip) wire at top with 85 mm dia 6 mm thick GI base plate at bottom incl. necessary holes etc. duly grouted on the parapet etc. in CC mortar (4:2:1) | Each                       | Rs. 428.00  |
| 2.              | S & F of 4 SWG GI (Hot Dip) wire on Parapet/Roof/Plinth/ Surface of wall for lightning conductor as required (for Horizontal runs) with 40 mm long GI Staples spaced not exceeding 1300 mm apart incl. mending good all the damages to the building works                           | Mtr                        | Rs. 79.00   |
| 3.              | S & F of 4 SWG GI (Hot Dip) wire on wall for the lightning conductor as required (for vertical run) with GI Staples (40 mm long) spaced not exceeding 1 Mtr. apart incl. mending good the damages to building works (excluding hire charges of scaffolding)                         | Mtr                        | Rs. 91.00   |
| 4.              | Cutting cornices/ steps etc. including cutting recess in buildings etc. & supply & fixing 15 mm bore (ISI-Medium) GI pipe protection as below and mending good damages to the building works:   |                            |             |
|                 | (a) Length upto 0.5 Mtr   | Set                        | Rs. 74.00   |
|                 | (b) Length above 0.5 Mtr  | Set                        | Rs. 148.00  |
| 5.              | Making soldered joints between conductors, conductors and air terminals for 4 SWG GI (Hot Dip) wire incl. supply of jointing materials and painting with 2 (two) coats of bituminous paint  | Each                       | Rs. 61.00   |
| 6.              | Making soldered joints between conductors and down pipes/ other metallic objects for 14 SWG GI (Hot Dip) wire including supply of necessary 4 SWG GI (Hot Dip) wire, jointing materials and painting with 2 (two) coats of bituminous paint   | Each                       | Rs. 109.00  |
| 7.              | Hiring charges for scaffolding arrangement including dismantling at the end of work and carriage, for LC installation, per storey of building per vertical run  | storey/<br>vertical<br>run | Rs. 155.00  |
| 8.              | Hiring charges for scaffolding arrangement including dismantling at the end of work and carriage, for LC installation of overhead reservoir (vertical run)  | Mtr                        | Rs. 62.00   |
| 9.              | Supply & fixing GI (Hot Dip) strips 20 mm x 3 mm thick for horizontal run on the Parapet/Roof/ Wall with GI Saddles 1100 mm apart incl. mending good the damages to building works  | Mtr                        | Rs. 62.00   |
| 10.             | Supply & Fixing 7/10 SWG GI (Hot Dip) stranded wire for Horizontal run on the parapet/roof/wall with GI saddles spaced not exceeding 1100 mm apart incl. mending good the damages to building works   | Mtr                        | Rs. 64.00   |
| 11 (a)          | Supply & fixing of GI (Hot Dip) strips 20 mm x 3 mm thick for vertical run on wall with GI saddles spaced not exceeding 1000 mm apart incl. mending good damages to building work   | Mtr                        | Rs. 87.00   |
| (b)             | Supply & fixing of 7/10 SWG stranded GI (Hot Dip) wire for vertical run on wall with GI saddles spaced not exceeding 1000 mm apart incl. mending good the damages to building work  | Mtr                        | Rs. 89.00   |

| Item No. | Description of Item  |      | Rate       |
|----------|--|------|------------|
| 12 (a)   | Making soldered joints between conductor/ conductor & air terminals by 7/10 stranded GI (Hot Dip) wire incl. supply of jointing materials & painting with 2 (two) coats of Bituminous paint  | mtr  | Rs. 70.00  |
| (b)      | Making soldered joints between conductor/ down pipes / other metallic objects by 7/10 stranded GI (Hot Dip) wire incl. supply of jointing materials & painting with 2 (two) coats of Bituminous paint  | mtr  | Rs. 91.00  |
| 13.      | Supply & Fixing of Testing Joints by 20 mm x 3 mm thick GI (Hot Dip) strip 125 mm long grouted on wall having clearance of 6 mm from wall for making connection with thimbles at the end of 7/10 SWG GI (Hot Dip) stranded Wire and 4 SWG GI (Hot Dip) wire of vertical conductor and conductor from earth electrode complete with S & F thimbles, GI bolts, nuts, check-nuts, spring washers etc. as required | Each | Rs. 170.00 |
| 14.      | S & F Lightning Conductor Air Terminal made of 20 mm dia 1000 mm long GI pipe (ISI Medium) having five discharge prongs of 4 SWG GI (Hot Dip) wire at top duly soldered with 7/16 stranded GI (Hot Dip) wire and 85 mm dia 6 mm thick GI base plate at bottom incl. necessary holes etc. complete duly grouted on the parapet etc. in CC mortar ( 4:2:1)   | Each | Rs. 430.00 |



**ANNEXURE - I****Basic Rate of Materials:**

(All Rates of materials from K-1 to K-14 are excluding VAT)

| Sl. No. | Materials  | Rate (Rs.) | Unit  |
|---------|--|------------|-------|
| 1       | Cable end box (16SWG) for TPN SFU enclosure 63A          | 200.00     | Each  |
| 2       | Cable end box (16SWG) for TPN SFU enclosure 125A         | 200.00     | Each  |
| 3       | Cable end box (16SWG) for TPN SFU enclosure 200A         | 220.00     | Each  |
| 4       | Cable end box (16SWG) for TPN SFU enclosure 250A         | 220.00     | Each  |
| 5       | Cable end box (16SWG) for TPN SFU enclosure 315/320A     | 230.00     | Each  |
| 6       | Cable end box (16SWG) for TPN SFU enclosure 400A         | 250.00     | Each  |
| 7       | MCB Enclosure 2-way                                      | 220.00     | Each  |
| 8       | MCB Enclosure 4-way                                      | 266.00     | Each  |
| 9       | MCCB Enclosure (Legrand)                                 | 427.00     | Each  |
| 10      | MCCB Enclosure (L&T) FP                                  | 1064.00    | Each  |
| 11      | MCCB Enclosure (Havells A-Frame) FP                      | 1026.00    | Each  |
| 12      | MCCB Enclosure (Havells G-Frame) FP                      | 912.00     | Each  |
| 13      | MCCB Enclosure (SKB7) FP                                 | 836.00     | Each  |
| 14      | MCCB Enclosure (SKB8) FP                                 | 988.00     | Each  |
| 15      | Cable end box (16SWG) for TPN horizontal MCBDB 6-way     | 505.00     | Each  |
| 16      | Cable end box (16SWG) for TPN horizontal MCBDB 8-way     | 627.00     | Each  |
| 17      | Cable end box (16SWG) for TPN horizontal MCBDB 12-way    | 882.00     | Each  |
| 18      | Cable end box (16SWG) for TPN vertical MCBDB 4-way       | 851.00     | Each  |
| 19      | Cable end box (16SWG) for TPN vertical MCBDB 8-way       | 851.00     | Each  |
| 20      | Cable end box (16SWG) for TPN vertical MCBDB 12-way      | 851.00     | Each  |
| 21      | Al. bars   | 225.00     | Kg.   |
| 22      | Cu. Bars   | 510.00     | Kg.   |
| 23      | Ding Dong Call Bell (Anchor)                             | 83.00      | Each  |
| 24      | Buzzer (Anchor)  | 40.00      | Each  |
| 25      | Multitune Call Bell (Anchor)                             | 191.00     | Each  |
| 26      | Danger board (15 cm. x 10 cm. )                          | 32.00      | Each  |
| 27      | Danger board (20 cm. x 30 cm. )                          | 62.00      | Each  |
| 28      | Angular batten Holder (Anchor)                           | 22.00      | Each  |
| 29      | Bulk head light fitting (Havells Make)                   | 520.00     | Each  |
| 30      | Pendent holder   | 16.00      | Each  |
| 31      | CFL luminaire (Bajaj make-524020 / 020168) Out door type | 1040.00    | Each  |
| 32      | CFL luminaire (Havells make-LHRC4185099) Out door type   | 1280.00    | Each  |
| 33      | Aluminium Louver shutter 9"                              | 65.00      | Each  |
| 34      | Aluminium Louver shutter 12"                             | 85.00      | Each  |
| 35      | Aluminium Louver shutter 15"                             | 185.00     | Each  |
| 36      | Aluminium Louver shutter 18"                             | 310.00     | Each  |
| 37      | Aluminium Louver shutter 24"                             | 510.00     | Each  |
| 38      | GI Louver shutter 9"                                     | 37.00      | Each  |
| 39      | GI Louver shutter 12"                                    | 47.00      | Each  |
| 40      | GI Louver shutter 15"                                    | 92.00      | Each  |
| 41      | GI Louver shutter 18"                                    | 125.00     | Each  |
| 42      | GI Louver shutter 24"                                    | 255.00     | Each  |
| 43      | 19mm dia EI Conduit 1.6mm thick                          | 62.50      | Metre |
| 44      | 19mm dia GI conduit 1.6mm thick                          | 101.50     | Metre |
| 45      | 25mm dia GI Conduit 1.6mm thick                          | 121.50     | Metre |
| 46      | 20 mm dia PVC Conduit                                    | 25.65      | Metre |
| 47      | 25 mm dia PVC Conduit.                                   | 35.55      | Metre |
| 48      | PVC casing-capping of size 20x12mm                       | 24.38      | Metre |
| 49      | PVC casing-capping of size 25x12mm                       | 27.07      | Metre |
| 50      | 13mm heavy gauge Polythene Pipe                          | 10.80      | Metre |

| Sl. No. | Materials  | Rate (Rs.) | Unit  |
|---------|--|------------|-------|
| 51      | 19mm heavy gauge Polythene Pipe                    | 13.68      | Metre |
| 52      | 25mm heavy gauge Polythene Pipe                    | 26.64      | Metre |
| 53      | 32mm heavy gauge Polythene Pipe                    | 30.24      | Metre |
| 54      | 40mm heavy gauge Polythene Pipe                    | 40.00      | Metre |
| 55      | 50mm heavy gauge Polythene Pipe                    | 42.00      | Metre |
| 56      | 16SWG MS Box (100X100X65mm) 4"x4"x2.5"             | 30.00      | Each  |
| 57      | 16SWG MS Box (150X100X65mm) 6"x4"x2.5"             | 55.00      | Each  |
| 58      | 16SWG MS Box (175X100X65mm) 7"x4"x2.5"             | 60.00      | Each  |
| 59      | 16SWG MS Box (200X150X65mm) 8"x6"x2.5"             | 95.00      | Each  |
| 60      | 16SWG MS Box (250X200X65mm) 10"x8"x2.5"            | 110.00     | Each  |
| 61      | 16SWG MS Box (250X250X65mm) 10"x10"x2.5"           | 125.00     | Each  |
| 62      | 16SWG MS Box (300X200X65mm) 12"x8"x2.5"            | 125.00     | Each  |
| 63      | 16SWG MS Box (400X200X65mm) 16"x8"x2.5"            | 140.00     | Each  |
| 64      | 16SWG MS Box (400X250X65mm) 16"x10"x2.5"           | 190.00     | Each  |
| 65      | 16SWG MS Box (450X250X65mm) 18"x10"x2.5"           | 216.00     | Each  |
| 66      | One way Circular Box & cover                       | 14.00      | Each  |
| 67      | Two way Circular Box & cover                       | 15.00      | Each  |
| 68      | PVC inspection box of 175x100x65mm                 | 202.00     | Each  |
| 69      | 3 way Ceiling Rose/Batten Holder                   | 18.30      | Each  |
| 70      | 1.5 sq.mm 'FR' stranded Copper Wire                | 13.68      | Metre |
| 71      | 2.5 sqmm 'FR' stranded Copper Wire                 | 22.04      | Metre |
| 72      | 4.0 sqmm 'FR' stranded Copper wire                 | 32.34      | Metre |
| 73      | 6.0 sqmm 'FR' stranded Copper wire                 | 48.89      | Metre |
| 74      | 10 sqmm 'FR' stranded Copper wire                  | 93.73      | Metre |
| 75      | 16sqmm 'FR' stranded Copper wire                   | 145.24     | Metre |
| 76      | 24/0.20mm twin twisted tinned copper flexible wire | 11.00      | Metre |
| 77      | 5 A, piano key type Switch                         | 15.00      | Each  |
| 78      | 5A, 2 way piano key type swith                     | 20.25      | Each  |
| 79      | 15A Piano key type Switch                          | 61.00      | Each  |
| 80      | 6A Piano key type Switch                           | 20.25      | Each  |
| 81      | 20A Piano key type Switch                          | 69.00      | Each  |
| 82      | 5 A, 3 pin Piano flush type Socket                 | 24.75      | Each  |
| 83      | 15A flushed type 3 pin Plug Socket                 | 61.00      | Each  |
| 84      | Step Type Electronics Fan regulator                | 196.00     | Each  |
| 85      | 16A kit kat rewirable fuse                         | 32.00      | Each  |
| 86      | 1 module GI box                                    | 47.00      | Each  |
| 87      | 2 module GI box                                    | 52.00      | Each  |
| 88      | 4 module GI box                                    | 66.00      | Each  |
| 89      | 6 module GI box                                    | 102.00     | Each  |
| 90      | 2 row 12 module GI box                             | 186.00     | Each  |
| 91      | 2 row 18 module GI box                             | 235.00     | Each  |
| 92      | 1 module Cover plate                               | 56.00      | Each  |
| 93      | 2 module Cover plate                               | 59.00      | Each  |
| 94      | 3 module Cover plate                               | 70.00      | Each  |
| 95      | 4 module Cover plate                               | 70.00      | Each  |
| 96      | 6 module Cover plate                               | 109.00     | Each  |
| 97      | 2 row 12 module Cover plate                        | 274.00     | Each  |
| 98      | 2 row 18 module Cover plate                        | 361.00     | Each  |
| 99      | Blank Plate for modular box                        | 20.00      | Each  |
| 100     | Indicator Modular type                             | 53.00      | Each  |

| Sl. No. | Materials                                   | Rate (Rs.) | Unit  |
|---------|---|------------|-------|
| 101     | 6A Modular type Switch                      | 67.00      | Each  |
| 102     | 16A Modular type Switch                     | 104.00     | Each  |
| 103     | 6A Modular type 5 pin Plug Socket           | 105.00     | Each  |
| 104     | 16A Modular type 6 pin Plug Socket          | 147.00     | Each  |
| 105     | 10A Modular type 2 way Switch               | 93.00      | Each  |
| 106     | 16A Modular type 2 way Switch               | 136.00     | Each  |
| 107     | Modular Soket type 2 module regulator       | 372.00     | Each  |
| 108     | Modular TV socket                           | 81.00      | Each  |
| 109     | ModularTelephone socket RJ11                | 81.00      | Each  |
| 110     | 10/25A socket                               | 180.00     | Each  |
| 111     | 20/25A socket                               | 180.00     | Each  |
| 112     | 20/25A starter                              | 285.00     | Each  |
| 113     | 20/25A plug top                             | 120.00     | Each  |
| 114     | 16A kit kat rewirable fuse                  | 32.00      | Each  |
| 115     | 3way Ceiling Rose/Holder                    | 18.30      | Each  |
| 116     | 18 SWG GI wire                              | 0.85       | Metre |
| 117     | 16 SWG GI wire                              | 1.00       | Metre |
| 118     | 10SWG GI wire                               | 3.78       | Metre |
| 119     | GI (Hot Dip) wire                           | 60.00      | Kg.   |
| 120     | 15mm dia GI pipe (ISI Medium)               | 83.30      | Metre |
| 121     | 20mm dia GI pipe(ISI-Medium)                | 106.39     | Metre |
| 122     | 25mm dia GI pipe(ISI-Medium)                | 148.90     | Metre |
| 123     | 32mm dia GI pipe (ISI-Medium)               | 193.40     | Metre |
| 124     | 40mm GI pipe (ISI-Medium)                   | 221.40     | Metre |
| 125     | 50mm GI pipe (ISI-Medium)                   | 293.29     | Metre |
| 126     | 65mm GI pipe (ISI-Medium)                   | 379.30     | Metre |
| 127     | 80mm GI pipe (ISI-Medium)                   | 492.50     | Metre |
| 128     | 100mm GI pipe (ISI-Medium)                  | 708.70     | Metre |
| 129     | 125mm GI pipe (ISI-Medium)                  | 917.92     | Metre |
| 130     | 150mm GI pipe (ISI-Medium)                  | 1093.36    | Metre |
| 131     | 65mm dia GI pipe (TATA-Medium)              | 436.00     | Metre |
| 132     | 80mm dia GI pipe (TATA-Medium)              | 574.00     | Metre |
| 133     | Thimble socket (Copper)                     | 55.20      | Each  |
| 134     | 50mm x 6mm Galv. [Hot Dip] steel strip      | 144.00     | Metre |
| 135     | 65mm x 8mm Galv. [Hot Dip] steel strip      | 240.00     | Metre |
| 136     | No. 4 S.W.G. GI [Hot Dip] wire              | 12.50      | Metre |
| 137     | 19/8 stranded GI [Hot Dip] wire ...         | 109.00     | Metre |
| 138     | GI reducer (heavy) 80/65 mm x 20 mm         | 129.00     | Each  |
| 139     | Galv. [Hot Dip] MS Flat                     | 60.00      | Kg.   |
| 140     | MS Flat iron chair (25 x 6 x 150mm MS flat) | 10.00      | Each  |
| 141     | GI saddle etc ...                           | 9.00       | Set   |
| 142     | 19/10 stranded GI [Hot Dip] wire ...        | 69.00      | Metre |
| 143     | Copper Plate,Copper Strip                   | 510.00     | Kg.   |
| 144     | Galv. Flat iron clamp (1½"x¼")              | 39.00      | Each  |
| 145     | Galv. Straining screw 12"x5/8" dia          | 70.00      | Each  |
| 146     | Galv. Eye hook 10"x3/4"                     | 35.00      | Each  |
| 147     | HD alum. Conductor, Wire                    | 225.00     | kg.   |
| 148     | Porcelain bobin insulator                   | 2.50       | Each  |
| 149     | Pocelain tube (9"x1/2")                     | 15.00      | Each  |
| 150     | Aerial fuse                                 | 10.00      | Each  |

| Sl. No. | Materials   | Rate (Rs.) | Unit  |
|---------|---|------------|-------|
| 151     | Alum. Sleeve for 7/2.21mm to 7/4.39mm av.                       | 50.00      | Each  |
| 152     | Al. Sleeve for 6/1/2.30mm to 6/1/3.66mm av.                     | 65.00      | Each  |
| 153     | PG clamp (2 bolt type)  | 24.00      | Each  |
| 154     | PG clamp (1 bolt type)  | 11.00      | Each  |
| 155     | GI reducer (32x15mm)  | 45.00      | Each  |
| 156     | GI reducer (40x15mm)  | 52.00      | Each  |
| 157     | GI conduit elbow/ bend  | 18.00      | Each  |
| 158     | 40x6mm thick MS clamp on pole upto 100mm dia                    | 60.00      | Each  |
| 159     | GI reducer/ bend/ elbow   | 90.00      | Each  |
| 160     | Rag bolts   | 3.30       | Each  |
| 161     | GI flat iron clamp and bolt (half)                              | 13.50      | Each  |
| 162     | 7/14 SWG stranded stay wire                                     | 55.00      | kg    |
| 163     | Box clamp for stay insulator (earth clamp)                      | 13.50      | Each  |
| 164     | 230x13mm straining screw  | 39.80      | Each  |
| 165     | 3"x3.5" shackle insulator galv. Strap bolts                     | 19.40      | Each  |
| 166     | GI flat iron clamp and bolt (half)                              | 13.50      | Each  |
| 167     | Box clamp for stay insulator (earth clamp)                      | 13.50      | Each  |
| 168     | Rag bolt for stay   | 3.30       | Each  |
| 169     | Shackle insulators with galv. Strap                             | 19.40      | Each  |
| 170     | 230x13mm dia straining screw                                    | 39.80      | Each  |
| 171     | 3"x 3½" Porcelain Shackle Insulator                             | 11.00      | Each  |
| 172     | 4"x 4½" Porcelain Shackle Insulator                             | 18.00      | Each  |
| 173     | 4"x 2½" Porcelain Pin Insulator incl spindle & nut              | 30.00      | Each  |
| 174     | (7½"x1¼"x½") GI strip & 5/8" dia bolt & nuts                    | 22.00      | Each  |
| 175     | (9"x1½"x¼") GI strip & 3/4" dia bolt & nuts                     | 29.00      | Each  |
| 176     | Galv. 'D' iron clamp & shackle bolt & nuts                      | 31.00      | set   |
| 177     | 3"x3½" dia GI pole clamp  | 35.00      | set   |
| 178     | 4"x4½" dia GI pole clamp  | 38.00      | set   |
| 179     | Red led / Zinc Oxied primar                                     | 130.00     | Litre |
| 180     | Synthetic Enamel Paint Gr.II                                    | 200.00     | Litre |
| 181     | RO primar   | 110.00     | Litre |
| 182     | Alum. Paint   | 230.00     | Litre |
| 183     | MS Clamp (380x25x3mm)   | 12.00      | Each  |
| 184     | MS Clamp (380x40x6mm)   | 30.00      | Each  |
| 185     | Barbed wire 4 barbs/ 3"   | 52.00      | kg    |
| 186     | 8.5 cm dia 6 mm GI flange / base plate                          | 40.00      | Each  |
| 187     | GI staples (40mm long)  | 56.00      | kg    |
| 188     | GI saddle with round head Al. alloy / cadmium plated iron screw | 10.00      | set   |
| 189     | GI (Hot Dip) tape (20mm x 3mm)                                  | 57.00      | kg    |
| 190     | GI (Hot Dip) strip (20 x 3 x 125mm long)                        | 57.00      | kg    |
| 191     | GI bolt 10mm x 25mm with nuts, Check nuts, spring washers etc   | 6.00       | Each  |
| 192     | Thimble for 4 SWG or 7/10 stranded GI (Hot Dip) wire            | 13.60      | Each  |
| 193     | 85mm dia, 6mm thick GI base plate                               | 40.00      | Each  |
| 194     | 6mm dia rag bolt with nut                                       | 5.00       | Each  |
| 195     | GI reducer (40x15mm)  | 52.00      | Each  |
| 196     | GI conduit elbow/ bend  | 18.00      | Each  |

**ANNEXURE-II****TECHNICAL INFORMATION AND TABLES****Current Rating for Aluminium conductors PVC Insulated Armoured and PVC Sheathed Cables for Working Voltage up to 1100 Volts****(MAXIMUM CONDUCTOR TEMP 85<sup>0</sup>C)**

| Conductor area<br>(in mm <sup>2</sup> ) | LAID IN GROUND          |                  |                            | IN SINGLE WAY DUCT      |                  |                            | IN AIR                  |                  |                            |
|---|-------------------------|------------------|----------------------------|-------------------------|------------------|----------------------------|-------------------------|------------------|----------------------------|
|   | Single Core<br>(3 nos.) | Twin<br>(single) | 3/3½/4<br>core<br>(single) | Single Core<br>(3 nos.) | Twin<br>(single) | 3/3½/4<br>core<br>(single) | Single Core<br>(3 nos.) | Twin<br>(single) | 3/3½/4<br>core<br>(single) |
|   | Amp.                    | Amp.             | Amp.                       | Amp.                    | Amp.             | Amp.                       | Amp.                    | Amp.             | Amp.                       |
| 1.5                                     | 20                      | 21               | 18                         | 20                      | 18               | 16                         | 18                      | 20               | 16                         |
| 2.5                                     | 28                      | 29               | 24                         | 28                      | 24               | 21                         | 26                      | 26               | 22                         |
| 4                                       | 36                      | 37               | 33                         | 35                      | 32               | 27                         | 33                      | 34               | 28                         |
| 6                                       | 46                      | 47               | 41                         | 43                      | 40               | 35                         | 43                      | 43               | 37                         |
| 10                                      | 60                      | 64               | 54                         | 60                      | 53               | 46                         | 57                      | 57               | 49                         |
| 16                                      | 77                      | 82               | 70                         | 76                      | 68               | 59                         | 77                      | 72               | 61                         |
| 25                                      | 101                     | 105              | 89                         | 97                      | 89               | 74                         | 102                     | 95               | 85                         |
| 35                                      | 117                     | 129              | 108                        | 117                     | 108              | 90                         | 127                     | 121              | 105                        |
| 50                                      | 140                     | 158              | 119                        | 135                     | 135              | 111                        | 159                     | 153              | 128                        |
| 70                                      | 164                     | 187              | 158                        | 158                     | 164              | 135                        | 189                     | 183              | 159                        |
| 95                                      | 205                     | 222              | 193                        | 181                     | 199              | 164                        | 232                     | 226              | 189                        |
| 120                                     | 228                     | 246              | 216                        | 199                     | 222              | 183                        | 268                     | 256              | 220                        |
| 150                                     | 256                     | 280              | 246                        | 222                     | 246              | 205                        | 305                     | 292              | 250                        |
| 185                                     | 280                     | 322              | 275                        | 246                     | 281              | 234                        | 354                     | 336              | 293                        |
| 225                                     | 304                     | 357              | 304                        | 258                     | 304              | 258                        | 390                     | 372              | 302                        |
| 240                                     | 316                     | 374              | 322                        | 264                     | 322              | 275                        | 409                     | 397              | 342                        |
| 300                                     | 345                     | 415              | 357                        | 286                     | 357              | 304                        | 464                     | 445              | 384                        |
| 400                                     | 380                     | 450              | 392                        | 322                     | 404              | 340                        | 531                     | 513              | 458                        |
| 500                                     | 403                     | –                | 427                        | 345                     | –                | 368                        | 586                     | –                | 513                        |
| 625                                     | 456                     | –                | 462                        | 374                     | –                | 398                        | 671                     | –                | 586                        |

The above Ratings (Subject to Voltage Drop) are at Ambient Air – 40<sup>0</sup> C  
 Temperature  
 Ground Temperature – 30<sup>0</sup> C  
 Depth of Laying – 30 cm

For Ambient Temperature other than 40<sup>0</sup>C, The Current Rating should be multiplied by the following rating factors

|               |                   |                   |                   |                   |                   |                   |                   |                   |                   |
|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Air Temp.     | 30 <sup>0</sup> C | 35 <sup>0</sup> C | 40 <sup>0</sup> C | 45 <sup>0</sup> C | 50 <sup>0</sup> C | 55 <sup>0</sup> C | 60 <sup>0</sup> C | 65 <sup>0</sup> C | 70 <sup>0</sup> C |
| Rating Factor | 1.10              | 1.05              | 1.00              | 0.95              | 0.88              | 0.82              | 0.74              | 0.65              | 0.55              |

Rating factor for variation in Ground Temperature  
 (For Cables laid direct in Ground or in duct)

|               |                   |                   |                   |                   |                   |                   |                   |
|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Ground Temp.  | 20 <sup>0</sup> C | 25 <sup>0</sup> C | 30 <sup>0</sup> C | 35 <sup>0</sup> C | 40 <sup>0</sup> C | 45 <sup>0</sup> C | 50 <sup>0</sup> C |
| Rating Factor | 1.08              | 1.04              | 1.00              | 0.93              | 0.86              | 0.8               | 0.75              |

**Estimated Current Ratings for Copper & Aluminium Conductors,  
Vulcanized Rubber, P.V.C. or Polythene Insulated Cables.  
(Single, Twin, Three & Four Core)**

| Standard Copper Conductor |                    |                             | Continuous Current Rating*<br>(Subject to Voltage Drop) |                                    |                             |                        |  | Standard Aluminium Conductor |                           |
|---------------------------|--------------------|-----------------------------|---|------------------------------------|-----------------------------|------------------------|--|------------------------------|---------------------------|
| ITEM                      | Area<br>(sq. inch) | No. of Strands<br>/inch dia | In conduit or casing                                    | Bunched in free air or open trench |                             |                        |  | Area<br>(sq.mm.)             | No. of Strands<br>/mm dia |
|                           |                    |                             | (2 single core cables)                                  | (2 single core cables)             | (3 or 4 single core cables) | One twin core DC or AC | One 3 or 4 core cable balanced 3 phase |                              |                           |
| 1                         | 2                  | 3                           | Amp.  | Amp.                               | Amp.                        | Amp.                   | Amp.                                   | 9                            | 10                        |
| 1.                        | 0.0015             | 1/0.044                     | 5   | 5                                  | 5                           | 5                      | 5                                      | —                            | —                         |
| 2.                        | 0.002              | 3/0.029                     | 10  | 10                                 | 10/9                        | 10                     | 8/7                                    | 1.5                          | 1/1.40                    |
| 3.                        | 0.003              | 3/0.036                     | 15  | 15                                 | 13/12                       | 15                     | 10/11                                  | 2.5                          | 1/1.80                    |
| 4.                        | 0.0045             | 7/0.029                     | 20  | 20                                 | 15                          | 20                     | 15                                     | —                            | —                         |
| 5.                        | —                  | —                           | 20  | 20                                 | 17                          | 20                     | 14                                     | 4                            | 1/2.24                    |
| 6.                        | —                  | —                           | 27  | 27                                 | 24                          | 27                     | 19                                     | 6                            | 1/2.80                    |
| 7.                        | 0.007              | 7/0.036                     | 28  | 28                                 | 25                          | 28                     | 20                                     | —                            | —                         |
| 8.                        | —                  | —                           | 34  | 34                                 | 31                          | 34                     | 24                                     | 10                           | 1/3.55                    |
| 9.                        | 0.01               | 7/0.044                     | 36  | 36                                 | 32                          | 36                     | 25                                     | —                            | —                         |
| 10.                       | 0.0145             | 7/0.052                     | 43  | 43                                 | 39/38                       | 43                     | 30                                     | 16                           | 7/1.70                    |
| 11.                       | 0.0225             | 7/0.064                     | 53  | 53                                 | 48                          | 53                     | 37                                     | —                            | —                         |
| 12.                       | —                  | —                           | 59  | 59                                 | 54                          | 59                     | 42                                     | 25                           | 7/2.24                    |
| 13.                       | 0.03               | 19/0.044                    | 62  | 62                                 | 56                          | 62                     | 43                                     | —                            | —                         |
| 14.                       | —                  | —                           | 69  | 69                                 | 62                          | 69                     | 48                                     | 35                           | 7/2.50                    |
| 15.                       | 0.04               | 19/0.052                    | 74  | 74                                 | 67                          | 74                     | 52                                     | —                            | —                         |
| 16.                       | —                  | —                           | 91  | 91                                 | 82                          | 91                     | 62                                     | 50                           | 19/1.80                   |
| 17.                       | 0.06               | 19/0.064                    | —   | 97                                 | 88                          | 97                     | 68                                     | —                            | —                         |
| 18.                       | 0.075              | 19/0.072                    | —   | 123                                | 107                         | 115                    | 78                                     | —                            | —                         |
| 19.                       | —                  | —                           | —   | 134                                | 118                         | 118                    | 82                                     | 70                           | 19/2.24                   |
| 20.                       | —                  | —                           | —   | 153                                | 138                         | 135                    | 94                                     | 95                           | 19/2.50                   |
| 21.                       | 0.10               | 19/0.83                     | —   | 160                                | 140                         | 140                    | 98                                     | —                            | —                         |
| 22.                       | 0.12               | 37/0.64                     | —   | 177                                | 158                         | 158                    | 109                                    | —                            | —                         |
| 23.                       | —                  | —                           | —   | 184                                | 170                         | 162                    | 114                                    | 120                          | 37/2.06                   |
| 24.                       | 0.15               | 37/0.72                     | —   | 205                                | 185                         | 180                    | 126                                    | —                            | —                         |
| 25.                       | —                  | —                           | —   | 210                                | 185                         | 181                    | 127                                    | 150                          | 37/2.24                   |
| 26.                       | —                  | —                           | —   | 246                                | 216                         | 209                    | 146                                    | 185                          | 37/2.50                   |
| 27.                       | 0.20               | 37/0.83                     | —   | 250                                | 220                         | 218                    | 153                                    | —                            | —                         |
| 28.                       | —                  | —                           | —   | 290                                | 248                         | 240                    | 169                                    | 225                          | 37/2.80                   |
| 29.                       | 0.25               | 37/0.93                     | —   | 293                                | 260                         | 252                    | 178                                    | —                            | —                         |
| 30.                       | 0.30               | 37/1.03                     | —   | 335                                | 295                         | 284                    | 199                                    | —                            | —                         |
| 31.                       | —                  | —                           | —   | 354                                | 302                         | 289                    | 202                                    | 300                          | 61/2.50                   |
| 32.                       | 0.40               | 61/0.93                     | —   | 425                                | 360                         | 342                    | 240                                    | —                            | —                         |
| 33.                       | —                  | —                           | —   | 435                                | 372                         | —                      | —                                      | 400                          | 61/3.00                   |
| 34.                       | 0.50               | 61/0.103                    | —   | 480                                | 410                         | —                      | —                                      | —                            | —                         |
| 35.                       | —                  | —                           | —   | 480                                | 411                         | —                      | —                                      | 500                          | 91/2.65                   |
| 36.                       | —                  | —                           | —   | 565                                | 484                         | —                      | —                                      | 625                          | 91/3.00                   |
| 37.                       | 0.75               | 91/0.103                    | —   | 610                                | 520                         | —                      | —                                      | —                            | —                         |
| 38.                       | 1.00               | 127/0.103                   | —   | 740                                | 630                         | —                      | —                                      | —                            | —                         |

**\*Rating at Ambient Temperature 30°C**

For Ambient Temperature other than 30°C the current rating should be multiplied by the following Rating Factor

|      |      |      |      |
|------|------|------|------|
| 25°C | 35°C | 40°C | 45°C |
| 1.13 | 0.86 | 0.69 | 0.47 |

In the above table, Current Ratings (Subject to Voltage drop) have been given for copper conductors cables (in the new metric sizes as per I.S. 1753 – 1961)

From this chart, the required size of Aluminium Conductor can be established if either the Current Rating or the size of Copper Conductor is known.

**FLEXIBLE CORDS**

| Conductor    |                              | Current Rating for Twin, 3-core or 4-core Flexible cords, subject to voltage drop |                   | Permissible Weight supported by Twin Flexible Cords |
|--------------|------------------------------|---|-------------------|---|
| Nominal Area | Number and Diameter of Wires | Circular  | Twin Twisted Type |   |
| Sq.mm.       | mm.                          | Amp.  | Amp.              | Kg.   |
| 0.50         | 16/0.20                      | 2   | 2                 | 1.35  |
| 0.75         | 24/0.20                      | 4   | 3                 | 2.25  |
| 1.00         | 32/0.20                      | 7   | 5                 | 4.50  |
| 1.50         | 48/0.20                      | 13  | 10                | 4.50  |
| 2.50         | 80/0.20                      | 20  | 15                | 4.50  |
| 4.00         | 128/0.20                     | 23  | 20                | 4.50  |

**MOTOR CURRENT**

| BHP of Motor | AC          |             | DC    |       |
|--------------|-------------|-------------|-------|-------|
|              | 230 V, 1-ph | 400 V, 3-ph | 220 V | 440 V |
| 1/8          | 1.0         | 0.3         | 0.7   | 0.4   |
| 1/4          | 1.8         | 0.7         | 1.3   | 0.7   |
| 1/2          | 3.5         | 1.2         | 2.5   | 1.2   |
| 3/4          | 4.8         | 1.7         | 4.0   | 1.7   |
| 1            | 6.2         | 2.0         | 5.0   | 2.5   |
| 1¼           | 7.4         | 2.5         | 6.0   | 3.0   |
| 1½           | 8.7         | 2.8         | 7.5   | 3.5   |
| 1¾           | 10.0        | 3.2         | 8.5   | 4.0   |
| 2            | 11.8        | 3.5         | 9.5   | 4.5   |
| 3            | 17.5        | 5.0         | 13.5  | 6.5   |
| 4            | 20.0        | 6.5         | 17.0  | 8.5   |
| 5            | 24.0        | 8.0         | 20.0  | 10.0  |
| 7 ½          | 36.0        | 12.0        | 30.0  | 15.0  |
| 10           | 47.0        | 15.0        | 39.0  | 20.0  |
| 12½          | 59.0        | 19.0        | 50.0  | 25.0  |
| 15           | 70.0        | 22.0        | 58.0  | 29.0  |
| 20           | 91.0        | 29.0        | 76.0  | 38.0  |
| 30           | 135.0       | 42.0        | 115.0 | 58.0  |
| 40           | 188.0       | 56.0        | 152.0 | 76.0  |
| 50           | 227.0       | 71.0        | 190.0 | 95.0  |

**Recommended Capacitor Rating For Direct Connection to Induction Motor to Improve Power Factor to 0.95 or Better of All Loads**

| Motor HP | Capacitor rating in KVAR when Motor Speed is |          |          |         |         |         |
|----------|--|----------|----------|---------|---------|---------|
|          | 3000 rpm                                     | 1500 rpm | 1000 rpm | 750 rpm | 600 rpm | 500 rpm |
| 3.0      | 1.0  | 1.0      | 1.5      | 2.0     | 2.5     | 2.5     |
| 5.0      | 2.0  | 2.0      | 2.5      | 3.5     | 4.0     | 4.0     |
| 7.5      | 2.5  | 3.0      | 3.5      | 4.5     | 5.0     | 5.5     |
| 10.0     | 3.0  | 4.0      | 4.5      | 5.5     | 6.0     | 6.5     |
| 12.5     | 3.5  | 4.5      | 5.0      | 6.5     | 7.5     | 8.0     |
| 15.0     | 4.0  | 5.0      | 6.0      | 7.5     | 8.5     | 9.0     |
| 17.5     | 4.5  | 5.5      | 6.5      | 8.0     | 10.0    | 10.5    |
| 20.0     | 5.0  | 6.0      | 7.0      | 9.0     | 11.0    | 12.0    |
| 22.5     | 5.5  | 6.5      | 8.0      | 10.0    | 12.0    | 13.0    |
| 25.0     | 6.0  | 7.0      | 9.0      | 10.5    | 13.0    | 14.5    |
| 27.5     | 6.5  | 7.5      | 9.5      | 11.5    | 14.0    | 16.0    |
| 30.0     | 7.0  | 8.0      | 10.0     | 12.0    | 15.0    | 17.0    |

**Maximum Capacity of Conduits for Drawing of PVC Insulated Cables**

| SIZE OF CONDUIT     |                             |                                   |       |           |       | 1/2 Inch                 | 5/8 Inch | 3/4 Inch | 1 Inch | 1&1/4 Inch | 1&1/2 Inch | 2 Inch |      |      |      |      |      |   |   |
|---------------------|-----------------------------|-----------------------------------|-------|-----------|-------|--------------------------|----------|----------|--------|------------|------------|--------|------|------|------|------|------|---|---|
| CONDUCTOR OF CABLES |                             | APPROXIMATE OVERALL DIA OF CABLES |       |           |       | MAXIMUM NUMBER OF CABLES |          |          |        |            |            |        |      |      |      |      |      |   |   |
| Nominal Area        | Number and Diameter of Wire | 250 Volts                         |       | 660 Volts |       | 250V                     | 660V     | 250V     | 660V   | 250V       | 660V       | 250V   | 660V | 250V | 660V | 250V | 660V |   |   |
|                     |                             | mm                                | inch  | mm        | inch  |                          |          |          |        |            |            |        |      |      |      |      |      |   |   |
| 1.5                 | 1/1.40                      | 3.65                              | 0.144 | 4.35      | 0.171 | 2                        | 2        | 4        | 2      | 6          | 4          | 10     | 9    | 16   |      |      |      |   |   |
| 2.5                 | 1/1.80                      | 4.05                              | 1.159 | 4.75      | 0.187 | 2                        | 2        | 4        | 2      | 6          | 4          | 10     | 9    | 16   |      |      |      |   |   |
| 4.0                 | 1/2.24                      | 4.70                              | 0.185 | 5.50      | 0.217 |                          |          | 3        |        | 5          | 4          | 10     | 9    | 16   |      |      |      |   |   |
| 6.0                 | 1/2.80                      | 5.25                              | 0.207 | 6.05      | 0.238 |                          |          | 2        |        | 3          | 2          | 7      | 5    | 10   | 9    | 14   |      |   |   |
| 10.0                | 1/3.55                      | 6.30                              | 0.248 | 6.80      | 0.268 |                          |          |          |        | 2          |            | 5      | 4    | 8    | 8    | 11   |      |   |   |
| 16.0                | 7/1.70                      | 8.05                              | 0.317 | 8.35      | 0.329 |                          |          |          |        |            |            | 3      | 3    | 5    | 5    | 7    | 7    |   |   |
| 25.0                | 7/2.24                      | 10.00                             | 0.394 | 10.30     | 0.405 |                          |          |          |        |            |            |        |      | 3    | 3    | 4    | 5    | 6 |   |
| 35.0                | 7/2.50                      | 11.05                             | 0.435 | 11.05     | 0.435 |                          |          |          |        |            |            |        |      | 3    | 2    | 4    | 4    | 6 | 6 |
|                     | 7/3.00                      |                                   |       |           |       |                          |          |          |        |            |            |        |      |      |      |      |      |   |   |
| 50.0                | 19/1.80                     | 12.55                             | 0.494 | 12.55     | 0.494 |                          |          |          |        |            |            |        |      |      |      |      | 3    | 5 | 5 |

Note : The Table shows the maximum capacity for the simultaneous drawing of Cables and apply to Cables manufactured in accordance with is 694 – 1960. The Table applies to all type of conduits irrespective of whether they are light-gauge or heavy-gauge.



**Performance Figures for Fans** (Approximate)

| TYPES OF FANS             | Sweep |      | Watts | rpm  | Air Displacement CFM |
|---------------------------|-------|------|-------|------|----------------------|
|                           | mm    | Inch |       |      |                      |
| AC Ceiling<br>(Capacitor) | 1500  | 60   | 75    | 230  | 14000                |
|                           | 1400  | 56   | 65    | 280  | 12300                |
|                           | 1200  | 48   | 45    | 320  | 9100                 |
|                           | 900   | 36   | 45    | 320  | 5400                 |
| DC Ceiling                | 1500  | 60   | 44    | 210  | 13200                |
|                           | 1200  | 48   | 35    | 275  | 8600                 |
|                           | 900   | 36   | 32    | 350  | 5700                 |
| AC Table                  | 400   | 16   | 50    | 1300 | 1800                 |

**Recommended Lux Values For Interior Illumination**  
As per IS : 3646 (Part II) – 1966

| Sl. No. | Classification of Building  | Illumination Lux     | Sl. No. | Classification of Building        | Illumination Lux |
|---------|---|----------------------|---------|-----------------------------------|------------------|
| 1.      | HOMES   |                      | (g)     | Offices                           | 300              |
| (a)     | Kitchen   | 200                  | (h)     | Staff room, Common room           | 150              |
| (b)     | Bathroom  | 100*                 | (i)     | Corridor                          | 70               |
| (c)     | Stairs  | 100                  | (j)     | Stairs                            | 100              |
| (d)     | Garage  | 70                   |         |                                   |                  |
| (e)     | Sewing & Dining   | 700                  | 4.      | HOSPITALS                         |                  |
| (f)     | Reading (Casual)  | 150                  | (a)     | Reception & Waiting room          | 150              |
| (g)     | Homework & sustained reading  | 300                  | (b)     | Wards                             |                  |
|         |   |                      |         | General                           | 100              |
| 2.      | OFFICES   |                      |         | Beds                              | 150              |
| (a)     | Entrance Hall & Reception   | 150                  | (c)     | Operation Theatres                |                  |
| (b)     | Conference Room, Executive Office   | 300                  |         | General                           | 300              |
| (c)     | General Office  | 300                  |         | Tables                            | Special Lighting |
| (d)     | Business machine operation  | 450                  | (d)     | Laboratories                      | 300              |
| (e)     | Drawing Office  |                      | (e)     | Radiology Department              | 100              |
|         | General   | 300                  | (f)     | Casualty & Out Patient Department | 150              |
|         | Boards & Tracing  | 450                  | (g)     | Stairs, Corridors                 | 100              |
| (f)     | Corridor & Lift Cage  | 70                   | (h)     | Dispensaries                      | 300              |
| (g)     | Stairs  | 100                  |         |                                   |                  |
| (h)     | Lift Landing  | 150                  | 5.      | DAIRIES                           |                  |
| (i)     | Telephone Exchange  |                      | (a)     | General working areas             | 200%             |
|         | Manual Exchange (on desk)   | 200 <sup>#</sup>     | (b)     | Bottle inspection                 | Special Lighting |
|         | Main Distribution Frame room  | 150                  | (c)     | Bottle Filling                    | 450              |
| 3.      | SCHOOLS & COLLEGES  |                      | 6.      | SUB-STATION                       |                  |
| (a)     | Assembly Hall   |                      | (a)     | Transformer, HT & LT Switch room  | 100              |
|         | Central   | 150                  | (b)     | Control Rooms                     | 200-300          |
|         | When used for examination   | 300                  |         |                                   |                  |
|         | Platforms   | 300                  | 7.      | CINEMA / THEATRE                  |                  |
| (b)     | Class & Lecture rooms   |                      | (a)     | Foyers                            | 150              |
|         | Desks   | 300                  | (b)     | Auditorium                        | 50-70            |
|         | Chalk Boards  | 200-300**            | (c)     | Corridors                         | 70               |
| (c)     | Embroidery & Sewing room  | 700                  | (d)     | Stairs                            | 100              |
| (d)     | Art room  | 450                  |         |                                   |                  |
| (e)     | Laboratory  | 300                  |         |                                   |                  |
| (f)     | Library   |                      |         |                                   |                  |
|         | Shelves, Stacks   | 70-150 <sup>\$</sup> |         |                                   |                  |
|         | Reading Tables  | 300                  |         |                                   |                  |
| %       | Supplementary local lighting may be required for sight grasses.               |                      |         |                                   |                  |
| *       | Supplementary local lighting should be provided at mirror.                    |                      |         |                                   |                  |
| **      | On vertical surfaces  |                      |         |                                   |                  |
| #       | Special Lighting will be required for switch board                            |                      |         |                                   |                  |
| \$      | Special attention should be paid to the direction and colour quality of light |                      |         |                                   |                  |

For further details, please refer to IS : 3646 (part II)

**LAMP DATA**

| <b>TYPE</b>                               | <b>Watt<br/>W</b> | <b>Lamp<br/>Current<br/>Amp.</b> | <b>Lamp<br/>Voltage<br/>Volt</b> | <b>Av. Lumen<br/>Output<br/>Lm.</b> | <b>Operating<br/>Position</b>   |
|---|-------------------|----------------------------------|----------------------------------|-------------------------------------|---|
| <b>1</b>                                  | <b>2</b>          | <b>3</b>                         | <b>4</b>                         | <b>5</b>                            | <b>6</b>  |
| Incandescent                              |                   |                                  |                                  |                                     |   |
| Vacuum, Single Coil                       | 25                | 0.11                             | 230                              | 230                                 | Universal   |
| Do  | 40                | 0.17                             | 230                              | 425                                 | Do  |
| Do  | 60                | 0.26                             | 230                              | 720                                 | Do  |
| Gas filled, Coiled Coil                   | 100               | 0.43                             | 230                              | 1380                                | Do  |
| Do  | 150               | 0.60                             | 250                              | 2060                                | Do  |
| Do  | 200               | 0.80                             | 250                              | 3040                                | Do  |
| Do  | 300               | 1.20                             | 250                              | 4800                                | Do  |
| Do  | 500               | 2.00                             | 250                              | 8200                                | Do  |
| Gas filled, Single Coil                   | 1000              | 4.00                             | 250                              | 18400                               | Do  |
| Fluorescent Tubular                       |                   |                                  |                                  |                                     |   |
| White                                     | 20                | 0.381                            | 47                               | 1160                                | Universal   |
| Daylight                                  | 20                | 0.381                            | 47                               | 970                                 | Do  |
| White                                     | 40                | 0.44                             | 103                              | 2770                                | Do  |
| Daylight                                  | 40                | 0.44                             | 103                              | 2550                                | Do  |
| Daylight                                  | 65/80             | 0.67                             | 110                              | 4000                                | Do  |
| Halogen Lamp                              |                   |                                  |                                  |                                     |   |
| Flood lighting                            | 1000              | 4.17                             | 240/250                          | 22000                               | Almost Horizontal   |
| Blended Lamp                              | 160               | 0.72                             | 240/250                          | 2900                                | Within 30° to vertical  |
| Do  | 250               | 1.10                             | 240/250                          | 5200                                | Within 45° to vertical  |
| Mercury Vapour Lamp                       |                   |                                  |                                  |                                     |   |
| High Pressure                             | 80                | 0.80                             | 115                              | 3400                                | Universal   |
| Do  | 125               | 1.15                             | 125                              | 5800                                | Do  |
| Do  | 250               | 2.00                             | 135                              | 12500                               | Do  |
| Do  | 400               | 3.20                             | 140                              | 22500                               | Do  |
| Do  | 1000              | 7.50                             | 145                              | 55000                               | Do  |
| Sodium Vapour Lamp                        |                   |                                  |                                  |                                     |   |
| High Pressure (SON-E)                     | 70                | 1.00                             | 90                               | 6000                                | Universal   |
| Do  | 150               | 1.80                             | 100                              | 15200                               | Do  |
| Do  | 250               | 3.00                             | 100                              | 26000                               | Do  |
| Do  | 400               | 4.45                             | 105                              | 47000                               | Do  |
| High Pressure (SON-T)                     | 250               | 3.00                             | 100                              | 28000                               | Do  |
| Do  | 400               | 4.45                             | 105                              | 48000                               | Do  |
| Do  | 1000              | 10.30                            | 110                              | 130000                              | Do  |
| Sodium Vapour Lamp                        |                   |                                  |                                  |                                     |   |
| Low Pressure (SOX)                        | 10                | 0.20                             | 55                               | 1000                                |  |
| Do  | 18                | 0.35                             | 55                               | 1800                                | Do  |
| Do  | 35                | 0.60                             | 70                               | 4800                                | Do  |
| Do  | 55                | 0.60                             | 109                              | 8000                                | Do  |
| Do  | 90                | 0.95                             | 112                              | 13500                               | Do  |
| Do  | 135               | 0.95                             | 164                              | 22500                               | Do  |
| Do  | 180               | 0.91                             | 240                              | 33000                               | Do  |
| Metal Halide Lamp                         |                   |                                  |                                  |                                     |   |
| High Pressure (MHN-TD)                    | 70                | 1.00                             | 90                               | 5500                                |  |
| Do  | 150               | 1.80                             | 98                               | 12100                               |  |
| High Pressure (HPI-T)                     | 250               | 3.00/2.20                        | 128/100                          | 20500/17000                         |  |
| Do  | 400               | 3.40                             | 125                              | 30500                               |  |
| Do  | 1000              | 8.25                             | 130                              | 81000                               |  |
| Do  | 2000              | 16.50                            | 130                              | 189000                              |  |
| CFL Retrofit<br>(Prismatic/Comfort/Décor) |                   |                                  |                                  |                                     |   |
| SL-13 P                                   | 13                | –                                | 240                              | 575                                 | Universal   |
| SL-18 P                                   | 18                | –                                | 240                              | 850                                 | Do  |
| SL-25 P                                   | 25                | –                                | 240                              | 1100                                | Do  |
| SL-13 C                                   | 13                | –                                | 240                              | 550                                 | Do  |
| SL-18 C                                   | 18                | –                                | 240                              | 800                                 | Do  |
| SL-25 C                                   | 25                | –                                | 240                              | 1050                                | Do  |
| SL-Décor 13                               | 13                | –                                | 240                              | 550                                 | Do  |
| SL-Décor 18                               | 18                | –                                | 240                              | 850                                 | Do  |
| CFL Non-Retrofit                          |                   |                                  |                                  |                                     |   |
| PL-S 2 PIN                                | 7                 | 175 mA                           | 47                               | 400                                 | Universal   |
| PL-S 2 PIN                                | 9                 | 170 mA                           | 60                               | 600                                 | Do  |
| PL-S 2 PIN                                | 11                | 160 mA                           | 91                               | 900                                 | Do  |

**SOME BASIC DATA FOR SWAGGED TYPE ST POLES**

| Designation | Over-<br>all<br>Length | Plant-<br>ing<br>Depth | Length of Section |        |      | Outside Dia & Thickness of Section |            |            | Approx<br>weight<br>of pole |
|-------------|------------------------|------------------------|-------------------|--------|------|------------------------------------|------------|------------|-----------------------------|
|             |                        |                        | Bottom            | Middle | Top  | Bottom                             | Middle     | Top        |                             |
|             | (m)                    | (m)                    | (m)               | (m)    | (m)  | (mm)                               | (mm)       | (mm)       | (Kg)                        |
| 410 SP - 16 | 8.50                   | 1.50                   | 5.00              | 1.75   | 1.75 | 114.3x3.65                         | 88.9x3.25  | 76.1x3.25  | 75                          |
| 410 SP - 17 | 8.50                   | 1.50                   | 5.00              | 1.75   | 1.75 | 114.3x4.50                         | 88.9x4.05  | 76.1x3.25  | 89                          |
| 410 SP - 18 | 8.50                   | 1.50                   | 5.00              | 1.75   | 1.75 | 114.3x5.40                         | 88.9x4.85  | 76.1x3.25  | 104                         |
| 410 SP - 19 | 8.50                   | 1.50                   | 5.00              | 1.75   | 1.75 | 139.7x4.50                         | 114.3x3.65 | 88.9x3.25  | 109                         |
| 410 SP - 20 | 8.50                   | 1.50                   | 5.00              | 1.75   | 1.75 | 139.7x4.85                         | 114.3x3.65 | 88.9x3.25  | 115                         |
| 410 SP - 21 | 8.50                   | 1.50                   | 5.00              | 1.75   | 1.75 | 139.7x5.40                         | 114.3x4.50 | 88.9x3.25  | 129                         |
| 410 SP - 22 | 8.50                   | 1.50                   | 5.00              | 1.75   | 1.75 | 165.1x4.50                         | 139.7x4.50 | 114.3x3.65 | 141                         |
| 410 SP - 23 | 8.50                   | 1.50                   | 5.00              | 1.75   | 1.75 | 165.1x4.85                         | 139.7x4.50 | 114.3x3.65 | 148                         |
| 410 SP - 24 | 8.50                   | 1.50                   | 5.00              | 1.75   | 1.75 | 165.1x5.40                         | 139.7x4.50 | 114.3x3.65 | 158                         |
| 410 SP - 25 | 9.00                   | 1.50                   | 5.00              | 2.00   | 2.00 | 114.3x3.65                         | 88.9x3.25  | 76.1x3.25  | 78                          |
| 410 SP - 26 | 9.00                   | 1.50                   | 5.00              | 2.00   | 2.00 | 114.3x4.50                         | 88.9x4.05  | 76.1x3.25  | 92                          |
| 410 SP - 27 | 9.00                   | 1.50                   | 5.00              | 2.00   | 2.00 | 114.3x5.40                         | 88.9x4.85  | 76.1x3.25  | 108                         |
| 410 SP - 28 | 9.00                   | 1.50                   | 5.00              | 2.00   | 2.00 | 139.7x4.50                         | 114.3x3.65 | 88.9x3.25  | 113                         |
| 410 SP - 29 | 9.00                   | 1.50                   | 5.00              | 2.00   | 2.00 | 139.7x4.85                         | 114.3x4.50 | 88.9x3.25  | 125                         |
| 410 SP - 30 | 9.00                   | 1.50                   | 5.00              | 2.00   | 2.00 | 139.7x5.40                         | 114.3x4.50 | 88.9x3.25  | 133                         |
| 410 SP - 31 | 9.00                   | 1.50                   | 5.00              | 2.00   | 2.00 | 165.1x4.50                         | 139.7x4.50 | 114.3x3.65 | 147                         |
| 410 SP - 32 | 9.00                   | 1.50                   | 5.00              | 2.00   | 2.00 | 165.1x4.85                         | 139.7x4.50 | 114.3x3.65 | 154                         |
| 410 SP - 33 | 9.00                   | 1.50                   | 5.00              | 2.00   | 2.00 | 165.1x5.40                         | 139.7x4.50 | 114.3x3.65 | 164                         |
| 410 SP - 40 | 10.00                  | 1.80                   | 5.20              | 2.40   | 2.40 | 139.7x4.50                         | 114.3x4.50 | 88.9x3.25  | 128                         |
| 410 SP - 41 | 10.00                  | 1.80                   | 5.20              | 2.40   | 2.40 | 139.7x4.85                         | 114.3x4.50 | 88.9x3.25  | 135                         |
| 410 SP - 42 | 10.00                  | 1.80                   | 5.20              | 2.40   | 2.40 | 139.7x5.40                         | 114.3x4.50 | 88.9x3.25  | 144                         |
| 410 SP - 43 | 10.00                  | 1.80                   | 5.20              | 2.40   | 2.40 | 165.1x4.50                         | 139.7x4.50 | 114.3x3.65 | 160                         |
| 410 SP - 44 | 10.00                  | 1.80                   | 5.20              | 2.40   | 2.40 | 165.1x4.85                         | 139.7x4.50 | 114.3x3.65 | 168                         |
| 410 SP - 45 | 10.00                  | 1.80                   | 5.20              | 2.40   | 2.40 | 165.1x5.40                         | 139.7x4.50 | 114.3x3.65 | 178                         |
| 410 SP - 46 | 10.00                  | 1.80                   | 5.20              | 2.40   | 2.40 | 193.7x4.85                         | 165.1x4.50 | 139.7x4.50 | 208                         |
| 410 SP - 47 | 10.00                  | 1.80                   | 5.20              | 2.40   | 2.40 | 193.7x5.40                         | 165.1x4.50 | 139.7x4.50 | 221                         |
| 410 SP - 48 | 10.00                  | 1.80                   | 5.20              | 2.40   | 2.40 | 193.7x5.90                         | 165.1x4.50 | 139.7x4.50 | 233                         |
| 410 SP - 58 | 12.00                  | 2.00                   | 5.80              | 3.10   | 3.10 | 165.1x4.50                         | 139.7x4.50 | 114.3x3.65 | 186                         |
| 410 SP - 59 | 12.00                  | 2.00                   | 5.80              | 3.10   | 3.10 | 165.1x4.85                         | 139.7x4.50 | 114.3x3.65 | 197                         |
| 410 SP - 60 | 12.00                  | 2.00                   | 5.80              | 3.10   | 3.10 | 165.1x5.40                         | 139.7x4.50 | 114.3x3.65 | 208                         |
| 410 SP - 61 | 12.00                  | 2.00                   | 5.80              | 3.10   | 3.10 | 193.7x4.85                         | 165.1x4.50 | 139.7x4.50 | 245                         |
| 410 SP - 62 | 12.00                  | 2.00                   | 5.80              | 3.10   | 3.10 | 193.7x5.40                         | 165.1x4.50 | 139.7x4.50 | 259                         |
| 410 SP - 63 | 12.00                  | 2.00                   | 5.80              | 3.10   | 3.10 | 193.7x5.90                         | 165.1x4.50 | 139.7x4.50 | 277                         |
| 410 SP - 64 | 12.00                  | 2.00                   | 5.80              | 3.10   | 3.10 | 219.1x4.85                         | 193.7x4.85 | 165.1x4.50 | 292                         |
| 410 SP - 65 | 12.00                  | 2.00                   | 5.80              | 3.10   | 3.10 | 219.1x5.40                         | 193.7x4.85 | 165.1x4.50 | 313                         |
| 410 SP - 66 | 12.00                  | 2.00                   | 5.80              | 3.10   | 3.10 | 219.1x5.90                         | 193.7x4.85 | 165.1x4.50 | 322                         |

**STEEL EQUAL ANGLES**

| Designation<br>(1) | Size<br>(2)<br>mmxmm | Thick-<br>ness<br>(3)<br>mm | Sec.<br>area<br>(4)<br>cm <sup>2</sup> | Weight<br>per mt.<br>(5)<br>Kg | Moments of Inertia     |                        |                        | Module of<br>Section   |                         |
|--------------------|----------------------|-----------------------------|--|--------------------------------|------------------------|------------------------|------------------------|------------------------|-------------------------|
|                    |                      |                             |  |                                | (6)<br>cm <sup>4</sup> | (7)<br>cm <sup>4</sup> | (8)<br>cm <sup>4</sup> | (9)<br>cm <sup>4</sup> | (10)<br>cm <sup>4</sup> |
| ISA 2020           | 20x20                | 3.0                         | 1.12                                   | 0.9                            | 0.4                    | 0.6                    | 0.4                    | 0.3                    | 0.3                     |
|                    |                      | 4.0                         | 1.45                                   | 1.1                            | 0.5                    | 0.8                    | 0.5                    | 0.4                    | 0.4                     |
| ISA 2525           | 25x25                | 3.0                         | 1.41                                   | 1.1                            | 0.8                    | 1.2                    | 0.8                    | 0.4                    | 0.4                     |
|                    |                      | 4.0                         | 1.84                                   | 1.4                            | 1.0                    | 1.6                    | 1.0                    | 0.6                    | 0.6                     |
|                    |                      | 5.0                         | 2.25                                   | 1.8                            | 1.2                    | 1.8                    | 1.2                    | 0.7                    | 0.7                     |
| ISA 3030           | 30x30                | 3.0                         | 1.73                                   | 1.4                            | 1.4                    | 2.2                    | 1.4                    | 0.6                    | 0.6                     |
|                    |                      | 4.0                         | 2.26                                   | 1.8                            | 1.8                    | 2.8                    | 1.8                    | 0.8                    | 0.8                     |
|                    |                      | 5.0                         | 2.77                                   | 2.2                            | 2.1                    | 3.4                    | 2.1                    | 1.0                    | 1.0                     |
| ISA 3535           | 35x35                | 3.0                         | 2.03                                   | 1.6                            | 2.3                    | 3.6                    | 2.3                    | 0.9                    | 0.9                     |
|                    |                      | 4.0                         | 2.66                                   | 2.1                            | 2.9                    | 4.7                    | 2.9                    | 1.2                    | 1.2                     |
|                    |                      | 5.0                         | 3.27                                   | 2.6                            | 3.5                    | 5.6                    | 3.5                    | 1.4                    | 1.4                     |
|                    |                      | 6.0                         | 3.86                                   | 3.0                            | 4.1                    | 6.5                    | 4.1                    | 1.7                    | 1.7                     |
| ISA 5050           | 50x50                | 3.0                         | 2.95                                   | 2.3                            | 6.9                    | 11.0                   | 6.9                    | 1.9                    | 1.9                     |
|                    |                      | 4.0                         | 3.88                                   | 3.0                            | 9.1                    | 14.5                   | 9.1                    | 2.5                    | 2.5                     |
|                    |                      | 5.0                         | 4.79                                   | 3.8                            | 11.0                   | 17.6                   | 11.0                   | 3.1                    | 3.1                     |
|                    |                      | 6.0                         | 5.68                                   | 4.5                            | 12.9                   | 20.6                   | 12.9                   | 3.6                    | 3.6                     |
| ISA 6565           | 65x65                | 5.0                         | 6.25                                   | 4.9                            | 24.7                   | 39.4                   | 24.7                   | 5.2                    | 5.2                     |
|                    |                      | 6.0                         | 7.44                                   | 5.8                            | 29.1                   | 46.5                   | 29.1                   | 6.2                    | 6.2                     |
|                    |                      | 8.0                         | 9.76                                   | 7.7                            | 37.4                   | 59.5                   | 37.4                   | 8.1                    | 8.1                     |
|                    |                      | 10.0                        | 12.00                                  | 9.6                            | 41.0                   | 71.3                   | 41.0                   | 9.9                    | 9.9                     |
| ISA 7575           | 75x75                | 5.0                         | 7.27                                   | 5.7                            | 38.7                   | 61.9                   | 38.7                   | 7.1                    | 7.1                     |
|                    |                      | 6.0                         | 8.66                                   | 6.8                            | 45.7                   | 73.1                   | 45.7                   | 8.4                    | 8.4                     |
|                    |                      | 8.0                         | 11.38                                  | 8.9                            | 59.0                   | 94.1                   | 59.0                   | 11.0                   | 11.0                    |
|                    |                      | 10.0                        | 14.02                                  | 11.0                           | 71.4                   | 113.3                  | 71.4                   | 13.5                   | 13.5                    |
| ISA 8080           | 80x80                | 6.0                         | 9.29                                   | 7.3                            | 56.0                   | 89.6                   | 56.0                   | 9.6                    | 9.6                     |
|                    |                      | 8.0                         | 12.21                                  | 9.6                            | 72.5                   | 115.6                  | 72.5                   | 12.6                   | 12.6                    |
|                    |                      | 10.0                        | 15.05                                  | 11.8                           | 87.7                   | 139.5                  | 87.7                   | 15.5                   | 15.5                    |
|                    |                      | 12.0                        | 17.81                                  | 14.0                           | 101.9                  | 161.4                  | 101.9                  | 18.3                   | 18.3                    |
| ISA 100100         | 100x100              | 6.0                         | 11.67                                  | 9.2                            | 111.3                  | 178.1                  | 111.3                  | 15.2                   | 15.2                    |
|                    |                      | 8.0                         | 15.39                                  | 12.1                           | 145.1                  | 231.8                  | 145.1                  | 20.0                   | 20.0                    |
|                    |                      | 10.0                        | 19.03                                  | 14.9                           | 177.0                  | 282.2                  | 177.0                  | 24.7                   | 24.7                    |
|                    |                      | 12.0                        | 22.59                                  | 17.7                           | 207.0                  | 329.3                  | 207.0                  | 29.2                   | 29.2                    |
| ISA 110110         | 110x110              | 8.0                         | 17.08                                  | 13.4                           | 196.8                  | 312.7                  | 196.8                  | 24.6                   | 24.6                    |
|                    |                      | 10.0                        | 21.12                                  | 16.6                           | 240.2                  | 381.5                  | 240.2                  | 30.4                   | 30.4                    |
|                    |                      | 12.0                        | 25.08                                  | 19.7                           | 281.3                  | 446.4                  | 281.3                  | 35.9                   | 35.9                    |
|                    |                      | 16.0                        | 32.76                                  | 25.7                           | 357.3                  | 564.6                  | 357.3                  | 46.5                   | 46.5                    |
| ISA 130130         | 130x130              | 8.0                         | 20.28                                  | 15.9                           | 331.0                  | 526.3                  | 331.0                  | 34.9                   | 34.9                    |
|                    |                      | 10.0                        | 25.12                                  | 19.7                           | 405.3                  | 644.6                  | 405.3                  | 43.1                   | 43.1                    |
|                    |                      | 12.0                        | 29.88                                  | 23.5                           | 476.4                  | 757.1                  | 476.4                  | 51.0                   | 51.0                    |
|                    |                      | 16.0                        | 39.16                                  | 30.7                           | 609.1                  | 965.6                  | 609.1                  | 66.3                   | 66.3                    |
| ISA 150150         | 150x150              | 10.0                        | 29.21                                  | 22.9                           | 633.5                  | 1007.4                 | 633.5                  | 58.0                   | 58.0                    |
|                    |                      | 12.0                        | 34.77                                  | 27.3                           | 746.3                  | 1186.6                 | 746.3                  | 68.8                   | 68.8                    |
|                    |                      | 16.0                        | 45.65                                  | 35.8                           | 958.9                  | 1522.5                 | 958.9                  | 89.7                   | 89.7                    |
|                    |                      | 20.0                        | 56.21                                  | 44.1                           | 1155.5                 | 1829.6                 | 1155.5                 | 109.7                  | 109.7                   |
| ISA 200200         | 200x200              | 10.0                        | 46.94                                  | 36.9                           | 1826.3                 | 2905.4                 | 1826.3                 | 125.0                  | 125.0                   |
|                    |                      | 12.0                        | 61.82                                  | 48.5                           | 2366.2                 | 3764.1                 | 2366.2                 | 163.8                  | 163.8                   |
|                    |                      | 16.0                        | 76.38                                  | 60.0                           | 2875.0                 | 4568.6                 | 2875.0                 | 201.2                  | 201.2                   |
|                    |                      | 20.0                        | 94.13                                  | 73.9                           | 3470.2                 | 5501.5                 | 3470.2                 | 246.0                  | 246.0                   |

**STEEL FLATS**

| WIDTH<br>(in mm) | WEIGHT IN KG. PER METRE LENGTH FOR THICKNESS (mm) |     |     |     |     |      |      |      |      |      |      |       |       |
|------------------|---|-----|-----|-----|-----|------|------|------|------|------|------|-------|-------|
|                  | 3.0   | 4.0 | 5.0 | 6.0 | 8.0 | 10.0 | 12.0 | 16.0 | 18.0 | 20.0 | 25.0 | 32.0  | 40.0  |
| 10               | 0.2   | 0.3 | 0.4 | 0.5 | -   | -    | -    | -    | -    | -    | -    | -     | -     |
| 15               | 0.4   | 0.5 | 0.6 | 0.7 | 0.9 | -    | -    | -    | -    | -    | -    | -     | -     |
| 20               | 0.5   | 0.6 | 0.8 | 0.9 | 1.3 | 1.6  | -    | -    | -    | -    | -    | -     | -     |
| 25               | 0.6   | 0.8 | 1.0 | 1.2 | 1.6 | 2.0  | 2.4  | -    | -    | -    | -    | -     | -     |
| 30               | 0.7   | 0.9 | 1.2 | 1.4 | 1.9 | 2.4  | 2.8  | 3.8  | -    | -    | -    | -     | -     |
| 35               | 0.8   | 1.1 | 1.4 | 1.6 | 2.2 | 2.8  | 3.3  | 4.4  | 5.0  | 5.5  | -    | -     | -     |
| 40               | 0.9   | 1.3 | 1.6 | 1.9 | 2.5 | 3.1  | 3.8  | 5.0  | 5.6  | 6.3  | -    | -     | -     |
| 45               | 1.1   | 1.4 | 1.8 | 2.1 | 2.8 | 3.5  | 4.2  | 5.6  | 6.4  | 7.1  | -    | -     | -     |
| 50               | 1.2   | 1.6 | 2.0 | 2.4 | 3.1 | 3.9  | 4.7  | 6.3  | 7.1  | 7.8  | 9.8  | -     | -     |
| 55               | 1.3   | 1.7 | 2.2 | 2.6 | 3.4 | 4.3  | 5.2  | 6.9  | 7.8  | 8.6  | 10.8 | -     | -     |
| 60               | 1.4   | 1.9 | 2.4 | 2.8 | 3.8 | 4.7  | 5.6  | 7.5  | 8.5  | 9.4  | 11.8 | 15.1  | -     |
| 65               | -   | -   | -   | 3.1 | 4.1 | 5.1  | 6.1  | 8.2  | 9.2  | 10.2 | 12.8 | 16.3  | 20.4  |
| 70               | -   | -   | -   | 3.3 | 4.4 | 5.5  | 6.6  | 8.8  | 9.9  | 11.0 | 13.7 | 17.6  | 22.0  |
| 75               | -   | -   | -   | 3.5 | 4.7 | 5.9  | 7.1  | 9.4  | 10.6 | 11.8 | 14.7 | 18.8  | 23.6  |
| 80               | -   | -   | -   | 3.8 | 5.0 | 6.3  | 7.5  | 10.0 | 11.3 | 12.6 | 15.7 | 20.1  | 25.1  |
| 90               | -   | -   | -   | 4.2 | 5.6 | 7.1  | 8.5  | 11.3 | 12.7 | 14.1 | 17.7 | 22.6  | 28.3  |
| 100              | -   | -   | -   | 4.7 | 6.3 | 7.8  | 8.8  | 12.6 | 14.1 | 15.7 | 19.6 | 25.1  | 31.4  |
| 110              | -   | -   | -   | 5.2 | 6.9 | 8.6  | 9.4  | 13.8 | 15.5 | 17.3 | 21.6 | 27.6  | 34.6  |
| 120              | -   | -   | -   | 5.6 | 7.5 | 9.4  | 10.4 | 15.1 | 17.0 | 18.8 | 23.6 | 30.1  | 37.7  |
| 130              | -   | -   | -   | -   | 8.2 | 10.2 | 11.2 | 16.3 | 18.4 | 20.4 | 25.5 | 32.7  | 40.8  |
| 140              | -   | -   | -   | -   | 8.8 | 11.0 | 12.2 | 17.6 | 19.8 | 22.0 | 27.5 | 35.2  | 44.0  |
| 150              | -   | -   | -   | -   | 9.4 | 11.8 | 13.2 | 18.8 | 21.2 | 23.6 | 29.4 | 37.7  | 47.1  |
| 200              | -   | -   | -   | -   | -   | 15.7 | 14.1 | 25.1 | 28.3 | 31.4 | 39.2 | 50.2  | 62.8  |
| 250              | -   | -   | -   | -   | -   | 19.6 | 23.6 | 31.4 | 35.3 | 39.2 | 49.1 | 62.8  | 78.5  |
| 300              | -   | -   | -   | -   | -   | -    | 28.3 | 37.7 | 42.4 | 47.1 | 58.9 | 75.4  | 94.2  |
| 400              | -   | -   | -   | -   | -   | -    | -    | 50.2 | 56.5 | 62.8 | 78.5 | 100.5 | 125.6 |

**STEEL CHEQUERED PLATES**

| Standard Thickness (mm) | * Weight per square meter (Kg) |
|-------------------------|--------------------------------|
| 5                       | 39                             |
| 6                       | 47                             |
| 7                       | 55                             |
| 8                       | 63                             |
| 10                      | 78                             |
| 12                      | 94                             |
| 14                      | 110                            |
| 16                      | 126                            |

**MILD STEEL SHEETS**

| Standard Thickness (mm) | * Weight per square meter (Kg) |
|-------------------------|--------------------------------|
| 4.00                    | 31.4                           |
| 3.55                    | 27.9                           |
| 3.15                    | 24.8                           |
| 2.80                    | 22.0                           |
| 2.50                    | 19.6                           |
| 2.24                    | 17.6                           |
| 2.00                    | 15.7                           |
| 1.80                    | 14.2                           |
| 1.60                    | 12.6                           |
| 1.40                    | 11.0                           |
| 1.25                    | 9.8                            |
| 1.12                    | 8.8                            |
| 1.00                    | 7.9                            |
| 0.90                    | 7.0                            |
| 0.80                    | 6.3                            |
| 0.63                    | 5.0                            |
| 0.50                    | 3.9                            |
| 0.40                    | 3.2                            |

**STANDARD SIZES OF MS SHEETS**

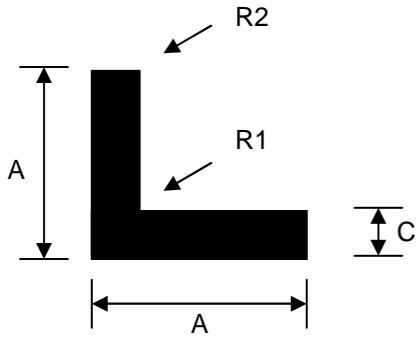
| mm x mm    | mm x mm    |
|------------|------------|
| 1800 X 600 | 2800 X 600 |
| 750        | 750        |
| 900        | 900        |
| 1000       | 1000       |
| 1100       | 1100       |
| 1200       | 1200       |
| 1250       | 1250       |
| 1400       | 1400       |
| 1500       | 1500       |
| 2000 X 600 | 3200 X 600 |
| 750        | 750        |
| 900        | 900        |
| 1000       | 1000       |
| 1100       | 1100       |
| 1200       | 1200       |
| 1250       | 1250       |
| 1400       | 1400       |
| 1500       | 1500       |
| 2200 X 600 | 3600 X 600 |
| 750        | 750        |
| 900        | 900        |
| 1000       | 1000       |
| 1100       | 1100       |
| 1200       | 1200       |
| 1250       | 1250       |
| 1400       | 1400       |
| 1500       | 1500       |
| 2500 X 600 | 4000 X 600 |
| 750        | 750        |
| 900        | 900        |
| 1000       | 1000       |
| 1100       | 1100       |
| 1200       | 1200       |
| 1250       | 1250       |
| 1400       | 1400       |
| 1500       | 1500       |

\* Conforms to the weights given in IS : 1730-1961, 'Dimensions for steel plate, sheet and strip for structural & general engineering purposes'

**ALUMINIMUM STRUCTURAL**

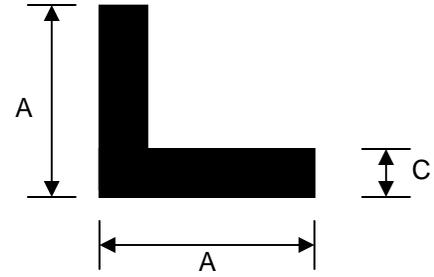
**EQUAL ANGLES**

**EQUAL LEGS – ROUND FILLET**



| A      | C    | R    | Weight Kg/m |
|--------|------|------|-------------|
| 12.70  | 3.18 | 0.79 | 0.195       |
| 19.05  | 3.18 | 0.79 | 0.306       |
| 25.40  | 3.18 | 0.79 | 0.418       |
| 31.75  | 3.18 | 5.08 | 0.548       |
| 31.75  | 4.78 | 5.08 | 0.780       |
| 38.10  | 3.18 | 0.79 | 0.640       |
| 38.10  | 4.78 | 5.33 | 0.948       |
| 44.45  | 4.78 | 5.84 | 1.132       |
| 44.45  | 6.35 | 5.84 | 1.455       |
| 50.80  | 4.78 | 0.79 | 1.275       |
| 50.80  | 4.78 | 6.10 | 1.281       |
| 63.50  | 4.78 | 6.86 | 1.643       |
| 63.50  | 6.35 | 0.79 | 2.117       |
| 63.50  | 6.35 | 6.86 | 2.130       |
| 76.20  | 6.35 | 7.62 | 2.575       |
| 88.90  | 6.35 | 8.38 | 3.030       |
| 101.60 | 9.52 | 9.14 | 5.010       |

**EQUAL LEGS – SQUARE FILLET**



| A     | C    | Weight Kg/m |
|-------|------|-------------|
| 20.64 | 1.98 | 0.216       |
| 23.82 | 1.57 | 0.199       |
| 25.40 | 3.18 | 0.421       |
| 38.18 | 3.18 | 0.503       |
| 38.10 | 1.62 | 0.334       |
| 60.00 | 8.00 | 2.481       |

| A     | C    | R1   | R2   | Weight Kg/m |
|-------|------|------|------|-------------|
| 25.40 | 1.60 | 0.79 | 1.60 | 0.217       |
| 31.75 | 6.35 | 3.18 | 4.70 | 0.006       |
| 41.28 | 6.35 | 3.18 | 4.70 | 1.341       |
| 44.45 | 6.35 | 3.18 | 4.70 | 1.454       |

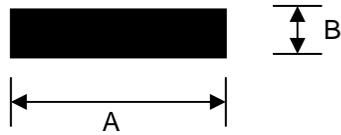
All dimensions are in mm.

**ALUMINIUM FLAT BARS**



| A     | B     | Weight Kg/m |
|-------|-------|-------------|
| 11.91 | 1.98  | 0.065       |
| 12.00 | 2.00  | 0.065       |
| 14.27 | 3.96  | 0.158       |
| 15.09 | 3.18  | 0.132       |
| 15.88 | 9.53  | 0.418       |
| 18.26 | 7.95  | 0.402       |
| 19.00 | 5.00  | 0.262       |
| 19.05 | 3.18  | 0.168       |
| 19.05 | 4.78  | 0.251       |
| 19.05 | 6.35  | 0.336       |
| 19.05 | 8.13  | 0.429       |
| 19.84 | 3.18  | 0.176       |
| 20.00 | 3.00  | 0.167       |
| 20.00 | 8.00  | 0.443       |
| 20.00 | 14.00 | 0.775       |
| 20.65 | 3.18  | 0.182       |
| 22.23 | 6.35  | 0.391       |
| 25.00 | 3.00  | 0.207       |
| 25.00 | 6.00  | 0.417       |
| 25.40 | 3.18  | 0.223       |

| A     | B     | Weight Kg/m |
|-------|-------|-------------|
| 25.40 | 6.35  | 0.446       |
| 25.40 | 7.92  | 0.557       |
| 25.40 | 14.30 | 1.006       |
| 30.00 | 5.00  | 0.416       |
| 30.18 | 3.18  | 0.262       |
| 30.18 | 3.96  | 0.331       |
| 30.18 | 12.70 | 1.068       |
| 31.75 | 3.18  | 0.278       |
| 31.75 | 4.78  | 0.419       |
| 31.75 | 6.35  | 0.559       |
| 31.75 | 7.37  | 0.644       |
| 31.75 | 8.13  | 0.714       |
| 31.75 | 9.53  | 0.838       |
| 32.00 | 6.00  | 0.530       |
| 34.99 | 3.18  | 0.307       |
| 38.10 | 6.35  | 0.670       |
| 38.10 | 9.53  | 1.006       |
| 38.10 | 12.70 | 1.339       |
| 39.70 | 3.18  | 0.348       |
| 41.28 | 6.35  | 0.725       |

**ALUMINIUM FLAT BARS**

| A     | B     | Weight<br>Kg/m | A      | B     | Weight<br>Kg/m |
|-------|-------|----------------|--------|-------|----------------|
| 42.00 | 6.00  | 0.696          | 80.16  | 4.94  | 1.321          |
| 44.45 | 3.18  | 0.391          | 82.55  | 6.35  | 1.452          |
| 44.45 | 6.35  | 0.783          | 35.00  | 7.50  | 1.766          |
| 44.45 | 12.70 | 1.562          | 35.00  | 28.00 | 6.593          |
| 50.80 | 1.98  | 0.278          | 95.25  | 15.90 | 4.195          |
| 50.80 | 6.35  | 0.893          | 101.70 | 6.35  | 1.786          |
| 50.80 | 9.53  | 1.339          | 101.70 | 12.70 | 3.574          |
| 50.80 | 12.70 | 1.786          | 101.70 | 34.93 | 9.830          |
| 50.80 | 31.75 | 4.468          | 127.00 | 28.58 | 10.054         |
| 50.80 | 44.45 | 6.225          | 150.00 | 75.00 | 31.161         |
| 60.00 | 38.00 | 6.316          | 152.40 | 12.70 | 5.357          |
| 63.00 | 19.00 | 3.316          | 165.00 | 9.50  | 4.342          |
| 63.00 | 6.35  | 1.117          | 203.20 | 12.70 | 7.143          |
| 63.50 | 9.53  | 1.676          | 203.20 | 25.50 | 14.297         |
| 63.50 | 12.70 | 2.232          | 223.00 | 52.00 | 32.121         |
| 65.00 | 22.00 | 3.961          | 254.00 | 12.70 | 8.935          |
| 76.20 | 4.78  | 1.006          | 304.80 | 12.70 | 10.715         |
| 76.20 | 6.35  | 1.339          | 305.00 | 25.40 | 21.459         |
| 76.20 | 12.70 | 2.678          | 330.00 | 19.00 | 17.368         |
| 76.20 | 22.22 | 4.690          |        |       |                |

**BARE COPPER CONDUCTORS**

| Standard<br>Diameter<br>(1)<br>mm | Area on Standard<br>Diameter<br>(2)<br>mm <sup>2</sup> | Standard Resistance<br>at 20°C per Km<br>(3)<br>ohm | Standard Weight per<br>Km<br>(4)<br>Kg |
|-----------------------------------|--|---|--|
| 1.36                              | 1.453  | 12.210  | 12.91                                  |
| 1.60*                             | 2.011  | 8.8230  | 17.87                                  |
| 1.70*                             | 2.270  | 7.8150  | 20.18                                  |
| 2.12*                             | 3.530  | 5.0250  | 31.08                                  |
| 2.64*                             | 5.515  | 3.2150  | 49.03                                  |
| 3.00*                             | 7.069  | 2.5070  | 62.84                                  |
| 3.25*#                            | 8.296  | 2.1360  | 73.75                                  |
| 3.35*                             | 8.814  | 2.0100  | 78.36                                  |
| 3.55*#                            | 9.898  | 1.7900  | 87.99                                  |
| 3.65*                             | 10.460   | 1.6930  | 93.02                                  |
| 3.75*                             | 11.040   | 1.6040  | 98.10                                  |
| 4.25*#                            | 14.190   | 1.2480  | 126.10                                 |
| 4.50#                             | 15.900   | 1.1130  | 141.40                                 |
| 4.75                              | 17.720   | 0.9987  | 157.50                                 |
| 5.00#                             | 19.630   | 0.9014  | 174.60                                 |
| 5.30*#                            | 22.060   | 0.8019  | 196.10                                 |
| 5.60*                             | 24.630   | 0.7181  | 219.00                                 |
| 6.50#                             | 33.180   | 0.5327  | 295.00                                 |
| 7.10#                             | 39.590   | 0.4463  | 352.00                                 |
| 7.50#                             | 44.180   | 0.3998  | 392.70                                 |
| 9.50#                             | 70.880   | 0.2488  | 630.10                                 |

\* Standard sizes recommended for stranded conductors.

†Standard sizes recommended for use as solid conductors.

**BUREAU OF**  
**INDIAN STANDARDS SPECIFICATIONS**

- |     |   |   |                         |
|-----|---|---|-------------------------|
| 1)  | Specification for Reversible Type Two Pin Plugs and Socket Outlets Without Earthing Connections (Tentative)   | – | IS : 370 – 1954         |
| 2)  | Specification for Two and Three Terminal Ceiling Roses  | – | IS : 371 – 1954         |
| 3)  | Specification for Rubber Insulated Cables and Flexible Cords for electrical Power and Lighting (for Working Voltages up to and Including 11 KV) (Tentative – Under revision)    | – | IS : 694 – 1953         |
| 4)  | Specification for P.V.C. Cables and Cords for Electrical Power and lighting for Working Voltages up to and Including 650 Volts to Earth (Amended) (Tentative – Under revision ) | – | IS : 694 – 1960         |
| 5)  | Specification for Single Pole 5 Ampere Tumbler Switches for A.C. / D.C.   | – | IS : 1087 – 1957        |
| 6)  | Specification for Reversible Protected Type Two Pin Plugs and Sockets with Earthing Connections   | – | IS : 1119 – 1957        |
| 7)  | Specification for Bayonet Cap Lamp holders  | – | IS : 1258 – 1958        |
| 8)  | Specification for Three Pin Plugs and Sockets Outlets   | – | IS : 1293 – 1958        |
| 9)  | Specification for Metal Clad Switches (Current Rating not Exceeding 100 Amperes)  | – | IS : 1567 – 1960        |
| 10) | Metric Sizes of Copper Wires and Conductors for Electrical Purposes   | – | IS : 1594 – 1960        |
| 11) | Specification for Polythene Insulated and P.V.C. – Sheathed Cables  | – | IS : 1596 – 1962        |
| 12) | Specification for Steel Conduits for Electrical Wiring  | – | IS : 1653 – 1960        |
| 13) | Specification for Aluminium Conductors in Insulated Cables  | – | IS : 1753 – 1961        |
| 14) | 2-way switches for domestic and similar purpose   | – | IS : 4949 – 1969        |
| 15) | Switches for domestic and similar purpose   | – | IS : 3854 – 1966        |
| 16) | Ceiling roses   | – | IS : 371 – 1979         |
| 17) | Boxes for enclosure of electrical accessories :   |   |                         |
|     | (a) Part – I steel and C.I. boxes   | – | IS : 5133 (P-I) – 1969  |
|     | (b) Part – II Boxes made for insulating materials   | – | IS : 5133 (P-II) – 1969 |
| 18) | Conduits for electrical installations part – I general requirements   | – | IS : 9537 (P-I) – 1980  |



- |     |   |   |                        |
|-----|---|---|------------------------|
| 19) | Flexible steel conduits for electrical wiring                   | – | IS : 3480 – 1966       |
| 20) | Rigid non – metallic conduits for electrical installation       | – | IS : 2509 – 1973       |
| 21) | Interlocking switch socket cut out                              | – | IS : 4160 – 1967       |
| 22) | Switch socket – out lets (non – inter locking)                  | – | IS : 4615 – 1968       |
| 23) | Link clips electrical wiring                                    | – | IS : 2412 – 1975       |
| 24) | 3-Pin plugs and socket outlets                                  | – | IS : 1293 – 1967       |
| 25) | Danger notice plates  | – | IS : 2551 – 1963       |
| 26) | Warning symbols for dangerous voltages                          | – | IS : 9823 – 1978       |
| 27) | Letter symbols & signs used in Electrical Technology            | – | IS : 3722 – 1966       |
| 28) | Fans and regulators Ceiling Type, Electric                      | – | IS : 374 – 1979        |
| 29) | Air circulator Type Fan and Regulators, Electric                | – | IS : 2997 – 1964       |
| 30) | Fan and Regulators, Pedestal Type, Electric                     | – | IS : 1169 – 1967       |
| 31) | Fan , Fixed Capacitor   | – | IS : 1709 – 1960       |
| 32) | Flame proof enclosures of Electrical apparatus                  | – | IS : 2148 – 1968       |
| 33) | Guides for Electrical equipment for explosive atmosphere        | – | IS : 8240 – 1976       |
| 34) | Guide for selection of Electrical equipment for hazardous areas | – | IS : 5571 – 1979       |
| 35) | Ballasts for Fluorescent lamps                                  | – | IS : 1534 (P-I) – 1977 |
| 36) | B.C. lamps holders  | – | IS : 1258 – 1979       |
| 37) | Bi-pin lamp holders for tubular fluorescent lamps               | – | IS : 3323 – 1980       |
| 38) | Holder for starters for tubular fl. Lamps                       | – | IS : 3324 – 1965       |
| 39) | Starters for fl. Lamps  | – | IS : 2215 – 1968       |
| 40) | Transistor filament general service Electrical lamps            | – | IS : 7027 – 1973       |
| 41) | Tungsten filament general service Electric lamp                 | – | IS : 418 – 1978        |
| 42) | Time Switches (1st revision)                                    | – | IS : 1766 – 1978       |
| 43) | Cross-Linked polyethylene insulated PVC sheathed cables :       |   |                        |
|     | (i) For working voltages up to and incl. 1100 V                 | – | IS : 7098 (P-I) – 1977 |
|     | (ii) For working voltages up to & incl. 33 KV                   | – | IS : 7098 (P-I) – 1973 |
| 44) | Lift Cables   | – | IS : 4289 – 1967       |

- 45) PILC Cables for Electric supply (22 V version) – IS : 692 – 1973
- 46) PILC Cables, St. through jt. Boxes, lead sleeves for upto and incl. 11 KV – IS : 7093 – 1973
- 47) PVC insulated PVC sheathed solid conductor Cables not exceeding 1100 V – IS : 4288 – 1967
- 48) PVC insulated - do- - do- upto and incl. 1100 V – IS : 694 – 1977
- 49) PVC insulated (heavy duty) Cables :
  - Part – I for working voltage upto and incl. 1100 V – IS : 1554 (P-I) – 1976
  - Part – II for - do- for 3.3 KV to 11 KV – IS : 1554 (P-II) – 1970
- 50) PVC insulated sheathed Electrical Cables – IS : 5831 – 1970
- 51) Recommended short circuit ratings of high voltages PVC Cables – IS : 5819 – 1970
- 52) Electrical Call Bell & Buzzer for indoor use (Revised) – IS : 2268 – 1966
- 53) Electrical immersion water heater (2nd revision) – IS : 368 – 1977