



GOVERNMENT OF MADHYA PRADESH

**DEPARTMENT OF
URBAN ADMINISTRATION & DEVELOPMENT**

**INTEGRATED STANDARD SCHEDULE OF RATES
(VOLUME IV)**

MUNICIPAL ELECTRICAL WORKS



**IN FORCE FROM
10th MAY, 2012**

**COMMISSIONER
URBAN ADMINISTRATION AND DEVELOPMENT
PALIKA BHAWAN, SHIVAJI NAGAR, NEAR 6 No. STOP,
BHOPAL, MADHYA PRAEDSH**

www.mpurban.gov.in



FOREWORD

India is part of the global trend of increasing urbanisation. The urban population in India has increased by 5 times as compared to the overall population growth of 2.5 times during last 5 decades. As per 2001 census, 27.8% of India's population lived in 4378 towns/ cities. This share increased to 31.16% in Census 2011. Urbanization in Madhya Pradesh has also expanded rapidly. As per provisional figures of Census 2011, in Madhya Pradesh, 27.63% of the population lives in towns and cities.

Cities hold tremendous potential as engines of socio-economic development, creating jobs and generating wealth through economies of scale. They need to be sustained and augmented through the high urban productivity for country's economic growth. For cities to become growth oriented and productive, it is essential to achieve a world class urban system. This, in turn, depends on attaining efficiency and equity in the delivery and financing of urban infrastructure.

74th Constitutional Amendment Act created a focus on improving and strengthening Urban infrastructure and Services in Urban Local Bodies. With the availability of substantial funds from various sources and with our own increased revenues, availability of development funds is no longer a major constraint. However, tapping these sources effectively is a major concern.

While preparing Detailed Project Reports, accurate Cost estimation is one of the most important and challenging aspects. Till 31st May 2011, in the absence of Departmental Schedule of Rates, Urban Local Bodies had to depend on Schedule of Rates of various Works Departments of the State Government such as MP Public Health Engineering Department, MP Public Works Department, Water Resource Department etc. for civil works and Madhya Pradesh State Electricity Board for electrical works. The infrastructure and maintenance works done by our Urban Local Bodies are town specific as well as need specific. The SoRs of these departments do not contain many such items.

Looking to the problems faced by the ULBs in cost estimation, Department of Urban Administration and Development decided to develop its own Integrated Standard Schedule of Rates for all Building and other infrastructure works keeping in view the current and future requirements of the Urban Local Bodies and to provide them effective tool for preparing accurate cost estimates. The Department prepared and adopted its first Integrated Standard Schedule of Rates in four volumes along with related specifications, on 1st June 2011.

The prices are ever changing. To accommodate the annual price rise, Department intends to update the ISSR annually. We are extremely happy that the Department, with

the able assistance of Project Utthan, Madhya Pradesh Urban Services for the Poor (MPUSP), a DFID assisted programme, has not only successfully completed the task of ISSR preparation but also has updated the ISSR well within time.

To complete this task, a Working Group was formed which deliberated about the new items and revisions required by Urban Local Bodies to carry out the infrastructure development and construction works smoothly.

An Output Review Panel was also constituted to review the process outputs and finalize various reports including Rate Analysis for various items under Integrated Standard Schedule of Rates.

The updated ISSR has been prepared in four parts i.e. Volume - 1 Water Supply, Sewerage & Tube well works, Volume - 2 Building works, Volume - 3 Roads & Bridges works, Volume - 4 Municipal Electrical works. Specifications for various works have also been illustrated in four separate volumes.

All the volumes of the ISSR along with the applications are also available on the Website of UADD (mpurban.gov.in). This will help the Urban Local Bodies in preparing cost estimates reflecting prevailing market values and hence, avoid high tender rates.

I extend my sincere thanks to all the members of Working Group and the Output Review Panel for taking keen interest in completing the voluminous job of updation & completion of ISSR well in time.

I am sure that this Updated Integrated Standard Schedule of Rates will be quite useful for all the Urban Local Bodies of Madhya Pradesh to prepare accurate cost estimates in Detailed Project Reports.



(Sanjay Kumar Shukla)
Commissioner

Urban Administration and Development
Government of Madhya Pradesh
Bhopal

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- | | | |
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| 1. | Shri Ashok Khare, Chief Engineer, Directorate of Urban Administration and Development, Bhopal | Chairman |
| 2. | Shri S.K. Sogani, Superintending Engineer, UADD, Indore | Member |
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| 2. | Shri M.J.S. Tulse, Deputy Director (Engineering), Project Uthhan, Municipal Support Unit, MPUSP, Urban Administration and Development, Bhopal | Convener |
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GENERAL NOTES

- 1 The SOR of UADD Department consists of 4 Volumes

VOLUME - I WATER SUPPLY, SEWRAGE AND TUBE WELL WORKS

VOLUME - II Building Works

VOLUME - III Road & Bridge Works

VOLUME - IV Electrical Works

- 2 The contents of each Volume are given below

VOLUME - I WATER SUPPLY, SEWRAGE AND TUBE WELL WORKS

| | |
|----|--|
| 1 | Cast Iron Pipes and Specials with with Socket & Spigot lead joints. |
| 2 | Cast Iron Tyton Pipes with Tyton Joints. |
| 3 | Cast Iron Pipes and Specials with flanged joints. |
| 4 | Ductile Iron Pressure Pipes and Special with Tyton joints. |
| 5 | Unplasticized PVC Pipes & Fittings for potable water supply. |
| 6 | Cast Iron Valves. |
| 7 | Galvanised Iron Pipes, Specials and Gun Metal/Brass Metal Fittings. |
| 8 | HDPE Pipes, MDPE Pipe & Specials and Zero Velocity Valves. |
| 9 | GRP Pipes and Specials. |
| 10 | Asbestos Cement Pressure Pipe and Cast Iron Fittings. |
| 11 | Salt Glazed Stoneware Pipes. |
| 12 | Unplasticized Non-Pressure Polyvinyl Chloride (PVC-U) Pipes, DWC Pipes for use in underground sewerage system. |
| 13 | Reinforced Cement concrete Pipes. |
| 14 | Sewer Appurtenances. |
| 15 | Civil Works for Water Supply & Sewerage works. |
| 16 | Miscellaneous. |
| 17 | Drawings for Water Supply & Sewerage. |
| 18 | Drilling of Tube Wells. |

VOLUME - II BUILDING WORKS

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| 1 | Carriage of Material |
| 2 | Earth work |
| 3 | Motars |
| 4 | Concrete work |
| 5 | Reinforced Cement Concrete |
| 6 | Brick work |
| 7 | Stone work |
| 8 | Marble work other than flooring |
| 9 | Wood Work & P.V.C. Works |
| 10 | Steel work |
| 11 | Flooring |
| 12 | Roofing and ceiling |
| 13 | Finishing |
| 14 | Repair to Building |
| 15 | Dismantling & Demolishing |
| 16 | Pile work |

| | |
|----|--|
| 17 | Aluminium work |
| 18 | Water proofing |
| 19 | Horticulture & Landscaping |
| 20 | Form Work |
| 21 | Higher Charges of Machine |
| 22 | Water Harvesting, Recycle and Reuse wastewater |
| 23 | Building Water Supply |
| 24 | Building Drainage |
| 25 | Sanitary Installation |

**VOLUME - III
ROAD & BRIDGES WORKS**

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| ROAD | |
| 1 | Carriage of Material |
| 2 | Site Clearance |
| 3 | Earth work, erosion control and Drainage |
| 4 | Sub-Bases, Bases (Non-Bituminous) and Shoulders |
| 5 | Bases and Surface courses (Bituminous) |
| 6 | Cement Concrete Pavements |
| 7 | Geosynthetics and Reinforced Earth |
| 8 | Traffic Signs, marking & other Road Appurtenances. |
| 9 | Supply of Material |
| 10 | Maintenance of Roads |
| 11 | Horticulture |
| 12 | Survey & investigation, Preparation of D.P.R. and other Miscellaneous items |
| BRIDGES | |
| 13 | Foundations |
| 14 | Sub-Structure |
| 15 | Super-Structure |
| 16 | River Training and protection works |
| 17 | Repair and Rehabilitation |

**VOLUME - IV
ELECTRICAL WORKS**

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General Notes for Volume -IV Electrical works'

Internal & External Electrification

3 Point Wiring

- 3.1 Method and type of wiring shall be fully described and measured separately, it shall be classified according to the size and types of cables used.
- 3.2 Concealed conduit work and surface conduit work shall also be classified and described separately the former shall include embedding the conduit and allied fitting in walls, floors etc. during constructions or cutting chases, or both and making good as necessary.
- 3.3 Point wiring shall include all work necessary in complete wiring of a switch circuit of any length from the tapping point on the distribution circuit to the following via a switch:
- (a) Ceiling rose or connector (in case of ceiling and exhaust fan points or stiff pendent).
 - (b) Ceiling rose (in case of pendent points except stiff pendent points).
 - (c) Lamp holder (in case of wall brackets, batten points bulk head fittings and similar other fittings).
 - (d) Call bell or Buzzer (in this case the words "Via the switch" shall be read as "Via the bell push or ceiling rose" as the case may be.
 - (e) Upto Electric Clock outlet.
 - (f) Upto Socket outlet.
- 3.3.1 When there is only one point on the distribution circuit (one way), the same shall be measured in two parts i.e. one as circuit wiring according to the definition of the circuit wiring and the other as "Points" according to the above definition for "Points".
- 3.3.2 The following shall be deemed to be included in the Point Wiring.
- (a) Rigid steel conduit/rigid PVC non-metallic conduit/HDPE conduit/casing and capping as the case may be, accessories for the same and wiring cables from controlling switch or any other type of switch to the point including earth wire.
 - (b) Switch and ceiling rose or connector or batten holder with special and suitable round block for neatly housing the connector as required.
 - (c) In case of wall brackets, bulk head fitting and similar fittings, cable as required upto the Lamp Holder
 - (d) Bushed conduit or porcelain tubing when cables pass through wall etc.

(e) All PVC/Metal blocks switch boards and boxes sunk or surface type, with suitable covering, i.e. (Phenolic laminated sheet, modular plate with base frame) including those frame required for mounting fan regulator but excluding those under the distribution board and main control switch, but as specified in schedule of items in this SOR, the boxes and covering shall be included.

(f) All fixing accessories such as clips, nails, screws, phil plug, rawl plug etc. as required.

(g) Joint for junction boxes and connecting the same as required.

(h) Connections to ceiling rose or connector, socket outlet, lamp holder, fan regulator etc.

(i) Socket outlets as specified.

(j) Inter connection wiring between points on the same circuits in same switch box or from another.

(k) connector as required for looping of wiring for two or more wires wherever required.

(l) Pendants, if provided shall be paid extra.

3.3.3 The mechanical protection to the wiring coming within 1.5 Mtr. from floor level upto switch board shall be deemed to have been included in the item of work. Method of installation and making good the damages shall be described in the specification.

3.3.4 The common bare earth continuity conductor as specified in the schedule of items shall be included in point/circuit wiring or fixing and drawing of all items and green colour PVC insulated Multi strand FR copper wire as earth wire. However, Switch Board with sheet - modular or non-modular type included in the rates of point wiring and switch boards should be selected so as to accommodate atleast similar one switch & socket in future.

3.4 Wiring points shall be classified as follows:

(a) Short points-not exceeding 3 Mtr. in length.

(b) Medium points-exceeding 3 Mtr. but not exceeding 6 Mtr. in length.

(c) Long point-exceeding 6 Mtr. but not exceeding 10 Mtr. in length.

(d) Extra Long Point-I:- Exceeding 10 Mtr. but not exceeding 15 Mtr. in length.

(e) Extra Long Point-II Exceeding 15 Mtr. but not exceeding 20 Mtr. in length.

(f) Extra Long Point-III:- Exceeding 20 Mtr.in length as required.

3.4.1 The terms length per point in point wiring in the case of fan points, light points and socket outlet hall mean the distance between the switch and ceiling rose/connector or back plate or lamp holder or socket outlet point depending upon the fitting measured along the run of wiring irrespective of the number of wires in the run, separate measurement may be made where the switches and socket outlet points are located on the same board.

- 3.4.2 In the case of boards with socket outlet point only, the length shall mean the distance between the socket outlet and the tapping point of live wire on the nearest switch board or junction box, as the case may be.
- 3.4.3 Any junction box provided for extending the wiring beyond the point referred to shall not be treated as the nearest tapping point.
- 3.4.4 Light point controlled by two, two way switches shall be measured as two points from fitting to switches on either side and classified according to the length.
- 3.4.5 In case of point with more than one light point controlled by the same switch such points shall be measured in parts i.e. from the switch to the first light point classified as one point and for the subsequent point, the distance from the fitting to fitting shall be measured along the run of wiring classified and treated as equivalent to half the point so derived.
- 3.4.6 In case of call bell/buzzer points, with single call bell/buzzer, controlled by more than one push, the length of point shall be measured in parts, i.e. from the call bell/buzzer to one of the nearest push classified as one point and for the other pushes, the distance from each push to the call bell shall be measured along the run of wiring classified and treated as equivalent to half the point so derived.
- 3.4.7 Where more than one call bell/buzzer points as controlled by the same push, the length of the points shall be measured as in 1.4.5.
- 3.4.8 Same Board socket outlet point means sockets and switches are provided on same board, if another sockets outlets is provided in adjacent switch board upto conduit length of 0.3M away shall be considered on same board. If length of conduits is above 0.3m (i.e. adjacent switch board is away above 0.3m) the point shall be considered as separate socket point.
- 3.4.9 M.S. Boxes will be embedded in wall of all types of wiring.
- 3.4.10 Any wiring should be carried out as per ISI/IS/BIS (emended upto date)
- 3.4.11 Wiring in PVC casing capping should be used in regular/for maintenance work.
- 4 The agency carrying out the work shall certify that the work has been carried out as per statutory or other regulations inforce and prescribed specifications.
- 4.1 The materials and labour involved shall be described and it shall be stated that the materials used are of approved make and as per list attached to the agreement/NIT etc.
- 4.2 Cutting through walls and floors lifting up floor boards and refixing cutting out plaster and making good all the work disturbed, notching or drilling holes through joists etc. shall be deemed to be included with the item of work.

- 4.3 The work shall be strictly carried out in accordance with the detailed layout plan of Electrical installation unless otherwise necessary to be altered due to site conditions during the course of execution.
- 4.4 Completion plans for the installation carried out shall be furnished.
- 4.5 Measurement – Tolerances for areas and cubic contents are applicable only for Civil Works associated with the electrical work:
- (a) Dimension shall be measured to the nearest 0.05 M.
 - (b) Areas shall be worked out in the nearest 0.01 Sqm.
 - (c) Cubic contents shall be worked out to the 0.01 Cum.
- 4.6 The material is to be used as per “List of standard list of electrical material “annexed herewith. However, the competent authority of UADD may further issue the list of electrical material of new Make/model keeping in view the quality and the required specification. In case of non-availability of material as specified in the ‘List of Approved material’ in any particulars are at any point of item, the Engineer-in-Charge may permit the use of material of the different equivalent make/model after taking permission from Higher Authority.
- 4.7 The rates given are for finished complete work. All material, labour, wastage, royalties, lease rent, scaffolding, temporary work, T&P hire charges, breakage, making good any damage to wall, surface, fitting etc. to original finish, transportation, replacement of any defective material, theft pilferage, insurance, variation in market rates etc. are included in the rates, unless specified otherwise. Removal of rubbish, dismantled material, cleaning of work/site is also included in the rates. Rectification of work due to defective/inappropriate materials and or workmanship.
- 4.8 In case of contradiction/conflict in the provisions of this SSR and UADD specifications, the former will prevail. In situations, where the provisions are not provided or silent in this SSR the provisions of UADD specification shall apply. However decision of competent authority for Technical sanction shall be final and binding.

5 **CIRCUIT WIRING'**

- 5.1 Circuit wiring is to be done in 2.5 sqmm cable. The rate of the earth wire of green colour of 2.5 sqmm copper Multi strand FR to be run inside the same conduit shall be payable separately as per actual measurements. Similarly, green colour earth wire of design size for sub-main shall run inside the same conduit and shall be paid separately. Separate conduit shall be used for point, circuit and sub-main wiring.

- 5.2 In case of exclusive socket outlet points with switch & socket the length of point shall be the distance between the socket outlet and the tapping point of live wire in the nearest distribution or sub distribution board and hence no separate measurement need be taken for circuit wiring or for earth continuity conductor.
- 5.3 Except as described above different types of wiring shall be measured separately and given in running meters. The length shall be the actual length of wiring installed and the number and size of cables shall be stated.
- 5.4 The length of sub mains, circuit wiring or any other type of wiring on linear basis shall include all lengths from end to end of casing and capping, conduits as the case may be exclusive of inter connections inside the switch board etc. The increase on account of division or slackness shall not be included in the measurements.
- 5.5 Modular accessories, and (non-modular), have been given accordingly.
- 5.6 The rewirable based SFUs and fuses are to be used.
- 5.7 MCB DBs of double door of sheet metal only are to be used and are included. MCBs of “C” curve type are to be used and rates have been accordingly provided.
- 5.8 Energy saver ceiling fans confirming to IS : 374 (update) with amended upto date are to be used. Provision for step type electronic regulator has been made and payable separately.
- 5.9 In addition to conventional energy saver CFL fitting and lamps are introduce.
- 5.10 Only Copper conductor (ICPCI approved) multi-strand cable with PVC Insulated Fire Retardant (FR) having minimum oxygen index value 29% is to be used.
- 5.11 Fixing and drawing of all items and green colour PVC insulated Multi strand FR copper wire as earth wire. However, Switch Board with sheet-modular or non-modular type is not included in the rates of point wiring and shall be paid separately and switch boards should be selected so as to accommodate atleast similar one switch & socket in future.
- 5.12 Fire extinguishers required for panel/sub-stations have also included.
- 6 CABLES
Cables shall be classified according to their voltage, materials, size and type of insulation armoring etc. Each type of cable shall be described and measured separately.

- 6.1 The length measured shall be actual length fixed or laid including connections upto switch for all cables other than paper insulated, lead covered cables and upto the entry point of cable end box of PILC cables.
- 6.2 The method of laying and the type of jointing shall be fully described.
- 6.3 Cables shall be described and given in running meters. Terminal and joint boxes of various type shall be enumerated and measured separately according to their type and size.
- 6.4 The mechanical protection for cables laid in walls or floor or underground shall be measured
- 6.5 4.5 manholes shall be described and enumerated separately.

7 **EARTHING'**

- 7.1 The object of an earthing system is to provide as nearly as possible a system of conductors at a uniform potential and as nearly zero or absolute earth potential as possible. The purpose of this is to ensure that in general all parts of apparatus other than live parts shall be at earth potential as well as to ensure that persons coming in contact with it shall be at earth potential at all times,

7.2 **System Earthing '**

Earthing associated with current carrying conductor is normally essential to the security of the system and is generally known as system earthing.

7.3 **Equipment Earthing'**

Earthing of non-current carrying metal work and conductor is essential to the safety of human life, of animals and or property and is generally known as equipment earthing.

As far as possible all earth connections shall be visible for inspection and shall be carefully made; if they are poorly made or inadequate the purposed for which they are intended, loss of life and property or serious personal injury may result. Earthing shall conform to the follow specifications. For other details not covered in this specification IS : 3043 – 1987 shall be referred to.

For checking the efficiency of earthing, the following tests are done.

- (a) The earth resistance of each electrode shall be measured.
- (b) Earth resistance of earthing grid shall be measured.
- (c) All electrodes shall be connected to the grid and the earth resistance of the entire earthing system shall be measured.

These tests shall preferably be done during the summer months.

- 8 Safety measures shall be followed as per IS Code 4770-1991 and IS 5424 - 1969 (Update)

- 9 Work shall be carried out by License holder Electrician/wireman registered from licensing board.
- 10 The items and rates taken in this SCHEDULE OF RATES are for finished items of work covering all materials, required labour, wastage, temporary work, tools, plants, overhead charges, lead and lifts, transportation, cleaning of obstacles if any, required to complete the work unless otherwise specified.
- 11 The rates mentioned in the SCHEDULE OF RATES are inclusive of all taxes and duties.
- 12 For technical specification, the I.E. rules 1956, Indian Electricity Act 1910, relevant IS codes with upto date amendments and Technical Specification (if enclosed) will be applicable unless otherwise specified.
- 13 While taking the measurement of overhead line conductor, 3% sag will be added in straight length.
- 14 The Tender form will be issued to the contractors having "A" class electrical contractor's valid license from M.P. Electrical Licensing Board, Govt. of M.P., and registered in appropriate category of M.P. departments as per N.I.T. conditions, unless otherwise specified.
- 15 The layout plan for External electrification shall be got approved from concerning authority of UADD and will be supplied to the contractor for execution.
- 16 All materials, fitting appliances etc. used in installation work shall be as per approved list of Deptt.
- 17 All materials will be confirming to relevant IS specifications wherever they exist.
- 18 Before inviting the tenders following special condition be added in notice inviting tender drafts:
- (a) The contractor will be responsible for submitting the guarantee certificates for a period of 24 months from the date of charging, and handing over of installation to the Deptt. for Transformer, Circuit breaker and other equipment and accessories.
- (b) The contractor shall submit the bill of purchase of materials, Test Certificate etc. and Excise gate passes (wherever required) before making payment.
- (c) The contractor shall be responsible for arranging inspections of authorities of Electricity Board, Electrical Licenising Board and other local bodies, getting approval of layouts, drawings, installation from them and to submit the required document, charging certificate etc. to MP UADD.
- (d) No final payment will be made till the lines are handed over to the deptt.

(e) 5% of cost of transformer and VCBs will be kept in miscellaneous deposits till the same is taken over by MP Electricity Board/Depositor. In addition to above 2% of total cost of work will be kept in Misc. deposit till the lines are taken over by the deptt.

(f) The contractor will be responsible for taking shutdown required from MPEB for execution and commissioning of work at his own risk & cost.

(g) The rate quoted shall be deemed to be inclusive of all taxes, duties including service tax if any.

(h) Income Tax, Commercial Tax, VAT, Labour Welfare etc. shall be deducted from the bill of contractors as per rules.

(i) The contractor shall make his own arrangements of water supply, site office, store and electricity at site for execution of work.

(j) The contractor shall be responsible for a period of 24 months for any loss/theft, if caused to the lines, sub-station and other materials from the date of charging and handing over the lines to the UADD.

(k) During the guarantee period of two years, 5% (Five Percent) amount of total value of work done shall be retained by the Deptt. Or the contractor shall have to give Bank guarantee/FDR of the said amount in favour of UADD.

(l) Transformer VCBs and associated items will be inspected/tested as per IS specification by M.C. before dispatch of materials at works. The above items will be accepted subject to the above qualifying.

19 The labour rates adopted for preparation of S.O.R. are inclusive of provision for weekend holiday.

20 Rates payable for any work to be done departmentally then rates should be reduced by (contractor profit percentage 10% + T & P charge 2%) i.c. $100 \times 12 / 115 = 10.434\%$

CHAPTER -1 to 8

Wiring, Control Switch gear/Bus bar, MCCB's, Isolators and fixing

| | |
|---|---|
| 1 | General |
| | (a) Rates include all lead and lift, for all materials, for all items, unless otherwise specified. |
| | (b) The provision of scaffolding or ladder or any tools and plants required shall be deemed to be included in the items, unless otherwise stated. |
| | (c) Excavation for poles, underground cables, concreting in foundations, painting of poles, struts etc, shall be measured separately. |
| | (d) Cutting through walls and floors, lifting up floor boards and re-fixing, cutting out plaster and making good all the work disturbed, notching or drilling holes through joists, etc., shall be deemed to be included with the item of work. |
| 2 | Point Wiring : - |
| | (a) Concealed conduit work shall include embedding the conduit and allied fittings in walls, floors etc., during construction or cutting chases, or both and making goods and necessary. |
| | (b) The work shall be strictly carried out in accordance with the detailed layout plan of electrical installation, unless otherwise necessary to be altered due to site conditions during the course of execution. |
| | (c) Completion plans for the installation carried out shall be furnished. |
| | (d) Point wiring shall include all work necessary to complete wiring of a switch circuit of any length from the tapping point on the distribution circuit to the following Via the switch: |
| | (i) Ceiling rose or connector (in case of ceiling and exhaust fan points or stiff pendant); |
| | (ii) Ceiling rose (in the case of pendant point except stiff pendant points); |
| | (iii) Socket outlet (in. the case of socket outlet points); |
| | (iv) Lamp holder (in the case of wall bracket(s), button points, bulb head fittings and similar other fittings. |
| | (v) Call bell or buzzer (in this case the words 'Via the switch' shall be read as 'via the bell push or ceiling rose as the case may be') |
| | (vi) Upto electric clock outlet. |
| | (e) Switches, |
| | (i) When measured separately from point wiring, the switches shall be described stating the type and rated capacity. Cover plates, if any, shall be included with the item. |
| | (ii) Switch plug combination, comprising socket outlet, switch and plug shall be described, and the type and rated capacity shall be stated. |
| | (e) When there is only one point on the distribution circuit (one way) the same shall be measured in two parts, one circuit wiring according to the definition of the circuit wiring and the other points according to the above definition for points. |
| | (f) The following shall be deemed to be included in the point wiring :- |
| | (i) Switch and ceiling rose of connector with special and suitable round block for neatly housing the connector as required; |

| | |
|--|---|
| | (ii) In the case of wall brackets, bulkhead fittings and similar fittings, cable as required up to the lamp holder; |
| | (iii) Bushed conduit or porcelain tubing when cables pass through walls etc.; |
| | (iv) Earth wire from 3-pin socket point to the common earth including connections to the earth pin of 3-pin socket outlet except the earth wire from the first tapping point of live wire to the sub-distribution board; |
| | (v) All wood or metal blocks, boards and boxes, sunk or surface type, with suitable covering, including those required, for mounting fan regulator but excluding those under the distribution board and main control switch |
| | (vi) All fixing accessories such as clips, nails, screws, phil plugs, rawl plugs, wooden plugs etc. as required. |
| | (vii) Joint for junction boxes and connecting the same as required and |
| | (viii) Connections to ceiling rose or connector, socket outlet, lamp holder, switch fan regulator, etc. |
| | (g) The mechanical protection provided to the wiring coming within 1.5 m. from floor level or up to switchboard shall be deemed to have been included in the item of work. Method of installation and making good the damages shall be described in the specification. |
| | (h) Wiring points shall be classified as follows :- |
| | (i) Short points not exceeding 3 m. in length. |
| | (ii) Medium points exceeding 3 m. but not exceeding 6 m. in length. |
| | (iii) Medium points exceeding 3 m. but not exceeding 6 m. in length. |
| | '.....' |
| | Special points of length exceeding 10m in length as required. |
| | (i) The terms "Length per point" in point wiring in the case of fan points, light points and socket outlets shall mean the distance between the switch and ceiling rose, connector or back plate, lamp holder or socket-outlet point depending upon the fitting measurement along the run of wiring irrespective of the number of wires in the run. Separate measurement may be made where the switches and socket outlet points are located on the same board. |
| | (j) In case of boards with socket-outlet point only, the length shall mean the distance between the socket-outlet and the tapping point of live wire on the nearest switch board or junction box, as the case may be. |
| | (k) Any junction box provided for extending the wiring beyond the point referred to, shall not be treated as the nearest tapping point. |
| | (l) Special-points such as staircase lighting, group control, etc., shall be specified separately and so measured. |
| | (m) A light point controlled by two, Two-way switches shall be measured as two points from the fittings to switches on either side and classified according to the "length". Any extra light point in the same circuit shall be considered as given below in (n) |
| | (n) In case of points with more than one light point controlled by the same switch, such points shall be measured in parts; i.e. from the switch to the first light point classified as one point and for the subsequent point, the distance from the fitting to fitting shall be measured along the run of wiring classified and treated as equivalent to half the point so derived. |
| | (o) In case of call-bell/buzzer controlled by more than one push, the length of point shall be measured in |
| | (p) Where more than one call-bell/buzzer points are controlled by the same push, the length of the |

| | |
|---|---|
| 3 | Circuit Wiring :- |
| | (a) Length of wiring from the distribution board of sub-distribution board up to the tapping point of the first point, that is, up to first switch board shall be considered as circuit wiring The length of circuit wiring with two wires shall be measured from the distribution or sub-distribution board to the first switch board in the circuit irrespective of whether the neutral conductor goes into the switch box or not. The earth wire from the distribution or sub-distribution board up to the first tapping point shall be measured separately. |
| | (b) In case of exclusive socket outlet circuits such as wiring points for power plugs, the length of points |
| | (c) The lengths of sub-main, circuit wiring or any other type of wiring on linear basis shall include all |
| 4 | Cables – |
| | (a) Cables shall be classified according to their voltage, materials, size and type of insulation, armouring, etc. Each type of cable shall be described and measured separately. |
| | (b) The length measured shall be actual length fixed or laid including connections up to switch for all cables other than paper-insulated, lead-covered cables and up to the entry point of cables en-box of PILC cables. |
| | (c) Cables shall be described and given in running Meters. Terminal and joints boxes of various types shall be enumerated and measured separately according to their size and type. |
| | (d) The mechanical protection for cables on walls or floors or underground shall be measured separately |
| | (e) Manholes shall be described and enumerated separately. |
| 5 | Power wiring shall be done in steel conduit system. |

The following Indian Standards may be referred to :- Chapter 1 to 8

| S.No. | Standards | Title Codes of Practice/ Guide |
|-------|-----------------------|--|
| 1 | IS:732-1989 | Code of practice for electrical wiring installation |
| 2 | IS:4648-1968 | Guide for electrical layout in residential buildings. |
| 3 | IS:8061-1976 | Code of practice for design, installation and maintenance of service lines upto and including 650 V. |
| 4 | IS:8884-1978 | Code of practice for installation of electric bells and call system. |
| 5 | IS:5578-1985 | Guide for marking of insulated conductor. |
| 6 | IS:11353-1985 | Guide for uniform system of marking and identification of conductors and apparatus terminals. |
| 7 | IS:5728-1970 | Guide for short circuit calculations. |
| 8 | IS:7752 (Part-1)-1975 | Guide for improvement of power factor in consumer installation Low and medium supply voltage. |
| 9 | IS:10118(Part-1)-1982 | Code of practice for selection, installation and maintenance of switch gear and control gear General. |
| 10 | IS:10118(Part-2)-1982 | Code of practice for selection, installation and maintenance of switch gear and control gear selection. |
| 11 | IS:10118(Part-3)-1982 | Code of practice for selection, installation and maintenance of switch gear and control gear installation. |
| 12 | IS:10118(Part-4)-1982 | Code of practice for selection, installation and maintenance of switch gear and control gear maintenance. |

| | | |
|----|----------------------------|---|
| 13 | IS:5216(Part-1)-1982 | Guide for safety procedures and practices in electrical work General. |
| 14 | IS:4237-1983 | General requirements for switch gear and control gear for voltages not exceeding 1000 V AC or 1200 V DC. |
| 15 | IS:6875(Part-1)-1973 | Control switches (switching devices control and auxiliary circuits including contractor relays) for voltages upto and including 100 VAC and 1200 V DC : General requirements and tests. |
| 16 | IS:6875(Part-2)-1973 | Control switches (switching devices for control and auxiliary circuits including contactor relays) for voltages upto and including 1000 V AC and 1200 V DC : Part 2 Push button and related control switches (Amendment 2). |
| 17 | IS:6875(Part-3)-1983 | Control switches (switching devices for control and auxiliary circuits including contactor relays) for voltages upto and including 1000 V AC and 1200 V DC: Rotary control switches. |
| 18 | IS:2675-1983 | Enclosed distribution fuse boards and cutouts for voltages not exceeding 1000V. |
| 19 | IS:8828-1978 | Miniature air break circuit breakers for voltages not exceeding 1000 volt. |
| 20 | IS:13032-1991 | Miniature circuit breaker boards for voltages upto and including 1000 volts AC. |
| 21 | IS:12610-1988 | Residual current operated circuit breakers. |
| 22 | IS:2516(Part-1/Sec.1 1985) | Circuit breakers: Requirements and test voltages not exceeding 1000 V AC or 1200 V DC. |
| 23 | IS:8623(Part1)-1977 | Factory built assemblies of switch gear and control gear for voltages upto and including 1000 V AC and 1200 V DC: General requirements. |
| 24 | IS:8623(Part-2)-1980 | Factory built assemblies of switch-gear and control gear for voltages upto and including 100 V AC and 1200 V DC: Particular requirements for bus bar trunking system (bus ways). |
| 25 | IS:694-1990 | PVC insulated cables for working voltages upto and including 1100 V/ |
| 26 | IS:3964(Part-2)-1968 | Recommended current ratings for cables PVC insulated light duty cables. |
| 27 | IS:1289(Part-1)-1984 | Flexible cables for lifts and other flexible connections : Elastomer insulated cables. |
| 28 | IS:9537(Part-1)-1980 | Conduits for electrical installations: General requirements. |
| 29 | IS:9537(Part-2)-1981 | Conduits for electrical installations: Rigid steel conduits |
| 30 | IS:3480-1966 | Flexible steel conduits for electrical wiring. |
| 31 | IS:2667-1988 | Fittings for rigid steel conduits for electrical wiring. |
| 32 | IS:3837-1976 | Accessories for rigid steel conduits for electrical wiring. |
| 33 | IS:9537(Part-4)-1983 | Conduits for electrical installation : Pliable self recovering conduits for insulating materials. |
| 34 | IS:6946-1973 | Flexible (pliable) non-metallic conduits for electrical installations. |
| 35 | IS:3419-1989 | Fittings for rigid non-metallic conduits. |
| 36 | IS:5133(Part-1)-1969 | Boxes for enclosure of electrical accessories: Steel and cast iron boxes. |
| 37 | IS:5133(Part-2)-1969 | Boxes for enclosure of electrical accessories : Boxes made of insulating materials. |
| 38 | IS:2412-1975 | Like clips for electrical wiring. |

| | | | |
|---|----|-----------------------|---|
| | 39 | IS:371-1979 | Ceiling roses. |
| | 40 | IS:3854-1988 | Switches for domestic and similar purposes. |
| | 41 | IS:4615-1968 | Switch socket outlets (non-interlocking type). |
| | 42 | IS:4160-1967 | Interlocking switch socket outlet. |
| | 43 | IS:1293-1988 | Plugs and socket outlets of rated voltage upto and including 250 volts and rated current upto and including 16 Amperes. |
| | 44 | IS:2551-1982 | Danger notice plates. |
| | 45 | IS:2448 (Part-1)-1963 | Adhesive insulating tapes for electric purposes: Tapes with cotton textile subtraction. |
| | 46 | IS:4770-1991 | Rubber gloves for electrical purposes. |
| | 47 | IS:5424-1969 | Rubber mats for electrical purposes. (xv) |
| Note:- The above IS Codes shall be applicable with latest amendments if any. | | | |

| CHAPTER -1 | | | |
|--|---|-------------|-------------|
| Wiring in surface /concealed rigid P.V.C. conduit system. | | | |
| S.No. | Description of Items | Unit | rate |
| 1.1 | Point Wiring in surface rigid P.V.C. conduit system with Flush type Accessories. | | |
| | Point wiring including metallic switch box, sheet, switches, sockets, lamp holders/ceiling roses etc with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Surface rigid P.V.C. conduit (MMS) ISI Marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit including painting etc. as required as per specification for :- | | |
| 1.1.1 | Light Point/Fan Points. | | |
| | a) Short point | Each | 320.00 |
| | b) Medium point | Each | 583.00 |
| | c) Long point | Each | 894.00 |
| 1.1.2 | 3 Pin 6 Amp socket outlet on Separate Board | | |
| | a) Short point | Each | 330.00 |
| | b) Medium point | Each | 593.00 |
| | c) Long point | Each | 904.00 |
| 1.1.3 | Call Bell / Buzzer Points | | |
| | a) Short point | Each | 327.00 |
| | b) Medium point | Each | 590.00 |
| | c) Long point | Each | 900.00 |
| 1.1.4 | Twin Control light points | | |
| | a) Short point | Each | 329.00 |
| | b) Medium point | Each | 514.00 |
| | c) Long point | Each | 903.00 |
| 1.1.5 | Point wiring including metallic switch box, sheet, switches, sockets for 3 pin 6 Amp. Socket outlet point with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Surface rigid P.V.C. conduit (MMS) ISI marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit with required materials as per specification on same board . | Each | 145.00 |
| 1.1.6 | Circuit Wiring | | |
| | Wiring for circuit wiring with PVC insulated cable FR with copper multi strand conductor ISI marked in Surface rigid P.V.C. conduit (MMS) of ISI marked suitable size including painting etc. as required as per specification | | |
| | a) 2x2.5 Sq.mm. | meter | 100.00 |
| | b) 4x2.5 Sq.mm. | meter | 129.00 |
| | c) 6x2.5 Sq.mm. | meter | 148.00 |
| | d) 8x2.5 Sq.mm. | meter | 177.00 |

| S.No. | Description of Items | Unit | rate |
|-------|---|------|---------|
| 1.2 | Point Wiring in surface rigid P.V.C. conduit system with Modular | | |
| | Point wiring including metallic switch box, sheet, switches, sockets, lamp holders/ceiling roses etc with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Surface rigid P.V.C. conduit (MMS) ISI Marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit including painting etc. as required as per specification for :- | | |
| 1.2.1 | <u>Light Point/Fan Points.</u> | | |
| | a) Short point | Each | 370.00 |
| | b) Medium point | Each | 633.00 |
| | c) Long point | Each | 944.00 |
| 1.2.2 | <u>3 Pin 6 Amp socket outlet on Separate Board</u> | | |
| | a) Short point | Each | 420.00 |
| | b) Medium point | Each | 683.00 |
| | c) Long point | Each | 993.00 |
| 1.2.3 | <u>Call Bell / Buzzer Points</u> | | |
| | a) Short point | Each | 373.00 |
| | b) Medium point | Each | 643.00 |
| | c) Long point | Each | 958.00 |
| 1.2.4 | <u>Twin Control light points</u> | | |
| | a) Short point | Each | 370.00 |
| | b) Medium point | Each | 680.00 |
| | c) Long point | Each | 1046.00 |
| 1.2.5 | Point wiring including metallic switch box, sheet, switches, sockets for 3 pin 6 Amp. Socket outlet point with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Surface rigid P.V.C. conduit (MMS) ISI marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit with required materials as per specification on same board . | Each | 257.00 |
| 1.3 | WIRING IN CONCEALED RIGID PVC CONDUIT (HEAVY DUTY) SYSTEM WITH FLUSH TYPE ACCESSORIES | | |
| | Point wiring including metallic switch box, sheet, switches, sockets, lamp holders/ceiling roses etc with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in concealed rigid P.V.C. conduit (HMS) ISI Marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit including painting etc. as required as per specification for :- | | |
| 1.3.1 | <u>Light Point/Fan Points.</u> | | |
| | a) Short point | Each | 407.00 |
| | b) Medium point | Each | 756.00 |
| | c) Long point | Each | 1154.00 |
| 1.3.2 | <u>3 Pin 6 Amp socket outlet on Separate Board</u> | | |
| | a) Short point | Each | 418.00 |
| | b) Medium point | Each | 766.00 |
| | c) Long point | Each | 1165.00 |

| S.No. | Description of Items | Unit | rate |
|-------|---|-------|---------|
| 1.3.3 | Call Bell / Buzzer Points | | |
| | a) Short point | Each | 414.00 |
| | b) Medium point | Each | 770.00 |
| | c) Long point | Each | 1172.00 |
| 1.3.4 | Twin Control light points | | |
| | a) Short point | Each | 455.00 |
| | b) Medium point | Each | 850.00 |
| | c) Long point | Each | 1304.00 |
| 1.3.5 | Point wiring including metallic switch box, sheet, switches, sockets for 3 pin 6 Amp. Socket outlet point with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in concealed rigid P.V.C. conduit (HMS) ISI marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit with required materials as per specification on same board . | Each | 135.00 |
| 1.3.6 | Circuit Wiring | | |
| | Wiring for circuit wiring with PVC insulated cable FR with copper multi strand conductor ISI marked in concealed rigid P.V.C. conduit (HMS) of ISI marked suitable size including painting etc. as required as per specification | | |
| | a) 2x2.5 Sq.mm. | meter | 116.00 |
| | b) 4x2.5 Sq.mm. | meter | 162.00 |
| | c) 6x2.5 Sq.mm. | meter | 206.00 |
| | d) 8x2.5 Sq.mm. | meter | 249.00 |
| 1.4 | WIRING IN CONCEALED RIGID PVC CONDUIT (HEAVY DUTY) SYSTEM WITH MODULER ACCESSORIES | | |
| | Point wiring including metallic switch box, sheet, switche, socket, lamp holders/ceiling roses etc with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in concealed rigid P.V.C. conduit (HMS) ISI Marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit including painting etc. as required as per specification for :- | | |
| 1.4.1 | Light Point/Fan Points. | | |
| | a) Short point | Each | 458.00 |
| | b) Medium point | Each | 806.00 |
| | c) Long point | Each | 1204.00 |
| 1.4.2 | 3 Pin 6 Amp socket outlet on Separate Board | | |
| | a) Short point | Each | 507.00 |
| | b) Medium point | Each | 856.00 |
| | c) Long point | Each | 1254.00 |
| 1.4.3 | Call Bell / Buzzer Points | | |
| | a) Short point | Each | 460.00 |
| | b) Medium point | Each | 816.00 |
| | c) Long point | Each | 1218.00 |

| S.No. | Description of Items | Unit | rate |
|-------|---|------|---------|
| 1.4.4 | Twin Control light points | | |
| | a) Short point | Each | 458.00 |
| | b) Medium point | Each | 853.00 |
| | c) Long point | Each | 1306.00 |
| 1.4.5 | Point wiring including metallic switch box, sheet, switch, socket for 3 pin 6 Amp. Socket outlet point with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in concealed rigid P.V.C. conduit (HMS) ISI marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit with required materials as per specification on same board . | Each | 257.00 |
| 1.5 | POWER WIRING IN SURFACE RIGID P.V.C.CONDUIT (HEAVY DUTY) SYSTEM WITH FLUSH TYPE ACCESSORIES | | |
| | Point wiring including metallic switch box, sheet, for 3 Pin 16 Amp. Socket Outlet Point With 4 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Surface rigid P.V.C.Conduit (HMS) ISI Marked of suitable size including painting etc. with 16 Amp. F.T. Switch & Socket / S.S.Combined 16 Amp. of ISI Marked and 4 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit as per specification for :- | | |
| 1.5.1 | On Separate Board | | |
| | A. Short Point | Each | 488.00 |
| | B. Medium Point | Each | 951.00 |
| | C. Long Point | Each | 1420.00 |
| | D. Extra Long -I | Each | 1789.00 |
| | E. Extra Long -II | Each | 2448.00 |
| | F. Extra Long -III | Each | 2984.00 |
| 1.5.2 | Same board socket 16 Amp | Each | 345.00 |
| 1.5.3 | POWER WIRING IN SURFACE RIGID P.V.C.CONDUIT (HEAVY DUTY) SYSTEM WITH MODULAR ACCESSORIES | | |
| | Point wiring including metallic switch box, sheet, for 3 Pin 16 Amp. Socket Outlet Point With 4 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Surface rigid P.V.C.Conduit (MMS) ISI Marked of suitable size including painting etc. with 16 Amp. F.T. Switch & Socket / S.S.Combined 16 Amp. of ISI Marked and 4 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit as per specification for :- | | |
| | On Separate Board | | |
| | A. Short Point | Each | 860.00 |
| | B. Medium Point | Each | 1251.00 |
| | C. Long Point | Each | 1721.00 |
| | D. Extra Long -I | Each | 2027.00 |
| | E. Extra Long -II | Each | 2748.00 |
| | F. Extra Long -III | Each | 3284.00 |
| 1.5.4 | Same board socket 16 Amp | Each | 613.00 |

CHAPTER - 2

Wiring in surface /concealed rigid Steel conduit system.

| S.No. | Descripton of Items | Unit | Rate |
|--------------|--|-------------|-------------|
| 2.1 | Wiring in surface rigid steel conduit system with Flush Type Accessories. | | |
| | Point wiring including metallic switch box, sheet, switche, socket, lamp holders/ceiling roses etc. with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in surface rigid steel conduit ISI Marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit including painting, etc. as required as per specification for :- | | |
| 2.1.1 | Light Point/Fan Points. | | |
| | a) Short point | Each | 428.00 |
| | b) Medium point | Each | 840.00 |
| | c) Long point | Each | 1326.00 |
| 2.1.2 | 3 Pin 6 Amp socket outlet on Separate Board | | |
| | a) Short point | Each | 439.00 |
| | b) Medium point | Each | 851.00 |
| | c) Long point | Each | 1153.00 |
| 2.1.3 | Call Bell / Buzzer Points | | |
| | a) Short point | Each | 435.00 |
| | b) Medium point | Each | 855.00 |
| | c) Long point | Each | 1159.00 |
| 2.1.4 | Twin Control light points | | |
| | a) Short point | Each | 476.00 |
| | b) Medium point | Each | 934.00 |
| | c) Long point | Each | 1475.00 |
| 2.1.5 | Point wiring including metallic switch box, sheet, switche, socket for 3 pin 6 Amp. Socket outlet point with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in surface rigid steel conduit ISI marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit with required materials as per specification on same board | Each | 173.00 |
| 2.1.6 | Circuit Wiring | | |
| | Wiring for circuit wiring with PVC insulated cable FR with copper multi strand conductor ISI marked in surface rigid steel conduit of ISI marked suitable size including painting etc. as required as per specification | | |
| | a) 2x2.5 Sq.mm. | meter | 180.00 |
| | b) 4x2.5 Sq.mm. | meter | 227.00 |
| | c) 6x2.5 Sq.mm. | meter | 270.00 |
| | d) 8x2.5 Sq.mm. | meter | 312.00 |

| S.No. | Descripton of Items | Unit | Rate |
|-------|---|------|---------|
| 2.2 | WIRING IN SURFACE RIGID STEEL CONDUIT SYSTEM WITH MODULAR ACCESSORIES | | |
| | Point wiring including metallic switch box, sheet, switche, socket, lamp holders/ceiling roses etc with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in surface rigid steel conduit ISI Marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit including painting, etc. as required as per specification for :- | | |
| 2.2.1 | Light Point/Fan Points. | | |
| | a) Short point | Each | 478.00 |
| | b) Medium point | Each | 891.00 |
| | c) Long point | Each | 1376.00 |
| 2.2.2 | 3 Pin 6 Amp socket outlet on Separate Board | | |
| | a) Short point | Each | 528.00 |
| | b) Medium point | Each | 940.00 |
| | c) Long point | Each | 1426.00 |
| 2.2.3 | Call Bell / Buzzer Points | | |
| | a) Short point | Each | 481.00 |
| | b) Medium point | Each | 780.00 |
| | c) Long point | Each | 1390.00 |
| 2.2.4 | Twin Control light points | | |
| | a) Short point | Each | 518.00 |
| | b) Medium point | Each | 977.00 |
| | c) Long point | Each | 1518.00 |
| 2.2.5 | Point wiring including metallic switch box, sheet, switche, socket for 3 pin 6 Amp. Socket outlet point with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in surface rigid steel conduit ISI marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit with required materials as per specification on same board | Each | 257.00 |
| 2.3 | WIRING IN CONCEALED RIGID STEEL CONDUIT SYSTEM WITH FLUSH TYPE ACCESSORIES | | |
| | Point wiring including metallic switch box, sheet, switche, socket, lamp holders/ceiling roses etc with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Concealed rigid steel conduit ISI Marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit including painting, etc. as required as per specification for :- | | |
| 2.3.1 | Light Point/Fan Points. | | |
| | a) Short point | Each | 515.00 |
| | b) Medium point | Each | 1013.00 |
| | c) Long point | Each | 1586.00 |
| 2.3.2 | 3 Pin 6 Amp socket outlet on Separate Board | | |
| | a) Short point | Each | 526.00 |
| | b) Medium point | Each | 1024.00 |
| | c) Long point | Each | 1597.00 |

| S.No. | Descripton of Items | Unit | Rate |
|-------|---|-------|---------|
| 2.3.3 | Call Bell / Buzzer Points | | |
| | a) Short point | Each | 522.00 |
| | b) Medium point | Each | 1028.00 |
| | c) Long point | Each | 1604.00 |
| 2.3.4 | Twin Control light points | | |
| | a) Short point | Each | 563.00 |
| | b) Medium point | Each | 1107.00 |
| | c) Long point | Each | 1736.00 |
| 2.3.5 | Point wiring including metallic switch box, sheet, switche, socket for 3 pin 6 Amp. Socket outlet point with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Concealed rigid steel conduit ISI marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit with required materials as per specification on same board | Each | 135.00 |
| 2.3.6 | Circuit Wiring | | |
| | Wiring for circuit wiring with PVC insulated cable FR with copper multi strand conductor ISI marked in Concealed rigid steel conduit of ISI marked suitable size including painting etc. as required as per specification | | |
| | a) 2x2.5 Sq.mm. | meter | 181.00 |
| | b) 4x2.5 Sq.mm. | meter | 229.00 |
| | c) 6x2.5 Sq.mm. | meter | 272.00 |
| | d) 8x2.5 Sq.mm. | meter | 315.00 |
| 2.4 | WIRING IN CONCEALED RIGID STEEL CONDUIT SYSTEM WITH MODULAR ACCESSORIES | | |
| | Point wiring including metallic switch box, sheet, switche, socket, lamp holders/ceiling roses etc with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Concealed rigid steel conduit ISI Marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit including painting, etc. as required as per specification for :- | | |
| 2.4.1 | Light Point/Fan Points. | | |
| | a) Short point | Each | 566.00 |
| | b) Medium point | Each | 1064.00 |
| | c) Long point | Each | 1636.00 |
| 2.4.2 | 3 Pin 6 Amp socket outlet on Separate Board | | |
| | a) Short point | Each | 615.00 |
| | b) Medium point | Each | 1113.00 |
| | c) Long point | Each | 1686.00 |
| 2.4.3 | Call Bell / Buzzer Points | | |
| | a) Short point | Each | 568.00 |
| | b) Medium point | Each | 1074.00 |
| | c) Long point | Each | 1650.00 |
| 2.4.4 | Twin Control light points | | |
| | a) Short point | Each | 566.00 |
| | b) Medium point | Each | 1110.00 |
| | c) Long point | Each | 1738.00 |

| S.No. | Descripton of Items | Unit | Rate |
|-------|---|------|---------|
| 2.4.5 | Point wiring including metallic switch box, sheet, switche, socket) for 3 pin 6 Amp. Socket outlet point with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Concealed rigid steel conduit ISI marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit with required materials as per specification on same board | Each | 241.00 |
| 2.5 | POWER WIRING IN SURFACE RIGID STEEL CONDUIT SYSTEM WITH FLUSH TYPE ACCESSORIES | | |
| | Point wiring including metallic switch box, sheet for 3 Pin 16 Amp. Socket Outlet Point With 4 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Surface rigid Steel Conduit ISI Marked of suitable size including painting etc. with 16 Amp. Switch & Socket / S.S.Combined 16 Amp. of ISI Marked and 4 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit as per specification for :- | | |
| 2.5.1 | On Separate Board | | |
| | A. Short Point | Each | 667.00 |
| | B. Medium Point | Each | 1208.00 |
| | C. Long Point | Each | 1852.00 |
| | D. Extra Long -I | Each | 2020.00 |
| | E. Extra Long -II | Each | 2647.00 |
| | F. Extra Long -III | Each | 3774.00 |
| 2.5.2 | Same board socket 16 Amp | Each | 183.00 |
| 2.5.3 | POWER WIRING IN SURFACE RIGID STEEL CONDUIT SYSTEM WITH MODULAR ACCESSORIES | | |
| | Point wiring including metallic switch box, sheet for 3 Pin 16 Amp. Socket Outlet Point With 4 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Surface rigid Steel Conduit ISI Marked of suitable size including painting etc. with 16 Amp. Switch & Socket / S.S.Combined 16 Amp. of ISI Marked and 4 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit as per specification for :- | | |
| | On Separate Board | | |
| | A. Short Point | Each | 968.00 |
| | B. Medium Point | Each | 1509.00 |
| | C. Long Point | Each | 2153.00 |
| | D. Extra Long -I | Each | 2656.00 |
| | E. Extra Long -II | Each | 3414.00 |
| | F. Extra Long -III | Each | 4074.00 |
| 2.5.4 | Same board socket 16 Amp | Each | 523.00 |

| S.No. | Descripton of Items | Unit | Rate |
|-------|---|-------|---------|
| 2.5.5 | POWER WIRING IN CONCEALED RIGID STEEL CONDUIT SYSTEM WITH FLUSH TYPE ACCESSORIES | | |
| | Point wiring including metallic switch box, sheet for 3 Pin 16 Amp. Socket Outlet Point with 4 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Concealed rigid Steel Conduit ISI Marked of suitable size including painting etc. with 16 Amp. Switch & Socket / S.S.Combined 16 Amp. of ISI Marked and 4 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit as per specification for :- | | |
| | On Separate Board | | |
| | A. Short Point | Each | 716.00 |
| | B. Medium Point | Each | 1307.00 |
| | C. Long Point | Each | 2009.00 |
| | D. Extra Long -I | Each | 2542.00 |
| | E. Extra Long -II | Each | 3028.00 |
| | F. Extra Long -III | Each | 3548.00 |
| 2.5.6 | Same board socket 16 Amp | Each | 198.00 |
| 2.5.7 | POWER WIRING IN CONCEALED RIGID STEEL CONDUIT SYSTEM WITH MODULAR ACCESSORIES | | |
| | Point wiring including metallic switch box, sheet for 3 Pin 16 Amp. Socket Outlet Point with 4 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Concealed rigid Steel Conduit ISI Marked of suitable size including painting etc. with 16 Amp. Switch & Socket / S.S.Combined 16 Amp. of ISI Marked and 4 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside conduit as per specification for :- | | |
| | On Separate Board | | |
| | A. Short Point | Each | 1017.00 |
| | B. Medium Point | Each | 1607.00 |
| | C. Long Point | Each | 2310.00 |
| | D. Extra Long -I | Each | 2842.00 |
| | E. Extra Long -II | Each | 3329.00 |
| | F. Extra Long -III | Each | 3848.00 |
| 2.5.8 | Same board socket 16 Amp | Each | 523.00 |
| 2.6 | SUPPLYING AND FIXING RIGID STEEL CONDUIT FOR SURFACE CONDUIT SYSTEM | | |
| | Supplying and fixing rigid steel conduit ISI marked alongwith the accessories on surface including painting etc. as required | | |
| 1 | H.G. Conduit 20 mm, wall thickness-1.6mm | meter | 109.00 |
| 2 | H.G. Conduit 25 mm, wall thickness-1.6mm | meter | 121.00 |
| 3 | H.G. Conduit 32 mm, wall thickness-1.6mm | meter | 131.00 |
| 4 | H.G. Conduit 40 mm, wall thickness-2.0mm | meter | 155.00 |
| 5 | H.G. Conduit 50 mm, wall thickness-2.0mm | meter | 199.00 |

| S.No. | Descripton of Items | Unit | Rate |
|-------|--|-------|--------|
| 2.7 | SUPPLYING AND FIXING RIGID STEEL CONDUIT FOR CONCEALED CONDUIT SYSTEM | | |
| | Supplying and fixing rigid steel conduit ISI marked alongwith the accessories in concealed system including cutting the wall and plastering & repainting the wall with matching colour to bring in its original condition as required | | |
| 1 | H.G. Conduit 20 mm, wall thickness-1.6mm | meter | 115.00 |
| 2 | H.G. Conduit 25 mm, wall thickness-1.6mm | meter | 126.00 |
| 3 | H.G. Conduit 32 mm, wall thickness-1.6mm | meter | 134.00 |
| 4 | H.G. Conduit 40 mm, wall thickness-2.0mm | meter | 154.00 |
| 5 | H.G. Conduit 50 mm, wall thickness-2.0mm | meter | 225.00 |
| | | | |
| 2.8 | METALLIC SWITCH BOXES | | |
| | Supplying and fixing factory fabricated hot dip galvanised switch box for normal flush type accessories of minimum 1.2 mm (18 swg gauge) thickness with earth terminal stud with nut and washer, with 3 mm thick synthetic phenollic resin bonded laminated sheet conforming to grade P-I of IS:2036-1974 on surface / concealed including painting etc. as required as per specification: | | |
| 1 | MSBox 100 mm X 100 mm X60mm deep | Each | 84.00 |
| 2 | MS Box 200 mm X 150 mm X 60 mm Deep | Each | 136.00 |
| 3 | MS Box 180 mm X 100 mm X 60 mm Deep | Each | 104.00 |
| 4 | MS Box 200 mm X 125 mm X 60 mm Deep | Each | 123.00 |
| 5 | MS Box 200 mm X 250 mm X 60 mm Deep | Each | 172.00 |
| 6 | MS Box 250 mm X 300 mm X 60 mm Deep | Each | 227.00 |
| 7 | MS Box 200mm X 300 mm X 60 mm Deep | Each | 198.00 |
| | | | |
| 2.9 | MODULAR SWITCH BOXES | | |
| | Supplying and fixing of approved make modular type metal box with modular frame/ base plate and cover plate including fixing in concealed / surface excluding switch,socket etc. as required for:- | | |
| 1 | 1 Or 2 Module | Each | 104.00 |
| 2 | 4 Module | Each | 173.00 |
| 3 | 6 Module | Each | 176.00 |
| 4 | 8 Module | Each | 202.00 |
| 5 | 12 Module | Each | 255.00 |

CHAPTER -3

Wiring in surface rigid P.V.C. casing capping system

| S.No. | Description of Items | Unit | Rate |
|--------------|--|-------------|-------------|
| 3.1 | WIRING IN SURFACE RIGID PVC CASING AND CAPPING SYSTEM WITH FLUSH TYPE ACCESSORIES | | |
| | Point wiring including metallic switch box, sheet, switch, socket, lamp holders/ceiling roses etc with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Surface rigid P.V.C. CASING AND CAPPING ISI Marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside casing & capping including painting etc. as required as per specification for :- | | |
| 3.1.1 | Light Point/Fan Points. | | |
| 1 | a) Short point | Each | 277.00 |
| 2 | b) Medium point | Each | 495.00 |
| 3 | c) Long point | Each | 753.00 |
| | | | |
| 3.1.2 | 3 Pin 6 Amp socket outlet on Separate Board | | |
| 1 | a) Short point | Each | 288.00 |
| 2 | b) Medium point | Each | 505.00 |
| 3 | c) Long point | Each | 764.00 |
| | | | |
| 3.1.3 | Call Bell / Buzzer Points | | |
| 1 | a) Short point | Each | 284.00 |
| 2 | b) Medium point | Each | 502.00 |
| 3 | c) Long point | Each | 760.00 |
| | | | |
| 3.1.4 | Twin Control light points | | |
| 1 | a) Short point | Each | 325.00 |
| 2 | b) Medium point | Each | 582.00 |
| 3 | c) Long point | Each | 892.00 |
| | | | |
| 3.1.5 | Point wiring including metallic switch box, sheet, switch, socket for 3 pin 6 Amp. Socket outlet point with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Surface rigid P.V.C. CASING AND CAPPING ISI marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside casing & capping with required materials as per specification on same board | Each | 135.00 |
| | | | |
| 3.1.6 | Circuit Wiring | | |
| | Wiring for circuit wiring with PVC insulated cable FR with copper multi strand conductor ISI marked in Surface rigid P.V.C. CASING AND CAPPING of ISI marked suitable size including painting etc. as required as per specification | | |
| 1 | a) 2x2.5 Sq.mm. | meter | 90.00 |
| 2 | b) 4x2.5 Sq.mm. | meter | 138.00 |
| 3 | c) 6x2.5 Sq.mm. | meter | 180.00 |
| 4 | d) 8x2.5 Sq.mm. | meter | 222.00 |
| | | | |

| S.No. | Description of Items | Unit | Rate |
|-------|---|------|---------|
| 3.2 | WIRING IN SURFACE RIGID PVC CASING AND CAPPING SYSTEM WITH MODULAR ACCESSORIES | | |
| | Point wiring including metallic switch box, sheet, switche, socket, lamp holders/ceiling roses etc with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Surface rigid P.V.C. CASING AND CAPPING ISI Marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside casing & capping including painting etc. as required as per specification for :- | | |
| 3.2.1 | Light Point/Fan Points. | | |
| 1 | a) Short point | Each | 327.00 |
| 2 | b) Medium point | Each | 545.00 |
| 3 | c) Long point | Each | 804.00 |
| | | | |
| 3.2.2 | 3 Pin 6 Amp socket outlet on Separate Board | | |
| 1 | a) Short point | Each | 377.00 |
| 2 | b) Medium point | Each | 569.00 |
| 3 | c) Long point | Each | 813.00 |
| | | | |
| 3.2.3 | Call Bell / Buzzer Points | | |
| 1 | a) Short point | Each | 330.00 |
| 2 | b) Medium point | Each | 548.00 |
| 3 | c) Long point | Each | 806.00 |
| | | | |
| 3.2.4 | Twin Control light points | | |
| 1 | a) Short point | Each | 328.00 |
| 2 | b) Medium point | Each | 584.00 |
| 3 | c) Long point | Each | 894.00 |
| | | | |
| 3.2.5 | Point wiring including metallic switch box, sheet, switche, socket for 3 pin 6 Amp. Socket outlet point with 1.5 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Surface rigid P.V.C. CASING AND CAPPING ISI marked of suitable size and 1.5 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside casing & capping with required materials as per specification on same board | Each | 257.00 |
| | | | |
| 3.3 | Power Wiring in PVC Casing Capping System with Flush Type Accessories | | |
| | Point wiring including metallic switch box, sheet for 3 Pin 16 Amp. Socket Outlet Point With 4 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Surface rigid P.V.C.CASING AND CAPPING ISI Marked of suitable size including painting etc. with 16 Amp. F.T. Switch & Socket / S.S.Combined 16 Amp. of ISI Marked and 4 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside capping as per specification for :- | | |
| 3.3.1 | On Separate Board | | |
| | A. Short Point | Each | 516.00 |
| | B. Medium Point | Each | 863.00 |
| | C. Long Point | Each | 1280.00 |

| S.No. | Description of Items | Unit | Rate |
|--------------|---|-------------|-------------|
| | D. Extra Long -I | Each | 1606.00 |
| | E. Extra Long -II | Each | 2135.00 |
| | F. Extra Long -III | Each | 2733.00 |
| 3.3.2 | Same board socket 16 Amps | Each | 214.00 |
| | | | |
| 3.3.3 | Power Wiring in PVC Casing Capping System with Mobular Accessories | | |
| | Point wiring including metallic switch box, sheet for 3 Pin 16 Amp. Socket Outlet Point With 4 Sq. mm. PVC insulated cable FR with copper multi strand conductor ISI marked in Surface rigid P.V.C.CASING AND CAPPING ISI Marked of suitable size including painting etc. with 16 Amp. F.T. Switch & Socket / S.S.Combined 16 Amp. of ISI Marked and 4 Sq. mm. PVC insulated copper earth continuity conductor of green colour inside capping as per specification for :- | | |
| | On Separate Board | | |
| | A. Short Point | Each | 817.00 |
| | B. Medium Point | Each | 1163.00 |
| | C. Long Point | Each | 1580.00 |
| | D. Extra Long -I | Each | 1907.00 |
| | E. Extra Long -II | Each | 2374.00 |
| | F. Extra Long -III | Each | 2936.00 |
| | | | |
| 3.3.4 | Same board socket 16 Amps | Each | 539.00 |
| | | | |

CHAPTER - 4

Wiring in existing/conduit/P.V.C. casing capping system

| S.No. | Description of Items | Unit | Rate |
|--------------|---|-------------|-------------|
| 4.1 | Point Wiring in Existing Surface rigid Conduit System with Flush Type Accessories. | | |
| | Point wiring (excluding metallic switch box, but including sheet, switches, sockets,lamp holders/ceiling roses etc) with 1.5 Sq. mm. PVC insulated cable with Copper Stranded Conductor ISI marked in existing surface rigid conduit ISI Marked of suitable size with PVC insulated copper earth continuity conductor of green colour as per specification including earthing of regulator etc as required for :- | | |
| 4.1.1 | Light Point / Fan Points. | | |
| 1 | a) Short point | Each | 212.00 |
| 2 | b) Medium point | Each | 381.00 |
| 3 | c) Long point | Each | 579.00 |
| 4.1.2 | 3 Pin 6 Amp socket outlet on Serarate Board | | |
| 1 | a) Short point | Each | 222.00 |
| 2 | b) Medium point | Each | 392.00 |
| 3 | c) Long point | Each | 590.00 |
| 4.1.3 | Call Bell / Buzzer Points | | |
| 1 | a) Short point | Each | 219.00 |
| 2 | b) Medium point | Each | 388.00 |
| 3 | c) Long point | Each | 586.00 |
| 4.1.4 | Twin Control light points | | |
| 1 | a) Short point | Each | 260.00 |
| 2 | b) Medium point | Each | 468.00 |
| 3 | c) Long point | Each | 717.00 |
| 4.2 | POINT WIRING IN EXISTING SURFACE RIGID CONDUIT SYSTEM WITH MODULAR ACCESSORIES | | |
| | Point wiring (excluding metallic switch box, but including sheet, switches, sockets,lamp holders/ceiling roses etc) with 1.5 Sq. mm. PVC insulated cable with Copper Stranded Conductor ISI marked in existing surface rigid conduit ISI Marked of suitable size with PVC insulated copper earth continuity conductor of green colour as per specification including earthing of regulator etc as required for :- | | |
| 4.2.1 | Light Point / Fan Points. | | |
| 1 | a) Short point | Each | 270.00 |
| 2 | b) Medium point | Each | 440.00 |
| 3 | c) Long point | Each | 638.00 |
| 4.2.2 | 3 Pin 6 Amp socket outlet on Serarate Board | | |
| 1 | a) Short point | Each | 320.00 |
| 2 | b) Medium point | Each | 489.00 |
| 3 | c) Long point | Each | 687.00 |

| S.No. | Description of Items | Unit | Rate |
|-------|--|-------|--------|
| 4.2.3 | Call Bell / Buzzer Points | | |
| 1 | a) Short point | Each | 273.00 |
| 2 | b) Medium point | Each | 443.00 |
| 3 | c) Long point | Each | 640.00 |
| | | | |
| 4.2.4 | Twin Control light points | | |
| 1 | a) Short point | Each | 254.00 |
| 2 | b) Medium point | Each | 447.00 |
| 3 | c) Long point | Each | 680.00 |
| | | | |
| 4.3 | CIRCUIT WIRING IN EXISTING CONDUIT / PVC CASING CAPPING | | |
| | Supplying and drawing single core PVC insulated cable FR with copper multi strand conductor ISI marked in existing rigid conduit in surface or concealed as per specification. | | |
| 4.3.1 | 1.5 Sq mm cable | | |
| 1 | 1 X 1.5 sq mm | meter | 24.00 |
| 2 | 2 X 1.5 sq mm | meter | 48.00 |
| 3 | 3 X 1.5 sq mm | meter | 72.00 |
| 4 | 4 X 1.5 sq mm | meter | 96.00 |
| 5 | 5 X 1.5 sq mm | meter | 120.00 |
| 6 | 6 X 1.5 sq mm | meter | 144.00 |
| 7 | 7 X 1.5 sq mm | meter | 168.00 |
| 8 | 8 X 1.5 sq mm | meter | 192.00 |
| 9 | 9 X 1.5 sq mm | meter | 216.00 |
| 10 | 10 X 1.5 sq mm | meter | 240.00 |
| | | | |
| 4.3.2 | 2.5 Sq mm cable | | |
| 1 | 1 X 2.5 sq mm | meter | 32.00 |
| 2 | 2 X 2.5 sq mm | meter | 64.00 |
| 3 | 3 X 2.5 sq mm | meter | 96.00 |
| 4 | 4 X 2.5 sq mm | meter | 128.00 |
| 5 | 5 X 2.5 sq mm | meter | 160.00 |
| 6 | 6 X 2.5 sq mm | meter | 191.00 |
| 7 | 7 X 2.5 sq mm | meter | 223.00 |
| 8 | 8 X 2.5 sq mm | meter | 255.00 |
| 9 | 9 X 2.5 sq mm | meter | 287.00 |
| 10 | 10 X 2.5 sq mm | meter | 319.00 |
| | | | |
| 4.3.3 | 4.00 Sq mm cable | | |
| 1 | 1 X 4.00 sq mm | meter | 44.00 |
| 2 | 2 X 4.00 sq mm | meter | 88.00 |
| 3 | 3 X 4.00 sq mm | meter | 131.00 |
| 4 | 4 X 4.00 sq mm | meter | 175.00 |
| 5 | 5 X 4.00 sq mm | meter | 219.00 |
| 6 | 6 X 4.00 sq mm | meter | 263.00 |
| 7 | 7 X 4.00 sq mm | meter | 307.00 |
| 8 | 8 X 4.00 sq mm | meter | 351.00 |
| 9 | 9 X 4.00 sq mm | meter | 394.00 |
| 10 | 10 X 4.00 sq mm | meter | 438.00 |
| | | | |
| 4.3.4 | 6.00 Sq mm cable | | |
| 1 | 1 X 6.00 sq mm | meter | 58.00 |

| S.No. | Description of Items | Unit | Rate |
|--------------|-----------------------------|-------------|-------------|
| 2 | 2 X 6.00 sq mm | meter | 116.00 |
| 3 | 3 X 6.00 sq mm | meter | 173.00 |
| 4 | 4 X 6.00 sq mm | meter | 231.00 |
| 5 | 5 X 6.00 sq mm | meter | 289.00 |
| 6 | 6 X 6.00 sq mm | meter | 347.00 |
| 7 | 7 X 6.00 sq mm | meter | 405.00 |
| 8 | 8 X 6.00 sq mm | meter | 462.00 |
| 9 | 9 X 6.00 sq mm | meter | 520.00 |
| 10 | 10 X 6.00 sq mm | meter | 548.00 |

CHAPTER - 5

Sub Mains in surface/concealed rigid steel conduit system.

| S.No. | Description of Items | Unit | Rate |
|-------|---|-------|---------|
| 5.1 | SUB MAINS IN SURFACE RIGID STEEL CONDUIT IN COPPER CONDUCTOR | | |
| | Wiring for sub-mains with PVC insulated cable FR with copper multi strand conductor ISI marked in surface rigid steel ISI marked conduit of suitable size(conduit included) including connection painting etc ,as required as per specification | | |
| 5.1.1 | 2 WIRE SUB MAIN | | |
| 1 | 2.5 sq mm cable in 20 mm conduit | meter | 191.00 |
| 2 | 4.0 sq mm cable in 20 mm conduit | meter | 217.00 |
| 3 | 6.0 sq mm cable in 25 mm conduit | meter | 261.00 |
| 4 | 10.0 sq mm cable in 25 mm conduit | meter | 342.00 |
| 5 | 16.0 sq mm cable in 25 mm conduit | meter | 458.00 |
| 6 | 25.0 sq mm cable in 32 mm conduit | meter | 650.00 |
| 7 | 35.0 sq mm cable in 40 mm conduit | meter | 855.00 |
| 8 | 50.0 sq mm cable in 50 mm conduit | meter | 1252.00 |
| 5.1.2 | 3 WIRE SUB MAIN | | |
| 1 | 2.5 sq mm cable in 20 mm conduit | meter | 210.00 |
| 2 | 4.0 sq mm cable in 20 mm conduit | meter | 253.00 |
| 3 | 6.0 sq mm cable in 25 mm conduit | meter | 311.00 |
| 4 | 10.0 sq mm cable in 25 mm conduit | meter | 433.00 |
| 5 | 16.0 sq mm cable in 25 mm conduit | meter | 606.00 |
| 6 | 25.0 sq mm cable in 32 mm conduit | meter | 889.00 |
| 7 | 35.0 sq mm cable in 40 mm conduit | meter | 1187.00 |
| 8 | 50.0 sq mm cable in 50 mm conduit | meter | 1756.00 |
| 5.1.3 | 3 1/2 WIRE SUB MAIN | | |
| 1 | 3 x 2.5 + 1 x 1.5 sq mm cable in 20 mm conduit | meter | 231.00 |
| 2 | 3 x 4.0 + 1 x 2.5 sq mm cable in 25 mm conduit | meter | 292.00 |
| 3 | 3 x 6.0 + 1 x 4.0 sq mm cable in 25 mm conduit | meter | 350.00 |
| 4 | 3 x 10.0 + 1 x 6.0 sq mm cable in 25 mm conduit | meter | 487.00 |
| 5 | 3 x 16.0 + 1 x 10.0 sq mm cable in 32 mm conduit | meter | 708.00 |
| 6 | 3 x 25.0 + 1 x 16.0 sq mm cable in 50 mm conduit | meter | 461.00 |
| 7 | 3 x 35.0 + 1 x 16.0 sq mm cable in 50 mm conduit | meter | 1380.00 |
| 5.1.4 | 4 WIRE SUB MAIN | | |
| 1 | 2.5 sq mm cable in 20 mm conduit | meter | 240.00 |
| 2 | 4.0 sq mm cable in 25 mm conduit | meter | 305.00 |
| 3 | 6.0 sq mm cable in 25 mm conduit | meter | 365.00 |
| 4 | 10.0 sq mm cable in 25 mm conduit | meter | 528.00 |
| 5 | 16.0 sq mm cable in 32 mm conduit | meter | 763.00 |
| 6 | 25.0 sq mm cable in 40 mm conduit | meter | 1153.00 |
| 7 | 35.0 sq mm cable in 50 mm conduit | meter | 1560.00 |

| S.No. | Description of Items | Unit | Rate |
|-------|---|-------|---------|
| 5.2 | SUB-MAIN IN CONCEALED RIGID STEEL CONDUIT IN COPPER CONDUCTOR | | |
| | Wiring for sub-mains with PVC insulated cable FR with copper multi strand conductor ISI marked in recessed / concealed rigid steel ISI marked conduit of suitable size (Conduit included) including connection painting etc, as required as per specification | | |
| 5.2.1 | 2 WIRE SUB-MAIN | | |
| 1 | 2.5 sq mm cable in 20 mm conduit | meter | 205.00 |
| 2 | 4.0 sq mm cable in 20 mm conduit | meter | 230.00 |
| 3 | 6.0 sq mm cable in 25 mm conduit | meter | 274.00 |
| 4 | 10.0 sq mm cable in 25 mm conduit | meter | 355.00 |
| 5 | 16.0 sq mm cable in 25 mm conduit | meter | 468.00 |
| 6 | 25.0 sq mm cable in 32 mm conduit | meter | 660.00 |
| 7 | 35.0 sq mm cable in 40 mm conduit | meter | 866.00 |
| 8 | 50.0 sq mm cable in 50 mm conduit | meter | 1261.00 |
| | | | |
| 5.2.2 | 3 WIRE SUB-MAIN | | |
| 1 | 2.5 sq mm cable in 20 mm conduit | meter | 227.00 |
| 2 | 4.0 sq mm cable in 20 mm conduit | meter | 266.00 |
| 3 | 6.0 sq mm cable in 25 mm conduit | meter | 325.00 |
| 4 | 10.0 sq mm cable in 25 mm conduit | meter | 447.00 |
| 5 | 16.0 sq mm cable in 25 mm conduit | meter | 616.00 |
| 6 | 25.0 sq mm cable in 32 mm conduit | meter | 899.00 |
| 7 | 35.0 sq mm cable in 40 mm conduit | meter | 1195.00 |
| 8 | 50.0 sq mm cable in 50 mm conduit | meter | 1764.00 |
| | | | |
| 5.2.3 | 3 1/2 WIRE SUB-MAIN | | |
| 1 | 3 x 2.5 + 1 x 1.5 sq mm cable in 20 mm conduit | meter | 241.00 |
| 2 | 3 x 4.0 + 1 x 2.5 sq mm cable in 25 mm conduit | meter | 302.00 |
| 3 | 3 x 6.0 + 1 x 4.0 sq mm cable in 25 mm conduit | meter | 360.00 |
| 4 | 3 x 10.0 + 1 x 6.0 sq mm cable in 25 mm conduit | meter | 497.00 |
| 5 | 3 x 16.0 + 1 x 10.0 sq mm cable in 32 mm conduit | meter | 705.00 |
| 6 | 3 x 25.0 + 1 x 16.0 sq mm cable in 50 mm conduit | meter | 458.00 |
| 7 | 3 x 35.0 + 1 x 16.0 sq mm cable in 50 mm conduit | meter | 1378.00 |
| | | | |
| 5.2.4 | 4 WIRE SUB-MAIN | | |
| 1 | 2.5 sq mm cable in 20 mm conduit | meter | 238.00 |
| 2 | 4.0 sq mm cable in 20 mm conduit | meter | 303.00 |
| 3 | 6.0 sq mm cable in 25 mm conduit | meter | 363.00 |
| 4 | 10.0 sq mm cable in 25 mm conduit | meter | 526.00 |
| 5 | 16.0 sq mm cable in 25 mm conduit | meter | 762.00 |
| 6 | 25.0 sq mm cable in 32 mm conduit | meter | 1151.00 |
| 7 | 35.0 sq mm cable in 40 mm conduit | meter | 1559.00 |

| CHAPTER - 6 | | | |
|--------------------------------------|--|-------|--------|
| Rewiring in existing conduit. | | | |
| S.No. | Description of Items | Unit | RATE |
| 6 | REWIRING IN EXISTING RIGID STEEL / PVC NON METALLIC CONDUIT WITH COPPER CONDUCTOR | | |
| | Rewiring in existing surface /concealed rigid steel /PVC non metallic conduit with PVC insulated cable FR with copper multi strand conductor ISI marked and other materials as required including replacement of worn-out /damaged/missing material, painting etc. complete as per specification. This shall include all work, arrangement required for wiring but shall exclude switch, ceiling rose fitting etc. | | |
| 6.1 | Light /Fan/3Pin 6AMP socket outlet on separate board / Call Bell/ Buzzer Points :- | | |
| 1 | Short Point | Each | 171.00 |
| 2 | Medium Point | Each | 341.00 |
| 3 | Long Point | Each | 539.00 |
| 6.2 | Twin Control Light Point | | |
| 1 | Short Point | Each | 194.00 |
| 2 | Medium Point | Each | 386.00 |
| 3 | Long Point | Each | 620.00 |
| 6.3 | Circuit Wiring | | |
| 1 | 2 X 1.5 Sq mm. | meter | 28.00 |
| 2 | 2 X 2.5 Sq mm. | meter | 71.00 |
| 6.4 | 3 Pin 5 Amp Socket Outlet Point on Same Board | | |
| 1 | 3 Pin 5 Amp Socket Outlet Point on Same Board with flush type accessires | Each | 171.00 |
| 2 | 3 Pin 5 Amp Socket Outlet Point on Same Board with modular accessires | Each | 241.00 |
| 6.5 | 2 WIRE SUB-MAIN | | |
| 1 | 2 X 2.5 Sq mm | meter | 55.00 |
| 2 | 2 X 4.00 Sq mm | meter | 79.00 |
| 3 | 2 X 6.00 Sq mm | meter | 107.00 |
| 4 | 2 X 10.0 Sq mm | meter | 183.00 |
| 5 | 2 X 16.00 Sq mm | meter | 289.00 |
| 6 | 2 X 25.00 Sq mm | meter | 459.00 |
| 7 | 2 X 35.00 Sq mm | meter | 627.00 |
| 8 | 2 X 50.00 Sq mm | meter | 953.00 |
| 6.6 | 3 WIRE SUB-MAIN | | |
| 1 | 3 X 2.5 Sq mm | meter | 76.00 |
| 2 | 3 X 4.0 Sq mm | meter | 112.00 |
| 3 | 3 X 6.0 Sq mm | meter | 155.00 |
| 4 | 3 X 10.0 Sq mm | meter | 269.00 |
| 5 | 3 X 16.0 Sq mm | meter | 427.00 |
| 6 | 3 X 25.0 Sq mm | meter | 682.00 |
| 7 | 3 X 35.0 Sq mm | meter | 935.00 |

| S.No. | Description of Items | Unit | RATE |
|-------|------------------------------|-------|---------|
| 8 | 3 X 50.0 Sq mm | meter | 1423.00 |
| 6.7 | 3 1/2 WIRE SUB-MAIN | | |
| 1 | a) 3 x 2.5 + 1 x 1.5 sq mm | meter | 89.00 |
| 2 | b) 3 x 4.0 + 1 x 2.5 sq mm | meter | 133.00 |
| 3 | c) 3 x 6.0 + 1 x 4.0 sq mm | meter | 188.00 |
| 4 | d) 3 x 10.0 + 1 x 6.0 sq mm | meter | 316.00 |
| 5 | e) 3 x 16.0 + 1 x 10.0 sq mm | meter | 512.00 |
| 6 | f) 3 x 25.0 + 1 x 16.0 sq mm | meter | 214.00 |
| 7 | g) 3 x 35.0 + 1 x 16.0 sq mm | meter | 1072.00 |
| 6.8 | 4 WIRE SUB-MAIN | | |
| 1 | 4 X 2.5 sq mm | meter | 97.00 |
| 2 | 4 X 4.0 sq mm | meter | 145.00 |
| 3 | 4 X 6.0 sq mm | meter | 202.00 |
| 4 | 4 X 10.0 sq mm | meter | 354.00 |
| 5 | 4 X 16.0 sq mm | meter | 565.00 |
| 6 | 4 X 25.0 sq mm | meter | 905.00 |
| 7 | 4 X 35.0 sq mm | meter | 1242.00 |
| 8 | 4 X 50.00 sq mm | meter | 1893.00 |

| CHAPTER - 7 | | | |
|-------------------------------------|--|------|----------|
| Control switch gear/Bus bar. | | | |
| S.No. | Description of Items | Unit | Rate |
| 7.1 | Supplying of ISI Marked Switch Fuse Unit (rewirable type) triple pole with neutral link ,415 Volt having conduit / cable gland entry with two earthing terminals confirming to IS : 13947(Part I & III) . | | |
| 1 | 16 Amps. | Each | 1171.00 |
| 2 | 32 Amps. | Each | 1625.00 |
| 3 | 63 Amps. | Each | 3406.00 |
| 4 | 100 Amps. | Each | 6346.00 |
| 5 | 200 Amps. | Each | 10296.00 |
| 6 | 320 Amps. | Each | 14222.00 |
| 7.2 | Supplying of ISI Marked iron clad / metal clad triple pole and neutral switch fuse unit with two earthing terminals & without HRC fuses -- | | |
| 1 | 16 Amps. 415/500 Volts. | Each | 1070.00 |
| 2 | 32 Amps. 415/500 Volts. | Each | 1494.00 |
| 3 | 63 Amps. 415/500 Volts. | Each | 3197.00 |
| 4 | 100 Amps. 415/500 Volts. | Each | 5970.00 |
| 5 | 200 Amps. 415/500 Volts. | Each | 8533.00 |
| 6 | 400 Amps. 415/500 Volts. | Each | 16236.00 |
| 7 | 500 Amps. 415/500 Volts. | Each | 19719.00 |
| 8 | 600 Amps. 415/500 Volts. | Each | 23544.00 |
| 7.3 | Supplying of ISI Marked Change over switches in sheet encloser confirming to IS : 4064 / IS : 13947 (part I & III) with side handle operated 4 pole with two earthing terminals | | |
| 1 | 16 Amps. 415/500 Volts. (on load) | Each | 1888.00 |
| 2 | 32 Amps. 415/500 Volts.(on load) | Each | 2271.00 |
| 3 | 63 Amps. 415/500 Volts.(on load) | Each | 4619.00 |
| 4 | 100 Amps. 415/500 Volts.(on load) | Each | 9292.00 |
| 5 | 200 Amps. 415/500 Volts.(off load) | Each | 13296.00 |
| 6 | 320 Amps. 415/500 Volts.(off load) | Each | 16913.00 |
| 7 | 400 Amps. 415/500 Volts.(off load) | Each | 22057.00 |
| 8 | 630 Amps. 415/500 Volts.(off load) | Each | 33851.00 |
| 9 | 800 Amps. 415/500 Volts.(off load) | Each | 42205.00 |
| 7.4 | Supplying of ISI Marked On-Load Change over switches panel mouniting type confirming to IS : 13947 (part I & III) with front operated 4 pole, 415 V with two earthing terminals if required. | | |
| 1 | 40 Amps. (open - execution) | Each | 4147.00 |
| 2 | 63 Amps. (open - execution) | Each | 4368.00 |
| 3 | 100 Amps. (open - execution) | Each | 5575.00 |
| 4 | 125 Amps. .(open - execution) | Each | 8336.00 |
| 5 | 160 Amps. (open - execution) | Each | 8631.00 |
| 6 | 200 Amps. (open - execution) | Each | 10619.00 |
| 7 | 250 Amps. (open - execution) | Each | 15178.00 |
| 8 | 320 Amps. .(open - execution) | Each | 16050.00 |
| 9 | 400 Amps. .(open - execution) | Each | 23376.00 |

| S.No. | Description of Items | Unit | Rate |
|-------|---|------|----------|
| 10 | 630 Amps. .(open - execution) | Each | 27051.00 |
| 11 | 800 Amps. .(open - execution) | Each | 38967.00 |
| 12 | 40 Amps. (With enclosure) | Each | 5611.00 |
| 13 | 63 Amps. (With enclosure) | Each | 6083.00 |
| 14 | 100 Amps.(With enclosure) | Each | 7224.00 |
| 15 | 125 Amps. .(With enclosure) | Each | 10194.00 |
| 16 | 160 Amps. .(With enclosure) | Each | 12387.00 |
| 17 | 200 Amps. .(With enclosure) | Each | 13666.00 |
| 18 | 320 Amps. .(With enclosure) | Each | 20347.00 |
| 19 | 400 Amps. .(With enclosure) | Each | 28133.00 |
| 20 | 630 Amps. .(With enclosure) | Each | 32286.00 |
| 21 | 800 Amps. .(With enclosure) | Each | 45820.00 |
| | | | |
| 7.5 | Supplying of ISI Marked Automatic Transfer Switches (ATS) confirming to IEC : 60947-1 & IEC : 60947-6-1 with automatic inbuilt time delay 4 pole, 415 V with two earthing terminals if | | |
| 1 | 100 Amp (open execution) | Each | 32734.00 |
| 2 | 160 Amp (open execution) | Each | 42367.00 |
| 3 | 200 Amp (open execution) | Each | 52382.00 |
| 4 | 315 Amp (open execution) | Each | 62002.00 |
| 5 | 400 Amp (open execution) | Each | 75973.00 |
| 6 | 630 Amp (open execution) | Each | 93792.00 |
| 7 | 100 Amp (with enclosure) | Each | 35823.00 |
| 8 | 160 Amp (with enclosure) | Each | 45450.00 |
| 9 | 200 Amp (with enclosure) | Each | 55465.00 |
| 10 | 315 Amp (with enclosure) | Each | 65098.00 |
| 11 | 400 Amp (with enclosure) | Each | 81949.00 |
| 12 | 630 Amp (with enclosure) | Each | 99762.00 |
| | | | |
| 7.6 | Supplying of Two Way Centre off MCB Changeover Switch confirming to IS:13947 (part III) / IEC : 60947-3, 2/4 pole ,AC 240 / 415 Volt, 50 Hz | | |
| 1 | 25 Amps, Double Pole (DP) | Each | 920.00 |
| 2 | 40 Amps, Double Pole (DP) | Each | 1249.00 |
| 3 | 25 Amps, Four Pole (FP) | Each | 1607.00 |
| 4 | 40 Amps, Four Pole (FP) | Each | 2438.00 |
| | | | |
| 7.7 | Supplying of ISI Marked Switch Disconnecter Fuse (SDF), open execution (Panel mounting cubicle type) confirming to IS:13947 (part I & III) 2 pole , AC -23A ,50 Hz , 415 Volt with 2 HBC fuses complete. | | |
| 1 | 32 Amps | Each | 1727.00 |
| 2 | 63 Amps | Each | 2307.00 |
| 3 | 100 Amps | Each | 4356.00 |
| 4 | 125 Amps | Each | 4798.00 |
| | | | |

| S.No. | Description of Items | Unit | Rate |
|-------|---|------|----------|
| 7.8 | Supplying of ISI Marked Switch Disconnecter Fuse (SDF), in sheet steel enclosure (Panel mounting cubicle type) confirming to IS:13947 (part I & III) 2 pole , AC -23A ,50 Hz , 415 Volt with 2 HBC fuses complete. | | |
| 1 | 32 Amps | Each | 2295.00 |
| 2 | 63 Amps | Each | 2862.00 |
| 3 | 100 Amps | Each | 4948.00 |
| 4 | 125 Amps | Each | 5390.00 |
| 7.9 | Supplying of ISI Marked Switch Disconnecter Fuse (SDF), open execution (Panel mounting cubicle type) confirming to IS:13947 (part I & III) 3 pole and neutral , AC -23A ,50 Hz , 415 Volt with 3 HBC fuses complete. | | |
| 1 | 32 Amps | Each | 1996.00 |
| 2 | 63 Amps | Each | 2671.00 |
| 3 | 100 Amps | Each | 4679.00 |
| 4 | 125 Amps | Each | 5521.00 |
| 5 | 160 Amps | Each | 7123.00 |
| 6 | 200 Amps | Each | 7469.00 |
| 7 | 250 Amps | Each | 8784.00 |
| 8 | 320 Amps | Each | 11569.00 |
| 9 | 400 Amps | Each | 13744.00 |
| 10 | 630 Amps | Each | 21841.00 |
| 7.10 | Supplying of ISI Marked Switch Disconnecter Fuse (SDF), in sheet steel enclosure (Panel mounting cubicle type) confirming to IS:13947 (part I & III) 3 pole and neutral , AC -23A ,50 Hz , 415 Volt with 3 HBC fuses complete. | | |
| 1 | 32 Amps | Each | 2964.00 |
| 2 | 63 Amps | Each | 3502.00 |
| 3 | 100 Amps | Each | 6310.00 |
| 4 | 125 Amps | Each | 6782.00 |
| 5 | 160 Amps | Each | 9310.00 |
| 6 | 200 Amps | Each | 9740.00 |
| 7 | 250 Amps | Each | 10732.00 |
| 8 | 320 Amps | Each | 13696.00 |
| 9 | 400 Amps | Each | 15644.00 |
| 10 | 630 Amps | Each | 26000.00 |
| 7.11 | Supplying of ISI Marked Direct On-Line Starters confirming to IS : 13947-4 with suitable over load relay range and contactor size, 415 V , 3 -Phase with two earthing terminals | | |
| 1 | i) 0.75 / 1.0 / 2.0 / 3.0 / 5.0 / 7.5 HP | Each | 1482.00 |
| 2 | ii) 10 HP | Each | 1601.00 |
| 7.12 | Supplying of ISI Marked Automatic Star-Delta Starters confirming to IS : 13947-4 with suitable over load relay range and contactor size & timer 415 V , 3 -Phase with two earthing terminals | | |
| 1 | i) 10.0 HP | Each | 5498.00 |
| 2 | ii) 12.5 / 15.0 HP | Each | 5737.00 |
| 3 | iii) 20 HP | Each | 6693.00 |
| 4 | iv) 25 HP | Each | 6812.00 |

| S.No. | Description of Items | Unit | Rate |
|-------|---|------|----------|
| 5 | v) 30 HP | Each | 8724.00 |
| 6 | vi) 35 HP | Each | 10696.00 |
| 7 | vii) 50 HP | Each | 16253.00 |
| 8 | viii) 60 HP | Each | 23305.00 |
| 9 | ix) 75 HP | Each | 26292.00 |
| | | | |
| 7.13 | Supplying & fixing of High Breaking Capacity (HBC) Fuse Links bolted connection type as per IS : 13703 : 1993 & IEC : 60269 :1986 with 80 kA breaking capacity of approved make | | |
| 1 | 20 Amp. to 32 Amp | Each | 48.00 |
| 2 | 36 Amp to 63 Amp | Each | 75.00 |
| 3 | 80 Amp to 125 Amp | Each | 167.00 |
| 4 | 160 Amp to 250 Amp | Each | 251.00 |
| 5 | 300 Amp to 315 Amp | Each | 353.00 |
| 6 | 400 Amp to 500 Amp | Each | 753.00 |
| 7 | 630 Amp | Each | 1440.00 |
| | | | |
| 7.14 | Supplying & fixing of High Breaking Capacity (HBC) Fuse Links knife (DIN) type as per IS : 13703 : 1993 & IEC : 60269 :1986 with 80 kA breaking capacity of approved make | | |
| 1 | 20 Amp. to 100 Amp | Each | 221.00 |
| 2 | 125 Amp to 160 Amp | Each | 245.00 |
| 3 | 200 Amp to 315 Amp | Each | 478.00 |
| 4 | 350 Amp to 400 Amp | Each | 574.00 |
| 5 | 425 Amp to 630 Amp | Each | 837.00 |
| | | | |
| 7.15 | Supplying & fixing of ISI marked Porcelain Rewireable type fuse carrier & base unit of approved make & confirming to IS: 2086-1993 | | |
| 1 | 16 Amps./240 Volts | Each | 33.00 |
| 2 | 16 Amps./415 Volts or 32 Amps/240 Volts | Each | 45.00 |
| 3 | 32 Amps /415 Volts | Each | 93.00 |
| 4 | 63 Amps /415 Volts | Each | 146.00 |
| 5 | 100 Amps /415 Volts | Each | 299.00 |
| 6 | 200 Amps /415 Volts | Each | 849.00 |
| 7 | 300 Amps /415 Volts | Each | 1016.00 |
| | | | |
| 7.16 | BUSBAR CHAMBERS | | |
| | Supplying of metal clad ISI Marked busbar chamber made of heavy gauge iron sheet complete with copper strip and busbar supports as per specification confirming to IS -4064 | | |
| 1 | 32 AMP 440/500 VOLTS, 4 way | Each | 697.00 |
| 2 | 60/63 AMP 440/500 VOLTS, 4 way | Each | 1362.00 |
| 3 | 100 AMP 440/500 VOLTS, 4 way | Each | 2027.00 |
| 4 | 200 AMP 440/500 VOLTS, 4 way | Each | 3642.00 |
| 5 | 300 AMP 440/500 VOLTS, 4 way | Each | 4351.00 |
| 6 | 400 AMP 440/500 VOLTS, 4 way | Each | 4787.00 |
| 7 | 500 AMP 440/500 VOLTS, 4 way | Each | 6423.00 |

CHAPTER - 8

MCCB's, Isolators, MCB's, MCB-DB and fixing.

| S.No. | Description of Items | Unit | Rate |
|-------|--|------|-----------|
| 8 | Supplying of ISI Marked and approved make of Moulded Case Circuit Breaker (MCCB) suitable for 3 phase,3 pole, 50 Hz, 415 Volts, AC supply with respective interrupting capacity (KA) at 415 Volts cited against their range standard conforming to IS - 8828 | | |
| 8.1 | MCCB with Breaking Capacity 25 KA at 415 V | | |
| 1 | Current Rating -25 to100 Amps & 70% -100% adjustable | Each | 4939.00 |
| 2 | Current Rating -125 Amps & 70% -100% adjustable | Each | 6241.00 |
| 3 | Current Rating -160 Amps & 70% -100% adjustable | Each | 8710.00 |
| 4 | Current Rating -200 Amps & 70% -100% adjustable | Each | 8580.00 |
| 8.2 | MCCB with Breaking Capacity 35 KA at 415 V | | |
| 1 | Current Rating -160 Amps & Adjustable: 70% -100% thermal & 5-10 times magnetic setting | Each | 13940.00 |
| 2 | Current Rating -200 Amps & Adjustable: 70% -100% thermal & 5-10 times magnetic setting | Each | 14401.00 |
| 3 | Current Rating -250 Amps & Adjustable: 70% -100% thermal & 5-10 times magnetic setting | Each | 17808.00 |
| 4 | Current Rating -315 Amps & Adjustable: 70% -100% thermal & 5-10 times magnetic setting | Each | 20907.00 |
| 5 | Current Rating -400 Amps & Adjustable: 70% -100% thermal & 4-10 times magnetic setting | Each | 20907.00 |
| 6 | Current Rating -500/630 Amps & Adjustable: 70% -100% thermal & 4-10 times magnetic setting | Each | 23229.00 |
| 7 | Current Rating -800 Amps & Adjustable: 70% -100% thermal & 4-10 times magnetic setting | Each | 27873.00 |
| 8.3 | MCCB with Breaking Capacity 50 KA at 415 V | | |
| 1 | Current Rating -400 Amps & Adjustable: 70% -100% thermal & 4-10 times magnetic setting | Each | 22459.00 |
| 2 | Current Rating -500/630 Amps & Adjustable: 70% -100% thermal & 4-10 times magnetic setting | Each | 25551.00 |
| 3 | Current Rating -800 Amps & Adjustable: 70% -100% thermal & 4-10 times magnetic setting | Each | 29419.00 |
| 8.4 | Supplying of ISI Marked and approved make of Air Circuit Breaker (ACB) with Microprocessor release with LCD screen showing kW ,kVA,PF,maximum demand with breaking capacity of 50 kA , 4 pole , 415 Volts conforming to IEC : 60947-2 / IS :13947-II | | |
| 1 | 630 Amp,manual,fixed | Each | 73680.00 |
| 2 | 800 Amp,manual,fixed | Each | 76312.00 |
| 3 | 1000 Amp,manual,fixed | Each | 80259.00 |
| 4 | 1250 Amp,manual,fixed | Each | 113152.00 |
| 5 | 1600 Amp,manual,fixed | Each | 117757.00 |
| 6 | 2000 Amp,manual,fixed | Each | 133545.00 |
| 7 | 630 Amp,manual,drawout | Each | 123348.00 |
| 8 | 800 Amp,manual,drawout | Each | 124664.00 |
| 9 | 1000 Amp,manual,drawout | Each | 131111.00 |
| 10 | 1250 Amp,manual,drawout | Each | 163675.00 |

| S.No. | Description of Items | Unit | Rate |
|---------|---|------|-----------|
| 11 | 1600 Amp,manual,drawout | Each | 176240.00 |
| 12 | 2000 Amp,manual,drawout | Each | 212883.00 |
| | | | |
| 8.5 | Supplying of ISI Marked and accepted standard of Miniature Circuit Breaker (MCB) of 'C' series suitable for 240/415 Volts, 50 Cycle , 10 kA Value AC supply confirming to IS : 8828 : 1996, IEC : 60898 :2002 but without enclosures :- | | |
| 8.5.1 | SINGLE POLE (SP) | | |
| 1 | 0.5 Amp to 5 Amp Rating | Each | 243.00 |
| 2 | 6 Amp to 32 Amp Rating | Each | 166.00 |
| 3 | For 40 Amps. Rating only. | Each | 342.00 |
| 4 | 50 Amp to 63 Amp Rating | Each | 401.00 |
| | | | |
| 8.5.2 | SINGLE POLE & NEUTRAL(SPN) | | |
| 1 | 0.5 Amp to 5 Amp Rating | Each | 559.00 |
| 2 | 6 Amp to 32 Amp Rating | Each | 500.00 |
| 3 | For 40 Amps. Rating only. | Each | 691.00 |
| 4 | 50 Amp to 63 Amp Rating | Each | 783.00 |
| | | | |
| 8.5.3 | DOUBLE POLE (DP) | | |
| 1 | 0.5 Amp to 5 Amp Rating | Each | 671.00 |
| 2 | 6 Amp to 32 Amp Rating | Each | 559.00 |
| 3 | For 40 Amps. Rating only. | Each | 750.00 |
| 4 | 50 Amp to 63 Amp Rating | Each | 914.00 |
| | | | |
| 8.5.4 | FOR TRIPLE POLE (TP) | | |
| 1 | 0.5 Amp to 5 Amp Rating | Each | 921.00 |
| 2 | 6 Amp to 32 Amp Rating | Each | 829.00 |
| 3 | For 40 Amps. Rating only. | Each | 1145.00 |
| 4 | 50 Amp to 63 Amp Rating | Each | 1329.00 |
| | | | |
| 8.5.5 | FOR TRIPLE POLE & NEUTRAL(TPN) | | |
| 1 | 0.5 Amp to 5 Amp Rating | Each | 1243.00 |
| 2 | 6 Amp to 32 Amp Rating | Each | 1085.00 |
| 3 | For 40 Amps. Rating only. | Each | 1428.00 |
| 4 | 50 Amp to 63 Amp Rating | Each | 1678.00 |
| | | | |
| 8.5.6 | FOUR POLE(FP) | | |
| 1 | 0.5 Amp to 5 Amp Rating | Each | 1362.00 |
| 2 | 6 Amp to 32 Amp Rating | Each | 1204.00 |
| 3 | For 40 Amps. Rating only. | Each | 1533.00 |
| 4 | 50 Amp to 63 Amp Rating | Each | 1770.00 |
| | | | |
| 8.4.(B) | Supplying of MCB Isolators suitable for 240/415 Volts, 50 Hz AC supply with KA value rating 10 kA of approved make confirming to IS :13947-Part III : 1993 & IEC :60947- 3:2001 (without enclosures) :- | | |
| 8.4.1 | SINGLE POLE | | |
| 1 | 40 Amps. | Each | 211.00 |
| 2 | 63 Amps. | Each | 237.00 |
| | | | |
| 8.4.2 | DOUBLE POLE | | |
| 1 | 40 Amps. | Each | 329.00 |
| 2 | 63 Amps. | Each | 414.00 |

| S.No. | Description of Items | Unit | Rate |
|---------|---|------|----------|
| 8.4.3 | TRIPLE POLE | | |
| 1 | 40 Amps. | Each | 599.00 |
| 2 | 63 Amps. | Each | 651.00 |
| 8.4.4 | FOUR POLE | | |
| 1 | 40 Amps. | Each | 730.00 |
| 2 | 63 Amps. | Each | 757.00 |
| 3 | 80 Amps. | Each | 987.00 |
| 4 | 100 Amps. | Each | 987.00 |
| 8.5.(B) | Supply of approved make powder coated sheet steel encloser SPN MCB DB inclusive of Busbar, Neutral bar, Earth bar & two earth terminals etc. complete as per IS:13032(exclusive of MCB & isolator)- | | |
| 1 | 2 way single door | Each | 197.00 |
| 2 | 4 way single door | Each | 480.00 |
| 3 | 4 way double door | Each | 829.00 |
| 4 | 6 way double door | Each | 974.00 |
| 5 | 8 way double door | Each | 1118.00 |
| 6 | 12 way double door | Each | 1441.00 |
| 7 | 16 way double door | Each | 1789.00 |
| 8.6 | Supplying of approved make TPN MCB DB Metal Double Door with provision for FP MCB/Isolator/RCCB/RCBO as incomer and SP MCBs as outgoing inclusive of Busbar, Neutral bar, Earth bar & two earth terminals etc. complete as per IS:13032(exclusive of MCB & isolator): | | |
| 1 | 4 way (4+12) | Each | 2250.00 |
| 2 | 6 way (4+18) | Each | 2849.00 |
| 3 | 8 way (4+24) | Each | 3289.00 |
| 4 | 4 way (8+12) | Each | 2345.00 |
| 5 | 6 way (8+18) | Each | 2927.00 |
| 6 | 8 way (8+24) | Each | 3487.00 |
| 7 | 12 way (8+36) | Each | 4717.00 |
| 8.7 | Supplying of approved make Vertical TPN MCB DB Metal Double Door with provision for FP CB/Isolator/RCCB/RCBO as incomer and SP/TP MCBs as outgoing inclusive of Busbar, Neutral bar, Earth bar & two earth terminals etc. complete as per IS:13032(exclusive of MCB & isolator) | | |
| 1 | 4 way (8+12) | Each | 6675.00 |
| 2 | 6 way (8+24) | Each | 8453.00 |
| 3 | 12 way (8+36) | Each | 11316.00 |
| 8.8 | Supplying of approved make, powder coated Vertical TPN MCB DB Metal Double Door with MCCB 100A TP 10kA as incomer and space for SP/TP MCBs as outgoing (without MCBs) inclusive of busbar & connections etc without MCB: | | |
| 1 | 4 way with MCCB | Each | 8578.00 |
| 2 | 8 way with MCCB | Each | 9519.00 |
| 3 | 12 way with MCCB | Each | 10888.00 |

| S.No. | Description of Items | Unit | Rate |
|--------|---|------|---------|
| 8.9 | Supplying & fixing of approved make Industrial type metal plug & socket DBs (without MCB) SPN sheet encloser (dust protected) inclusive of 2 pole and earth metal plug and socket and space to incorporate SP MCB complete as per specification as required. | | |
| 1 | 10 Amps | Each | 730.00 |
| 2 | 20 Amps | Each | 749.00 |
| 8.10 | Supplying & fixing of ISI marked Industrial type metal plug socket D.B.s (without MCBs) for TPN encloser three pole and earth metal plug and socket including space incorporating TP MCB complete as per specification as required. | | |
| 1 | 20 Amps | Each | 1441.00 |
| 2 | 30 Amps | Each | 2006.00 |
| 8.11 | Supply & fixing of approved make Industrial type metal plug & socket, 3 pin (2P + E) conforming to IEC : 60309 -1&3 complete as per specification | | |
| 1 | 10 Amps Plug only | Each | 118.00 |
| 2 | 10 Amps socket only | Each | 118.00 |
| 3 | 20 Amps Plug only | Each | 132.00 |
| 4 | 20 Amps socket only | Each | 151.00 |
| 8.12 | Supplying and installing of RCBOs (Residual current circuit breaker with overload and short circuit protection) ISI marked complete as per I.S. standard confirming to IEC:61009-2-1 & IS:12640-2:2001,240/415V 50 Hz with 10 kA short circuit withstand capacity for earth leakage,overload & short circuit protection including connection in existing enclosure in approved manner as per specification. | | |
| 8.12.1 | DP(4 module) | | |
| 1 | 2 pole 6 to 25 Amps, 30 mA sensitivity | Each | 2178.00 |
| 2 | 2 pole 32 Amps, 30 mA sensitivity | Each | 2283.00 |
| 3 | 2 pole 40 Amps, 30 mA sensitivity | Each | 2381.00 |
| 4 | 2 pole 63 Amps, 30 mA sensitivity | Each | 4414.00 |
| 5 | 2 pole 6 to 25 Amps, 100 mA sensitivity | Each | 2276.00 |
| 6 | 2 pole 32 Amps, 100 mA sensitivity | Each | 2395.00 |
| 7 | 2 pole 40 Amps, 100 mA sensitivity | Each | 2467.00 |
| 8 | 2 pole 63 Amps, 100 mA sensitivity | Each | 4709.00 |
| 8.12.2 | FP(8 module) | | |
| 1 | 4 pole 16 Amps, 30 mA sensitivity | Each | 4012.00 |
| 2 | 4 pole 25-32 Amps, 30 mA sensitivity | Each | 4247.00 |
| 3 | 4 pole 40 Amps, 30 mA sensitivity | Each | 4313.00 |
| 4 | 4 pole 63 Amps, 30 mA sensitivity | Each | 5129.00 |
| 5 | 4 pole 16 Amps, 100/300 mA sensitivity | Each | 4487.00 |
| 6 | 4 pole 25-32 Amps, 100/300 mA sensitivity | Each | 4487.00 |
| 7 | 4 pole 40 Amps, 100/300 mA sensitivity | Each | 4580.00 |
| 8 | 4 pole 63 Amps, 100/300 mA sensitivity | Each | 5268.00 |
| 8.13 | FIXING OF SFUs, DBs,BUSBAR,MCCBs,MCBs, ISOLATORS & RCBOs | | |

| S.No. | Description of Items | Unit | Rate |
|-------|--|------|--------|
| | Fixing of metal clad enclosure on 25 X 5 mm flat iron clamps including supplying and fixing of clamps as required duly embedded in masonry including cable connection and other required material as per specification :- | | |
| 1 | 16 Amps SP/DP Switch /SPN DB up to 4 way | Each | 94.00 |
| 2 | 32 Amps DP switch /SPN DB up to 8 way /16 Amp TPN DB up to 3 way per pole or 16 Amps TP or TPN switch / 16 Amps 415 V Isolator | Each | 87.00 |
| 3 | 32 Amps TP or TPN switch/ 32 Amps 415 V Isolator / 16 Amps TPN DB up to 6 way per pole /32 Amps 415 Volt busbar 4 way | Each | 108.00 |
| | | | |
| 8.14 | Fixing of metal clad enclosure on 25X 25 X 5 mm angle iron clamps including supplying and fixing of clamps as required duly embedded in masonry including cable connection and other required material as per specification :- | | |
| 1 | Fixing of 63 Amps TP or TPN main switches/ DB 63 Amps. 240/415 Volt 4 to 8 way or 63 Amps change over switch /63 Amps 415 Volt Isolator /30 Amps 415V TPN DB upto 6 way per pole and busbar 4 way | Each | 170.00 |
| 2 | Fixing of 100 Amps TP or TPN main switch or 100 Amps change over switch /100 Amps 415 Volt Isolators and busbar 4 way | Each | 235.00 |
| 3 | Fixing of 200 Amps TP or TPN main switch or 200 Amps change over switch /200 Amps 415 Volt Isolators and busbar 4 way | Each | 313.00 |
| | | | |
| 8.15 | Fixing of metal clad enclosure on 35X 35 X 5 mm angle iron clamps including supplying and fixing of clamps as required duly embedded in masonry including cable connection and other required material as per specification :- | | |
| 1 | Fixing of 300/400 Amps TP or TPN main switch or 300/400 Amps change over switch /300/400 Amps 415 Volt Isolators and busbar 4 way | Each | 280.00 |
| 2 | Fixing of 500/600 Amps TP or TPN main switch or 500/600 Amps change over switch 500/600 Amps 415 Volt Isolators and busbar 4 way | Each | 335.00 |
| | | | |
| 8.16 | Fixing of MCB /MCCB/ Isolator | | |
| 1 | Fixing of MCB / Isolator SP/DP in sheet steel enclosure as required as per accepted practice, including mounting on busbar and cable connection etc. complete (Labour only) | Each | 10.00 |
| 2 | Fixing of MCB /MCCB Isolator TP /TPN/FP in sheet steel enclosure as required as per accepted practice, including mounting on busbar and cable connection etc. complete. | Each | 20.00 |
| | | | |
| 8.17 | Labour charges for fixing sheet steel enclosure, MCB DB surface mounting type, as per accepted practice on 25x5mm flat iron clamps duly embedded in wall,cable connection etc. complete. | | |
| | FOR S.No :- | | |
| 1 | 8.5 (1) to 8.5 (4) | Each | 94.00 |
| 2 | 8.5 (5) & 8.5 to 8.6 (2) | Each | 101.00 |
| 3 | 8.6 (3), 8.6(4) & 8.7 (1) | Each | 108.00 |
| | | | |

| S.No. | Description of Items | Unit | Rate |
|-------|---|------|--------|
| 8.18 | Labour charges for fixing sheet steel enclosures, MCB DB surface mounting type, as per accepted practice on 25x25x 5 mm angle iron clamp, including supplying and fixing of clamps duly embedded in wall, cable connection etc. complete :- | | |
| | FOR S.No :- | | |
| 1 | 8.5(6) & 8.5(7), 8.6(5) to 8.6 (7) | Each | 170.00 |
| | 8.7(2) & 8.7(3) & 8.8(1) to 8.8 (3) | | |
| 8.19 | Labour charges for fixing sheet steel enclosures, MCB DB flush mounting type, as per accepted practice, duly embedded and end plate completely flushed in wall, cable connection etc. complete :- | | |
| | FOR S.No :- | | |
| 1 | 8.5(1) to 8.5(5), 8.6(1) to 8.6 (5) & 8.7(1) | Each | 167.00 |
| 2 | 8.5(6) & 8.5(7), 8.6(6) to 8.6(7), 8.7(2) to 8.7(3) & 8.8(1) to 8.8(3) | Each | 235.00 |

CHAPTER NO.- 9
ACCESSORIES, PANELS, LAMPS, TELEPHONE WIRES, FANS,
LUMINAIRES

| | |
|---|--|
| 1 | Rates include all lead and lift for all materials for all items unless otherwise specified. |
| 2 | The provision of scaffolding of ladder or any tools and plants required shall be deemed to be included in the items unless otherwise stated. |
| 3 | Cutting through walls and floors, lifting up floor boards and re-fixing, cutting out plaster and making good all the work disturbed, notching or drilling holes through joists, etc. shall be deemed to be included with the item of work. |
| 4 | Description and Enumeration of fittings: - |
| | 4.1 Ordinary Pendants |
| | 4.1.1 Ordinary Pendants shall be described as including |
| | (a) Lamp holders, and |
| | (b) Required length of flexible cord. |
| | 4.2 Stiff pendants. |
| | 4.2.1 Stiff pendants shall be described as including- |
| | (a) Back plate, |
| | (b) Required length of conduit, |
| | (c) Adapter, and |
| | (d) Lamp holder, |
| | 4.3 Plain Brackets. |
| | 4.3.1 Plain brackets shall be described as including- |
| | (a) Back-plate, |
| | (b) Tumbling with nozzle, and |
| | (c) Lamp holder. |
| | 4.4 Watertight Brackets, |
| | 4.4.1 Watertight brackets shall be described as including – |
| | (a) Back-plate, |
| | (b) Conduit, |
| | © Gallery, |
| | (d) Reflector, |
| | (e) Well glass screw guard fitting, |
| | (f) Lamp holder, and |
| | (g) Rubber washers. |
| | 4.5 Switches, |
| | 4.5.1 When measured separately from point wiring, the switches shall be described stating the type and rated capacity. Cover plates, if any, shall be included with the item. |
| | 4.5.2 Switch plug combination, comprising socket outlet, switch and plug shall be described, and the type and rated capacity shall be stated. |
| | 4.6 Bulk-Head fittings, |
| | 4.6.1 Bulk-head fittings shall be described as including- |
| | (a) Lamp holder (all insulated) |
| | (b) Reflector, |
| | (c) Water tight glass front, hinged and with wing nuts, and |
| | (d) Wire guard. |

| | | |
|---|---|--|
| | | |
| | 4.7 Lamps, | |
| | 4.7.1 Lamps shall be described stating the type, wattage and voltage. | |
| | | |
| | 4.8 Fluorescent-Lamp fittings, | |
| | 4.8.1 Fluorescent-lamp fittings shall be described as including- | |
| | (a) Single tube or twin tube (stating the type and length), | |
| | (b) Choke (ballast), | |
| | (c) Capacitor, | |
| | (d) Starter, | |
| | (e) Lamp holders, | |
| | (f) Starter- holders, | |
| | (g) Reflector, | |
| | (h) Back-plate | |
| | (i) Inter-connecting wiring | |
| | (j) Make and type of fitting, and | |
| | (k) Louver or perplex panel | |
| | | |
| 5 | The provisions of scaffolding or ladder or any tools and plants required shall be deemed to be included in the items, unless otherwise stated. | |
| | | |
| 6 | Cutting through walls and floors, lifting up floor boards and refixing, cutting out plaster and making good all the work disturbed, notching or drilling holes through joists, etc. shall be deemed to be included with the item of work. | |
| | | |

The following Indian Standards may be referred to :- Chapter 9

| S.No. | Standards | Title Codes of Practice/ Guide |
|-------|------------------------|---|
| 1 | IS:3646 (Part-1)- 1966 | Code of practice for interior illumination Principles for good lighting and aspects of design. |
| 2 | IS:3646 (Part-2)-1966 | Code of practice for interior illumination: Schedule of illumination and glare index. |
| 3 | IS:3646 (Part-3)-1968 | Code of practice for interior illumination : Calculation of coefficients of utilization by the BZ method. |
| 4 | IS:4347-1967 | Code of practice for hospital lighting. |
| 5 | IS:6665-1972 | Code of Practice for industrial lighting. |
| 6 | IS:2672-1966 | Code of Practice for library lighting. |
| 7 | IS:555-1979 | Electric table type fans and regulators. |
| 8 | IS:1169-1967 | Electric pedestal type fans and regulators. |
| 9 | IS:374-1979 | Electric ceiling type fans and regulators. |
| 10 | IS:2997-1961 | Air circulator type electric fans and regulators. |
| 11 | IS:2312-1967 | Propeller type AC ventilating fans. |
| 12 | IS:3588-1987 | Electrical axial flow fans. |
| 13 | IS:3963-1987 | Roof Extractor units. |
| 14 | IS:1283-1981 | Hor air fan. |
| 15 | IS:6272-1987 | Industrial cooling fans (man coolers) |
| 16 | IS:4894-1987 | Centrifugal fans |
| 17 | IS:11037-1984 | Electronic type fan regulators. |
| 18 | IS:12155-1987 | General and Safety requirements for fans and regulators for household and similar purposes. |
| 19 | IS:118-1978 | Tungsten filament general service electric lamps. |
| 20 | IS:2118(Part-1)-1977 | Tubular fluorescent lamps for general lighting service: Requirements and tests. |
| 21 | IS:9900(Part-1)-1981 | High pressure mercury vapor lamps: Requirements and test. |

| | | |
|---|------------------------------|--|
| 22 | IS:9974(Part-1)-1981 | High pressure sodium vapor lamps: General requirements and tests. |
| 23 | IS:1258-1987 | Bayonet lamp holders. |
| 24 | IS:3323-1980 | B1-pin lamp holders for tubular fluorescent lamps. |
| 25 | IS:3324-1982 | Holders for starters for tubular fluorescent lamps. |
| 26 | IS:2215-1984 | Starters for fluorescent lamps. |
| 27 | IS:1534(Part-1)-1977 | Ballast for fluorescent lamps: For switch start circuits. |
| 28 | IS:1569-1976 | Capacitors for use in tubular fluorescent high pressure mercury and low pressure sodium vapor discharge lamp circuits. |
| 29 | IS:6616-1982 | Ballasts for high pressure mercury vapor lamps. |
| 30 | IS:1913(Part-1)-1978 | General and safety requirements for luminaries: Tubular flu (2) |
| 31 | IS:10322(Part-1)-1982 | Luminaries : General requirements |
| 32 | IS:10322(Part-2)-1982 | Luminaries : Constructional requirements |
| 33 | IS:10322(Part-5/Sec-1) 1987 | Luminaries: Particular requirements : Recessed luminaries. |
| 34 | IS: 10322(Part-5/Sec-3) 1987 | Luminaries: Particulars requirements: Luminaries for road and street lighting. |
| 35 | IS:10322 (Part-5/Sec-5) 1987 | Luminaries: Particulars requirements: Portable general purpose luminaries |
| 36 | IS:10322(Part-5/Sec-5) 1987 | Luminaries: Particulars requirements : Floodlight |
| 37 | IS: 3287-1965 | Industrial lighting fittings with plastic reflectors. |
| 38 | IS: 1777-1978 | Industrial luminaries with metal |
| 39 | IS:2206(Part-1)-1984 | Flame proof electric lighting fittings : Well glass and bulk head types. |
| 40 | IS:3528-1966 | Water proof electric lighting fittings. |
| 41 | IS:3553-1966 | Water tight electric lighting fittings. |
| 42 | IS:8030-1976 | Luminaries for hospitals. |
| 43 | IS:7537-1974 | Road traffic signals. |
| 44 | IS:9583-1981 | Emergency lighting units. |
| 45 | IS:302-1979 | General and safety requirements for household and similar electrical appliances. |
| 46 | IS:2268-1988 | Electric call bells and buzzers for indoor use. |
| 47 | IS:3412-1985 | Electric water boilers. |
| 48 | IS:4770-1991 | Rubber gloves for electrical purposes. |
| 49 | IS:5424-1969 | Rubber mats for electrical purposes. (xv) |
| Note:- The above IS Codes shall be applicable with latest amendments if any. | | |

| CHAPTER - 9 | | | |
|---|---|-------------|-------------|
| Accessories/Pannel/Lamp/Telephone wires/Fans/Luminaries. | | | |
| S.No. | Description of Items | Unit | Rate |
| 9.1 | Supplying and fixing as per specification Bakelite pendent Holder of approved make including flexible cord up to 3 Meter length with necessary materials complete | Each | 28.00 |
| 9.2 | Supplying and fixing as per specification Bakelite Batten Holder / Angle Holder of approved make with necessary materials complete | Each | 24.00 |
| 9.3 | Supplying and fixing as per specification Bulk Head fitting of approved make suitable for 100 Watt lamp with necessary materials complete. | | |
| | Ordinary | Each | 86.00 |
| 9.4 | Supplying and fixing as per specification Call bell / buzzer of approved make with necessary materials complete. | | |
| 1 | Buzzer | Each | 63.00 |
| 2 | Ding Dong bell | Each | 119.00 |
| 3 | Musical bell | Each | 282.00 |
| 4 | Remote/cordless bell | Each | 594.00 |
| 9.5 | Supplying and fixing as per specification Call bell indicator 230 Volt A.C. of approved make with necessary materials complete. | | |
| 1 | with 4 way Indicator | Each | 2112.00 |
| 2 | with 6 way Indicator | Each | 3168.00 |
| 3 | with 8 way Indicator | Each | 4224.00 |
| 9.6 | Supplying and fixing of multi core round HRFR / FR PVC insulated copper (flexible) conductor & PVC sheathed cables 1100 Volts as per IS:694-1990 of approved make | | |
| 1 | (23/.0076) Three core | meter | 17.00 |
| 2 | (40/.0076) Three core | meter | 33.00 |
| 9.7 | Supplying and fixing in position incandescent lamp of approved make as per IS specification | | |
| 1 | 15 Watt 250 Volt | Each | 13.00 |
| 2 | 25 Watt 250 Volt | Each | 14.00 |
| 3 | 40 Watt 250 Volt | Each | 15.00 |
| 4 | 60 Watt 250 Volt | Each | 15.00 |
| 5 | 100 Watt 250 Volt | Each | 16.00 |
| 6 | 200 Watt 250 Volt | Each | 25.00 |
| 7 | 500 Watt 250 Volt | Each | 86.00 |
| 8 | 1000 Watt 250 Volt | Each | 152.00 |
| 9 | 5 Watt 250 Volt night lamp | Each | 16.00 |
| 10 | 15 Watt 250 Volt coloured lamp | Each | 17.00 |
| 9.8 | Supplying and fixing as per specification socket outlet of approved make & ISI marked with necessary material complete | | |
| 1 | 6 Amp 250 Volt 3 Pin PB | Each | 59.00 |
| 2 | 6 Amp 250 Volt 3 / 5 Pin Flush type | Each | 28.00 |
| 3 | 16 Amp 250 Volt 3 Pin PB | Each | 88.00 |
| 4 | 16 Amp 250 Volt 3 / 6 Pin Flush type | Each | 86.00 |
| 5 | 10 Amps 250 Volt 3 Pin Modular type | Each | 170.00 |
| 6 | 20 Amps 250 Volt 3 Pin Modular type | Each | 275.00 |

| S.No. | Description of Items | Unit | Rate |
|-------|--|---------|---------|
| 9.9 | Supplying and fixing of approved make 3 pin plug top ISI marked | | |
| 1 | 6 Amp 250 Volt 3 Pin | Each | 62.00 |
| 2 | 16 Amp 250 Volt Pin | Each | 78.00 |
| 9.10 | Supplying and fixing as per specification Ball Socket of approved make with necessary material complete. | Each | 32.00 |
| 9.11 | Supplying and fixing as per specification Caution / Danger Board as required of approved make & design with necessary material complete. | | |
| 1 | Small Size | Each | 106.00 |
| 2 | Large Size | Each | 211.00 |
| 9.12 | Supplying and fixing as per specification bakelite Ceiling rose 3 Plate of approved make ISI marked with necessary material complete. | Each | 28.00 |
| 9.13 | Supplying and fixing as per specification Switch of approved make ISI marked with necessary material complete. | | |
| 1 | 6 Amp S.P. porcelain Base 250 Volt | Each | 59.00 |
| 2 | 16 Amp S.P. porcalane Base 250 Volt | Each | 88.00 |
| 3 | 6 Amp Flush type | Each | 17.00 |
| 4 | 16 Amp Flush type | Each | 49.00 |
| 5 | 6 Amp S.P. 250 Volt two way Flush type | Each | 26.00 |
| 6 | 10 Amps S.P.250 Volt Modular Switch | Each | 107.00 |
| 7 | 20 Amps S.P.250 Volt Modular Switch | Each | 172.00 |
| 8 | 10 Amps S.P.250 Volt Modular Switch 2 way | Each | 124.00 |
| 9.14 | Supplying and fixing as per specification 6 Amp 250 Volt Bell Push switch of approved make ISI marked with necessary material complete. | | |
| 1 | 10 Amps S.P.250 Volt Modular Switch Bell Push | Each | 124.00 |
| 2 | Flush Type | Each | 28.00 |
| | Locking arrangement for Switch Gear Mounting | | |
| 9.15 | Supplying, fixing,testing & commissioning wall / floor mounted LT Panel primer coated with two coat of enamel paint & provided with required gasket for dust/ vermin proof with degree of protection IP42 suitable for 415V 3 phase ,50 Hz ,4 wire system fabricated out of CRCA sheet upto 2 mm thick (1.6 mm for doors) with frame work of angle iron/ channel/ bolted type construction duly compartmentalised for incomer,bus section , outgoing ,cable alleys & CT,PT Ampere Meter ,Volt Meter , selector switches,Frequency Meter ,phase indicating lamps , energy Meter complete including cost of busbar supports,detachable cable gland plates,2 earthing terminals, internal wiring & fixing of separately supplied MCBs, MCCBs ,panel mounted Changeover switch/SFUs, etc. as required but excluding cost of busbar strips,Ampere Meter, Volt Meter, Selector switch as per approved design & specification | Kg | 116.00 |
| 9.16 | Supplying and fixing of LT Panel accessories of approved make in existing LT Panel including connections etc.as required as per spececification | | |
| 1 | Digital Ampere Meter with CTs with selector switch | per set | 2354.00 |
| 2 | Digital Volt Meter with selector switch & HRC fuse | per set | 2530.00 |
| 3 | Frequency Meter | Each | 1458.00 |

| S.No. | Description of Items | Unit | Rate |
|-------|---|------|---------|
| 4 | Copper Bus bar strips with PVC sleeves | Kg | 666.00 |
| 5 | Aluminium bus bar strips with PVC sleeves | Kg | 209.00 |
| 6 | LED lamps | each | 242.00 |
| 9.17 | Supplying,Fixing and Testing of MPP condensor of approved make as required as per specification | | |
| 1 | 2.5 mfd. | Each | 32.00 |
| 2 | 3.15 mfd | Each | 42.00 |
| 3 | 4.00 mfd | Each | 59.00 |
| 4 | 6.00 mfd | Each | 99.00 |
| 5 | 10.00 mfd | Each | 158.00 |
| 6 | 25.00 mfd | Each | 238.00 |
| 7 | 30.00 mfd | Each | 290.00 |
| 8 | 33.00 mfd | Each | 343.00 |
| 9.18 | Supplying,Fixing and Testing of Flourescent Tube rod ISI marked of approved make as required as per specification | | |
| 1 | 4' X 40 Watt | Each | 59.00 |
| 2 | 4' X 36 Watt | Each | 54.00 |
| 3 | 2' X 20 Watt | Each | 54.00 |
| 4 | 2' X 18 Watt | Each | 51.00 |
| 9.19 | Supplying,Fixing and Testing of MV lamp ISI marked of approved make as required as per specification | | |
| 1 | 80 Watt | Each | 198.00 |
| 2 | 125 Watt | Each | 205.00 |
| 3 | 250 Watt | Each | 488.00 |
| 4 | 400 Watt | Each | 726.00 |
| 9.20 | Supplying,Fixing and Testing of SV lamp SON-T (tubular clear type) ISI marked of approved make as required as per specification | | |
| 1 | 70 Watt | Each | 515.00 |
| 2 | 150 Watt | Each | 686.00 |
| 3 | 250 Watt | Each | 766.00 |
| 4 | 400 Watt | Each | 950.00 |
| 9.21 | Supplying,Fixing and Testing of MH lamp Single ended type ISI marked of approved make as required as per specification | | |
| 1 | 70 Watt | Each | 1221.00 |
| 2 | 150 Watt | Each | 1320.00 |
| 3 | 250 Watt | Each | 1650.00 |
| 4 | 400 Watt | Each | 1749.00 |
| 9.22 | Supplying,Fixing and Testing of MH lamp Double ended type ISI marked of approved make as required as per specification | | |
| 1 | 70 Watt | Each | 858.00 |
| 2 | 150 Watt | Each | 865.00 |
| 9.23 | Supplying,Fixing and Testing of Compact Flourescent Lamp (CFL) with inbuilt electronic ballast ISI marked of approved make as required as per specification | | |
| 1 | 5 Watt | Each | 148.00 |
| 2 | 8 Watt | Each | 165.00 |

| S.No. | Description of Items | Unit | Rate |
|-------|---|-------|---------|
| 3 | 11 Watt | Each | 178.00 |
| 4 | 15 Watt | Each | 191.00 |
| 5 | 18 Watt | Each | 224.00 |
| 6 | 20 Watt | Each | 297.00 |
| 7 | 25 Watt | Each | 319.00 |
| 8 | 30 Watt | Each | 330.00 |
| 9 | 36 watt | Each | 528.00 |
| 10 | 45 Watt | Each | 858.00 |
| 11 | 65 Watt | Each | 990.00 |
| 12 | 85 Watt | Each | 1056.00 |
| 9.24 | Supplying,Fixing and Testing of Helogen Rod of approved make as required as per specification | | |
| 1 | 500 Watt | Each | 106.00 |
| 2 | 1000 Watt | Each | 132.00 |
| 9.25 | Supplying,Fixing and Testing of Ball Bearing of approved make as required as per specification | | |
| 1 | 6201 | Each | 91.00 |
| 2 | 6202 | Each | 96.00 |
| 3 | 6203 | Each | 119.00 |
| 4 | 6204 | Each | 176.00 |
| 9.26 | suppling and drawing following pair,0.5 Sq mm PVC Insulated copper conductor unarmoured telephone cable in existing surface / concealed ,steel / PVC Conduit as required. | | |
| 1 | (i) 1 Pair | meter | 35.00 |
| 2 | (ii) 2 Pair | meter | 42.00 |
| 3 | (iii) 4 Pair | meter | 56.00 |
| 9.27 | suppling and drawing Co-axial T.V. Cable RG-6 Grade , 0.7 mm Solid Copper conductor PE Insulated , Shielded with fine tined copper braid and protected with PVC Sheath in the existing surface / concealed ,steel / PVC. Conduit as required. | meter | 73.00 |
| 9.28 | Suppling and fixing of approved make Resistance type Fan regulator including connection etc. as required on existing board | Each | 61.00 |
| 9.29 | Suppling and fixing of approved make step type electronic Fan regulator including connection etc. as required on existing board | | |
| 1 | 450 Watt | Each | 249.00 |
| 9.30 | Suppling and fixing of approved make electronic dimmer / regulator including connection etc. as required on existing board | | |
| 1 | 650 Watt | Each | 240.00 |
| 2 | 1000 Watt | Each | 294.00 |
| 9.31 | Suppling and fixing of approved make step type Modular electronic, Fan regulator single/double module including connection etc. as required on existing board | | |
| 1 | upto 120 watt | Each | 600.00 |

| S.No. | Description of Items | Unit | Rate |
|-------|--|------|---------|
| 9.32 | Supplying, erection and testing of approved make electric Ceiling fan of double ball bearing complete with standard down rod, canopy, hanging shackle, Aluminium blades, without regulator, A.C. 230-250 volts including connections with all necessary material complete as required confirming to IS :374/1979 with upto date ammendments. | | |
| 1 | Ceiling Fan (Energy Saver 50 W)-1200 mm Sweep | Each | 1888.00 |
| 2 | Ceiling Fan (Energy Saver 60 W)-1400 mm Sweep | Each | 1998.00 |
| 9.33 | Supplying, erection and testing of approved make Wall Mounting fan complete with Wall Bracket ,canopy, blades, speed Regulator etc .A.C 230-250 volts with connections and including raw bolt/Anchor hole fastener etc. complete finished and as required. | | |
| 1 | 300 sweep | Each | 1964.00 |
| 2 | 400 sweep | Each | 2079.00 |
| 9.34 | Supplying, erection and testing of approved make Cabin fan oscillating type with base, blades, guard, speed regulator etc. AC 230-250 volts with connections and including raw bolt/Anchor hole fastener etc. complete finished and as required. | | |
| 1 | 300 sweep | Each | 1992.00 |
| 2 | 400 sweep | Each | 2139.00 |
| 9.35 | Supplying, erection and testing of approved make 'Fresh Air Fan' AC 230-250 volts with connection and including frame bolt/Anchor hole fasteners etc. compelte finished and as required. | | |
| 1 | 225mm sweep | Each | 1126.00 |
| 2 | 300mm sweep | Each | 1347.00 |
| 9.36 | Supplying, erecting and testing of approved make Exhaust Fan heavy duty with mounting frame, blades AC 230-250 complete connection and including, frame bolt/ Anchor hole fastners etc. complete finished and as required. | | |
| 1 | 300mm sweep 900 RPM | Each | 2830.00 |
| 2 | 380mm sweep 900 RPM | Each | 3031.00 |
| 3 | 450mm sweep 900 RPM | Each | 4291.00 |
| 9.37 | Supplying and testing of approved make Pedestal fan A.C. 230-250 volts with blades speed regulator 'pedestal etc duly wired with all necessary material complete as required | | |
| 1 | 400 mm Sweep | Each | 2486.00 |
| | <u>Fluorescent Tube Fitting</u> | | |
| 9.38 | Supplying, fixing and testing of approved make florescent tube fitting 36/40 watt , rust resistant, stove enamelled paint, box type channel with cover, complete with electronic ballast (HF) complete duly wired (without tube rod) as per specification & fixing as below: | | |
| 1 | I) Fixing on wall/Ceiling on wooden round block with 'J' hook / Anchor hole fastners/hollow bow with rod fixed in Ceiling and other necessary materials including connections etc. and as required. | Each | 930.00 |
| 2 | II) Fixing by stiff pendant arrangement with two pieces of steel conduit 19/20 dia 16 SWG and other necessary materials such as ball socket, wooden round block with 'J' hook/Anchor hole fasteners fixed in Ceiling including connection and as required for length upto 1.5 Meter | Each | 1233.00 |

| S.No. | Description of Items | Unit | Rate |
|--------|--|------|---------|
| 3 | III) Fixing by pendant arrangement with two pieces of approved metallic chain and other necessary materials such as wooden block with 'J' hook Anchor hole fastner fixed in Ceiling including connection as required for length up to 1.5Meter | Each | 1165.00 |
| 9.39 | Supplying, fixing and testing of approved make fluorescent tube fitting 36/40 watt, rust resistant, stove enamelled paint, CRCA sheet steel housing with white stove enamelled reflector complete with copper ballast complete duly wired (without tube rod) as per specification & fixing as below: | Each | 647.00 |
| 9.40 | Supplying, fixing and testing of approved make fluorescent single & double tube fitting 36/40 watt, rust resistant, stove enamelled paint, CRCA sheet steel housing with opal acrylic diffuser and decorative end plates complete with copper ballast complete duly wired (without tube rod) as per specification & fixing . | | |
| 1 | 1 x 40/36 watt | Each | 1210.00 |
| 2 | 2x36/40 watt | Each | 2033.00 |
| 9.41 | Supplying, fixing and testing of approved make surface mounting mirror optics luminaires for single/twin 36/40 watt fluorescent lamp comprising of white powder coated CRCA sheet steel housing raw silk / navy brown / white colour M.S. low profile flat housing complete with all accessories i.e. electronic ballast (HF) duly wired (without tube rod) and high purity anodised aluminium reflector assmebly along with cross louvers as per specification and fixing as below. | | |
| 9.41.1 | Fixing on wall/Ceiling on wooden round block with 'J' hook/Anchor hole fastener fixed in Ceiling and other necessary materials including connectons etc. and as required. | | |
| 1 | 1x36/40w | Each | 2427.00 |
| 2 | 2x40w | Each | 3811.00 |
| 9.41.2 | Fixing by stiff pendant arrangement with two pieces of steel conduit 19/20mm dia 16 SWG and other necesssary materials such as ball socket, T.W. block with 'J' hook/ Anchor hole fastner fixed in Ceiling including connections and as required for length upto 1.5 Meter. | | |
| 1 | 1x40w | Each | 2526.00 |
| 2 | 2x36/40w | Each | 3910.00 |
| 9.41.3 | Fixing by pendant arrangement with two pieces of approved metallic chain and other necessary materials such as T.W. block with 'J' hook/ Anchor hole fastner fixed in Ceiling including connections and as required for length upto 1.5 Meter. | | |
| 1 | 1x40w | Each | 2497.00 |
| 2 | 2x40w | Each | 3847.00 |
| 9.42 | Supplying, fixing and testing of approved make surface mounting mirror optics luminaires for single/twin 36/40 watt fluorescent lamp comprising of white powder coated CRCA sheet steel housing raw silk / navy brown / white colour M.S. low profile flat housing complete with all accessories i.e. copper ballast duly wired (without tube rod) and high purity anodised aluminium reflector assmebly along with cross louvers as per specification and fixing as below. | | |

| S.No. | Description of Items | Unit | Rate |
|--------|---|------|---------|
| 9.42.1 | Fixing on wall/Ceiling on wooden round block with 'J' hook/Anchor hole fastener fixed in Ceiling and other necessary materials including connectons etc. and as required. | | |
| 1 | 1x36/40w | Each | 1963.00 |
| 2 | 2x40w | Each | 2887.00 |
| | Mirror Optics (recessed/concealed) | | |
| | | | |
| 9.43 | Supplying, fixing and testing of approved make recess mounting mirror optics luminaires for single/twin 36/40 watt fluorescent lamp comprising of white powder coated CRCA sheet steel housing raw silk / navy brown / white colour M.S. low profile flat housing complete with all accessories i.e. electronic ballast (HF) duly wired (without tube rod) and high purity anodised aluminium reflector assmebly along with cross louvers as per specification and fixing . | | |
| 1 | 1x40 Watt | Each | 2334.00 |
| 2 | 2x40 Watt | Each | 3679.00 |
| | | | |
| 9.44 | <u>Street Lights</u> | | |
| | Supplying, fixing and tesing of approved make street/ road light fitting complete with copper wound polyster choke, lamp holder,starter holder, starter duly wired, side entry with clear acrylic cover with fixing clamps (without tube rod) including fixing with 20mm dia G.I. pipe medium class of required length upto 2 Meter for mounting on wall/existing pole, on existing"D" Bracket including bending the pipe to required shape and connectios including all materials as required. | | |
| 1 | 1x40 Watt | Each | 1353.00 |
| 2 | 2x40 Watt | Each | 1940.00 |
| | | | |
| 9.45 | <u>BULK HEAD</u> | | |
| | Supplying, fixing and testing of approved make bulk head luminaire consisting of pressure die aluminium housing lamp holder, prismatic glass cover, rubber gasket and wire guard, delux type, including fixing on wall as required, with necessary material complete Fitting(suitable for GLS w/o lamp upto 11 watt Retorted CFL) | Each | 576.00 |
| | | | |
| 9.46 | Supplying, fixing and testing of approved make high pressure M.V. fitting, consisting of cast aluminium cotrol gear housing, highly polished reflector, highly transparent acrylic hinged cover, complete with taped polyster choke, capacitor, connector etc. suitable for end mounting duly wired (without lamp) including fixing with 25 / 30mm dia G.I. pipe medium class of required length upto 2 Meter for mounting on wall / existing pole/on existing 'D' bracket, including bending the pipe to required shape and connections including all materials as required. | | |
| 1 | 80 Watt | Each | 2775.00 |
| 2 | 125 Watt | Each | 3044.00 |
| 3 | 250 Watt | Each | 4070.00 |
| 4 | 400 Watt | Each | 5022.00 |
| | | | |
| 9.47 | H.P. Sodium Vapour Fitting | | |

| S.No. | Description of Items | Unit | Rate |
|-------|--|------|---------|
| | Supplying, fixing & testing of approved make H.D. Sodium vapour fitting consisting of matallic cast aluminium alloy housing highly polished anodised aluminium reflector clear acrylic cover, gasket and equipped with accessories; such as ballast, condensor, ignitor, skirted ceramic lamp holder (without lamp) suitable for end mounting duly wired, including fixing with 32/38 mm dia G.I. pipe medium class of required length upto 2 Meter for mounting on wall/exisiting pole/on existing D bracket including bending the pipe to required shape and connections including all materials as required. | | |
| 1 | 70 watt | Each | 3123.00 |
| 2 | 150 watt | Each | 4234.00 |
| 3 | 250 watt | Each | 5341.00 |
| 4 | 400 watt | Each | 6074.00 |
| | | | |
| 9.48 | Supplying ,fixing and testing of approved make of H.P.Sodium vapour side road lighting/ main road lighting lantern consisting of single piece cast aluminium housing complete with all accessories suitable for tubular 70W /150W /250W/HPSV lamp pot type high purity ALGLAS coated electromechanically brightened anodized aluminium reflector/ with ripples embossing above the lamp, lamp holder, clear acrylic cover & 3/5 stainless steel toggle, ignitor & ballast, condensor(without lamp) i/c fixing with 32/38 mmdia G.I. pipe medium class of required length upto 2 mtr. for mounting on wall/existing pole/on existing "D" bracket i/c bending the pipe to required shape and connections, i/c all material as required & suitable for: | | |
| 1 | 70 Watt | Each | 3615.00 |
| 2 | 150 Watt | Each | 5345.00 |
| 3 | 250 Watt | Each | 6841.00 |
| | | | |
| 9.49 | <u>Flood Lighting</u> | | |
| | Supplying, fixing & testing of approved make of intergal type compact flood light fitting consisting of cast aluminium housing complete with all accessories ALGLAS coated aluminium reflector, lamp holder heat resisting toughned clear glass cover and mounting bracket with aiming disc, including fixing & connections as required in position with all necessary materials required, suitable for single ended tubular lamp (without lamp) | | |
| 1 | 150 Watt S.V. Lamp | Each | 5939.00 |
| 2 | 150 Watt metal halide Lamp | Each | 6431.00 |
| | | | |
| 9.50 | Supplying, fixing & testing of approved make H.D. asymmetrical beam flood light fitting suitable for tubular single lamp consisting of cast aluminium housing 'ALGLAS coated aluminium faceted reflector assly toughned glass cover, mounting bracket and aiming disc, seperate control gear box required for HPSV/M.H. Lamp (without lamp) including fixing & connection as required in position with all necessary material required | | |
| 1 | 250 watt S.V. Lamp/Metal Halide with control gear box. | Each | 7699.00 |
| 2 | 400 Watt S.V. Lamp/metal Halide with control gear box | Each | 8521.00 |
| | <u>POST TOP LANTERNS</u> | | |
| | | | |

| S.No. | Description of Items | Unit | Rate |
|-------|--|------|---------|
| 9.51 | Supplying, fixing & testing of approved make of integral type decorative post top lantern consisting of aluminium canopy opal acrylic bottom cover and cast aluminium spigot complete with all accessories and control gear box (without lamp) including fixing on gate pillars/ existing G.I. pipe, pole with connection and all required material on required size of G.I. pipe, suitable for - | | |
| 1 | 125 Watt M.V. lamp | Each | 4118.00 |
| 2 | 70 Watt S.V. Lampwith ignitor | Each | 4328.00 |
| 9.52 | Supplying, fixing & testing of approved make of integral mushroom type roto moulded/Diamond shaped roto moulded post top lantern, consisting of cast aluminium spigot complete with all accessories, lamp holder, control gear box(without lamp) including fixing on gate Pillers/exiting G.I. pipe, pole with connection & all required materials on required size of G.I. pipe, suitable for | | |
| 1 | 125 Watt M.V. lamp | Each | 4118.00 |
| 2 | 70 Watt S.V. Lampwith ignitor | Each | 4218.00 |
| 9.53 | <u>LOW WATT MOUNTINGS</u> | | |
| | Supplying, fixing & testing of approved make of low watt surface mounting luminaires, made of white powder coated CRCA sheet steel housing with aluminium mirror reflector complete with control gear, wired upto terminal block on a detachable tray including fixing on wall/ Ceiling on wooden round block including wiring & connection as required and suitable for CFL as following :- (without lamp) | | |
| 1 | 2 nos. 11 watt CFL | Each | 1606.00 |
| 2 | 2 no. 18 watt CFL | Each | 1619.00 |
| 3 | 2 Nos 36 watt CFL | Each | 2702.00 |
| 4 | 3 Nos 36 watt CFL | Each | 4600.00 |
| 9.54 | Supplying, fixing & testing of approved make of low watt recessed mounting luminaire made of CRCA sheet steel housing with false Ceiling lips finished in stove enamelled white inside/outside fitted with high purity anodised aluminium mirror reflector and complete with control gear, including fixing with recessed mounting arrangement with necessary materials connection etc. complete as required and suitable for single/twin 9 & 11 watt CFL (without lamp) | | |
| 1 | 2 nos. 11 watt CFL aluminium mirror reflector | Each | 1562.00 |
| 2 | 2 nos. 36 watt CFL (595 mm X 595 mm) aluminium darklight reflector | Each | 3984.00 |
| 3 | 2 no. 36 watt CFL (295 mm X 595 mm) aluminium mirror reflector | Each | 3021.00 |
| 4 | 3 Nos 36 watt CFL aluminium mirror reflector | Each | 4160.00 |
| 5 | 3 Nos 36 watt CFL (597 mm X 597 mm) aluminium darklight reflector | Each | 5145.00 |
| 9.55 | Supplying, fixing & testing of approved make of low watt surface / recessed mounting CFL down lighter luminaire with white powder coated aluminium cover with anodised aluminium reflector with necessary materials connection etc. complete as required (without lamp) | | |
| 1 | CFL 1 X 10 / 13 / 18 watt | Each | 777.00 |
| 2 | CFL 2 X 13 / 18 watt | Each | 1041.00 |

| S.No. | Description of Items | Unit | Rate |
|-------|---|------|---------|
| 9.56 | Supplying, fixing & testing of approved make of low watt CFL roadway / street light luminaire with epoxy powder coated sheet aluminium / steel housing with epoxy white powder coated CRCA sheet steel gear tray ,clear acrylic cover with necessary materials connection including mounting with GI pipe 32 mm OD, clamps on existing wall / pole etc. complete as required (without lamp) | | |
| 1 | CFL 1 X 9 / 11 watt | Each | 1212.00 |
| 2 | CFL 1 X 13 / 18 watt | Each | 1278.00 |
| 3 | CFL 2 X 11 watt | Each | 1371.00 |
| 4 | CFL 2 X 18 watt | Each | 1542.00 |
| 5 | CFL 1 X 36 watt | Each | 1542.00 |
| 9.57 | Supplying, fixing & testing of approved make of T- 5 lamp channel luminaire with plastic extruded housing with in-built electronic control gear with decorative end caps with necessary materials connection etc. complete as required (with lamp) | | |
| 1 | T - 5 Lamp 1 X 28 watt | Each | 838.00 |
| 9.58 | Supplying, fixing & testing of approved make of T- 5 lamp channel luminaire with epoxy white powder coated CRCA sheet steel housing with reflector cover with necessary materials connection etc. complete as required (with lamp) | | |
| 1 | T - 5 Lamp 1 X 28 watt | Each | 1340.00 |
| 9.59 | Supplying and fixing of Delux fresh air fan with louvers (ventilating fan) with self closing louvers of decorative PVC blades mounting square frame of approved made complete with all necessary material as required | | |
| 1 | 150 mm | Each | 1277.00 |
| 2 | 200 mm | Each | 1349.00 |
| 3 | 250 mm | Each | 1462.00 |
| 9.60 | supplying and fixing of Cooler Kit including cooler fan 450 mm ISI marked and Vertical pump complete with all necessary material as required | Each | 2407.00 |
| 9.61 | supplying and fixing of cooler / A.C. MS angle iron stand including flat iron supports, including grouting in wall if required,welding ,painting with primer and two coat of superior quality paint complete. | Kg | 61.00 |
| 9.62 | Supplying,Fixing and Testing of Flourescent Tube rod T-5 ISI marked of approved make as required as per specification | | |
| 1 | 14 watt T-5 | Each | 121.00 |
| 2 | 21 watt T-5 | Each | 132.00 |
| 3 | 24 watt T-5 | Each | 165.00 |
| 4 | 28 watt T-5 | Each | 132.00 |
| 9.63 | Supplying,Fixing and Testing of Compact Flourescent Lamp (CFL) without electronic ballast ISI marked of approved make as required as per specification | | |
| 1 | 9 Watt | Each | 83.00 |
| 2 | 11 Watt | Each | 88.00 |
| 3 | 18 Watt | Each | 204.00 |
| 4 | 36 watt | Each | 220.00 |

| S.No. | Description of Items | Unit | Rate |
|----------|--|-------|---------|
| 9.64 | Supplying, Erection & Commissioning of 3 mtr. Long garden light pole having base pipe 114mm dia 1 meter long & 2 meter pipe 60mm dia. Total length 3 mtr. Base plate size 300x300x12mm with in built installation facility of MCB 4 pole will be installed on 600mm long 4 nb. Foundation bolt of 20mm thickness E.N. grade material. The Foundation bolt having 20mm thickness is 600mm long grouted in payal of atleast 350mm dia 750mm in depth in concrete mix of ratio 1:3:6 using 0.30 cum above 200mm ground level complete finished with fine plaster. (overall weight including of foundation bolt & Base plate will be 42 Kg.) | Each | 3879.00 |
| 9.64.1 | Supply & installation of following garden accessories. | | |
| 9.64.1.1 | Coloured lamp 70w ISI marked | Each | 836.00 |
| 9.64.1.2 | Coloured lamp 150w ISI marked | Each | 982.00 |
| 9.64.1.3 | Coloured lamp 250w ISI marked | Each | 1273.00 |
| 9.64.1.4 | Coloured lamp 400w ISI marked | Each | 1491.00 |
| 9.64.2 | Round P.V.C. dom renowned make ISI marked | | |
| 9.64.2.1 | 200mm to 300mm | Each | 218.00 |
| 9.64.2.2 | 300mm to 600mm | Each | 364.00 |
| 9.64.3 | Decorative dom renowned make ISI marked | | |
| 9.64.3.1 | 200mm to 300mm | Each | 509.00 |
| 9.64.3.2 | 300mm to 600mm | Each | 727.00 |
| | | | |
| 9.65 | Supply & Installation G.I. pipe for protection of under ground cable with required material laid 600mm depth below ground level including excavation in all types of soil & refilling as per direction of the Engineer-in-charge. | | |
| 9.65.1 | 25mm dia G.I. Pipe | Meter | 139.00 |
| 9.65.2 | 50mm dia G.I. Pipe | Meter | 288.00 |
| | | | |

CHAPTER - 10**Miscellaneous**

| S.No. | Description of Items | Unit | Rate |
|--------------|--|-------------|-------------|
| 10.1 | Fixing of Flourescent Tube fitting on wall /ceiling on wooden round block with anchor fastener /J hook & necessary material including connection with 3 core flexible wire etc. complete as required. | Each | 84.20 |
| 10.2 | Fixing of Flourescent Tube fitting on wall with two approved type swan neck steel conduit brackets on wooden round block with anchor fastener /J hook & necessary material including connection with 3 core flexible wire etc. complete as required. | Each | 204.00 |
| 10.3 | Fixing of Flourescent Tube fitting with pendant arrangement of two pieces of approved metallic chain with necessary material including connection with 3 core flexible wire etc. complete as required. | | |
| 1 | For pendent length up to 1.5 meter | Each | 194.00 |
| 2 | Add additional pendent length in excess of 1.5 meter | meter | 80.00 |
| 10.4 | Fixing of Flourescent Tube fitting with stiff pendant arrangement of two pieces of steel conduit and with anchor fastener /J hook & other necessary material including connection with 3 core flexible wire etc. complete as required. | | |
| 1 | For pendent length up to 1.5 meter | Each | 349.00 |
| 2 | Add additional pendent length in excess of 1.5 meter | meter | 221.00 |
| 10.5 | Fixing of Flourescent Tube recessed / concealed mounting Fitting in existing recesses with necessary material including connection with 3 core flexible wire etc. complete as required. | Each | 105.00 |
| 10.6 | Supplying and fixing fan clamps of 16 mm dia steel bar as per specification complete :- | | |
| 1 | For stone slab roof "J" Type hook | Each | 78.00 |
| 2 | For R.C.C. Slabs / Beams | Each | 26.00 |
| 3 | For existing old R.C.C. Slabs / Beams | Each | 76.00 |
| 10.7 | Supplying and fixing fan clamps with hook on existing T.W. beam/ trusses with required size flat iron etc.as per specification complete :- | Each | 65.00 |
| 10.8 | Erection of ceiling fan in position with regulator on existing switch board including wiring , testing etc. with necessary material complete as required. | Each | 110.00 |
| 10.9 | Fixing of fan Regulator on existing switch board in position with necessary material connection etc.complete as required. | Each | 20.00 |
| 10.10 | Erection of exhaust fan / wall bracket fan/cabin fan in position with required PVC cable, rawl bolts etc. complete including connections and making wall surface good. | Each | 80.00 |
| 10.11 | Supplying and fixing down rod of MS pipe for ceiling fan including threading, painting, making holes etc. as required complete :- | meter | 101.00 |

| S.No. | Description of Items | Unit | Rate |
|--------------------------------|---|------|--------|
| 10.12 | Numbering of ceiling fans or fittings with approved paint including all labour material etc. complete as required :- | | |
| 1 | Lettering up to 7 cm height | Each | 1.00 |
| 2 | Lettering above 7 cm but up to 15 cm height | Each | 2.00 |
| 10.13 | Providing and fixing pilot lamp over Main Distribution Fuse Boards / Boxes with 16 mm bracket with lamp holder , paw shade, controlling switch , including wiring and other necessary material as required | Each | 45.00 |
| 10.14 | Providing and fixing wooden board of suitable size (maximum 12" X 18") for fixing of house service meter with necessary materials and connection testing etc. complete as per specification : | | |
| 1 | Single phase meter | Each | 107.00 |
| 2 | Three phase meter | Each | 111.00 |
| 10.15 | Chemical Servicing of Window /Split Air Conditioning unit 1.5 TR/2 TR capacity including cleaning of cooling & condensing units, filters, grills etc & all other parts oiling & greasing of fan motor testing of A.C unit etc. | Each | 605.00 |
| 10.16 | Providing & refilling of wood wool / Khas pads of normal size cooler panels 3 Nos including scraping of old paint, making surface even, painting with red oxide primer & two coats of paint of required shade including fixing new wiremesh complete. | Each | 514.00 |
| 10.17 | Servicing & overhauling of cooler fan motor, pump including replacement of distribution & delivery pipes, PVC elbows, painting etc. as reqd. complete with necessary material & labour including replacement of connection leads. | Each | 228.00 |
| 10.18 | Rewinding of fans by copper enamelled wire of suitable gauge including all required material, insulation, varnishing, connection leads, oiling .greasing etc complete with testing including dismantling & refitting of fan at site. Scrap old material is not returnable to the department. | | |
| 1 | Ceiling Fan 1400 mm sweep new model / Exhaust Fan 380 mm sweep | Each | 539.00 |
| 2 | Ceiling Fan 1200 mm sweep new model / Exhaust Fan 300 mm sweep | Each | 484.00 |
| 3 | Fresh Air Fan up to 300 mm sweep / Wall Bracket /Cabin Fan 400 mm sweep | Each | 356.00 |
| 10.19 | Cleaning, overhauling, servicing of ceiling / Exhaust / Wall bracket fan by applying grease & oil, including testing with mounting / Hanging arrangement including replacement of safty pins, check nuts, lock nut, nut bolts etc. making perfect allignment & refitting at site as required. | Each | 140.00 |
| 10.20 | Supplying & Fixing of Batten type Tube fitting (Channel Type) single 4' x 40 / 36 watts complete with copper wound choke, rotor holders, starter holder, starter duly wired (without tube rod) on wooden block with necessary materials complete as reqd. | Each | 352.00 |
| LABOUR RATES FOR WIRING | | | |

| S.No. | Description of Items | Unit | Rate |
|-------|---|-------|--------|
| 10.21 | Labour rate for point wiring a Light / Fan / Twin control light / Socket out let on seperate board / Call bell Point in (open) surface rigid steel conduit system. | Each | 90.00 |
| 10.22 | Labour rate for point wiring a Light / Fan / Twin control light / Socket out let on seperate board / Call bell Point in recessed/concealed rigid steel conduit system. | Each | 291.00 |
| 10.23 | Labour rate for point wiring a Light / Fan / Twin control light / Socket out let on seperate board / Call bell Point in (open) surface rigid PVC conduit system. | Each | 93.00 |
| 10.24 | Labour rate for point wiring a Light / Fan / Twin control light / Socket out let on seperate board / Call bell Point in recessed/concealed rigid PVC conduit system. | Each | 506.00 |
| 10.25 | Labour rate for point wiring a Power Point in surface rigid steel conduit system including labour for fixing earth continuity conductor . | Each | 398.00 |
| 10.26 | Labour rate for point wiring a Power Point in recessed/concealed rigid steel conduit system including labour for fixing earth continuity conductor . | Each | 654.00 |
| 10.27 | Labour rate for fixing rigid steel conduit in surface /concealed conduit wiring system, as per specification . | | |
| 1 | 20 mm Conduit | meter | 40.00 |
| 2 | 25 mm & 32 mm Conduit | meter | 40.00 |
| 3 | 40 mm & 50 mm Conduit | meter | 41.00 |
| 10.28 | Labour rate for rewiring a Light / Fan / Twin control light / Socket out let on seperate board / Call bell Point in rigid steel / rigid PVC non metallic conduit in (open) surface conduit wiring system. | each | 136.00 |
| 10.29 | Labour rate for rewiring a Light / Fan / Twin control light / Socket out let on seperate board / Call bell Point in rigid steel / rigid PVC non metallic conduit in recessed/concealed conduit wiring system. | each | 136.00 |
| 10.30 | Labour rate for fixing rigid PVC conduit as per specification in recessed/concealed conduit wiring system. | | |
| 1 | 20 mm Conduit | Each | 25.89 |
| 2 | 25 mm & 32 mm Conduit | Each | 25.74 |
| 3 | 40 mm & 50 mm Conduit | Each | 30.81 |
| 10.31 | Labour rate for drawing cables in existing rigid steel conduit (surface or recessed/concealed) | | |
| | "A" 2 Wires -- | | |
| 1 | 2.5 sq mm / 4 sq mm / 6 sq mm | meter | 22.00 |
| 2 | 10 sq mm / 16 sq mm / 25 sq mm | meter | 27.00 |
| 3 | 35 sq mm / 50 sq mm | meter | 27.00 |
| 10.32 | "B" 3 Wires & 4 Wires | | |
| 1 | 2.5 sq mm / 4 sq mm / 6 sq mm | meter | 24.00 |
| 2 | 10 sq mm / 16 sq mm / 25 sq mm | meter | 25.00 |
| 3 | 35 sq mm / 50 sq mm | meter | 25.00 |

10.33 Miscellaneous Civil Material required for the Electrical installations.

| S.No. | Description of Items | Unit | Rate |
|----------|--|----------|---------|
| 10.33.1 | Cement inclusive of all taxes & duties FOR Site | Tonne | 5400.00 |
| 10.33.2 | Stone aggregate (Single Size) : 20mm nominal size inclusive of all taxes & duties FOR Site | Cum | 1100.00 |
| 10.33.3 | Stone aggregate (Single Size) : 10mm nominal size inclusive of all taxes & duties FOR Site | Cum | 730.00 |
| 10.33.4 | Stone aggregate (Single Size) : 40mm nominal size inclusive of all taxes & duties FOR Site | Cum | 655.00 |
| 10.33.5 | Class 40 TM chimney bricks or ghol brick inclusive of all taxes & duties FOR Site | 1000 Nos | 670.00 |
| 10.33.6 | Mild steel flat strap fitting inclusive of all taxes & duties FOR Site | Quintal | 5000.00 |
| 10.33.7 | Flat iron upto 10mm in thickness inclusive of all taxes & duties FOR Site | Quintal | 3950.00 |
| 10.33.8 | Flat iron above 10mm in thickness inclusive of all taxes & duties FOR Site | Quintal | 4200.00 |
| 10.33.9 | Mild steel sheet 3.15mm thick inclusive of all taxes & duties FOR Site | Quintal | 4290.00 |
| 10.33.10 | Earth work in rough excavation in all kinds of soil rate from Building ISSR | Cum | 203.00 |
| 10.33.11 | Earth Filling by available excavated earth (excluding rock) rate from Building ISSR | Cum | 59.00 |
| 10.33.12 | Cement Mortar 1:2 (rate from Building ISSR) | Cum | 5015.00 |
| 10.33.13 | Cement Mortar 1:3 (rate from Building ISSR) | Cum | 4230.00 |
| 10.33.14 | Cement Mortar 1:4 (rate from Building ISSR) | Cum | 3520.00 |
| 10.33.15 | Cement concrete grade M-20 (Nominal Mix) with 20mm maximum size of stone aggregate (rate from Building ISSR) | Cum | 4594.00 |
| 10.33.16 | Cement concrete grade M-15 (Nominal Mix) with 20mm maximum size of stone aggregate (rate from Building ISSR) | Cum | 4154.00 |
| 10.33.17 | Cement concrete grade M-15 (Nominal Mix) with 40mm maximum size of stone aggregate (rate from Building ISSR) | cum | 4094.00 |
| 10.33.18 | Cement concrete grade M-10 (Nominal Mix) with 40mm maximum size of stone aggregate (rate from Building ISSR) | Cum | 3528.00 |
| 10.33.19 | Cement concrete grade M-5 (Nominal Mix) with 40mm maximum size of stone aggregate (rate from Building ISSR) | Cum | 2971.00 |

CHAPTER - 11**Earthing**

| S.No. | Description of Items | Unit | Rate |
|-------|--|-------|---------|
| 11.1 | Earthing with G.I. Earth pipe 4.5 meter long and 40 mm dia with masonry enclosure in cement mortar, cover plate having locking arrangement on the top etc.(but without charcoal or coke and salt) complete as required. | Each | 1893.00 |
| 11.2 | Add Extra for using salt and charcoal / coke for pipe earth electrode as required including excavation & refilling. | | |
| 1 | Excavation 2.5 cum by manual labour | Each | 663.00 |
| 2 | Excavation by making hole with Auger | Each | 609.00 |
| 11.3 | Earthing with G.I. Earth plate 600mm X 600mm X 6mm thick including accessories and providing masonry enclosure in cement mortar, cover plate having locking arrangement on the top and G.I. watering pipe 20mm dia 2.7 meter long etc. (but without charcoal or coke and salt) complete as required. | Each | 2540.00 |
| 11.4 | Earthing with Copper Earth plate 600mm X 600mm X 3mm thick including accessories and providing masonry enclosure in cement mortar, cover plate having locking arrangement on the top and G.I. watering pipe 20mm dia 2.7 meter long etc. (but without charcoal or coke and salt) complete as required. | Each | 7618.00 |
| 11.5 | Add Extra for using salt and charcoal / coke for G.I. Plate or Copper plate earth electrode as required including excavation & refilling. | Each | 520.00 |
| 11.6 | Supplying and laying 8 SWG copper wire at 0.5 meter below ground level as conductor earth electrode including soldering etc. as required. | meter | 83.00 |
| 11.7 | Supplying and laying 6 SWG G.I. wire at 0.5Meter below ground level as conductor earth electrode including soldering etc. as required. | meter | 15.00 |
| 11.8 | Supplying and laying 25mm X 5mm G.I. strip at 0.5 meter below ground level as strip earth electrode including soldering etc. as required. | meter | 65.00 |
| 11.9 | Supplying and laying 25mm X 6mm G.I. strip at 0.5 meter below ground level as strip earth electrode including soldering etc. as required. | meter | 77.00 |
| 11.10 | Providing & fixing 25mm X 5mm copper strip in 40mm dia G.I.pipe from earth electrode as required. | meter | 979.00 |
| 11.11 | Providing & fixing 25mm X 5mm G.I.strip in40mm dia G.I. Pipe(B class) from earth electrode as required. | meter | 289.00 |

| S.No. | Description of Items | Unit | Rate |
|-------|---|-------|---------|
| 11.12 | Providing and laying earth connections from earth electrode with 4.00 mm dia G.I. wire in 15mm dia G.I. Pipe(B class) from earth electrode as required. | meter | 99.00 |
| 11.13 | Providing and laying earth connections from earth electrode with 4.00 mm dia copper wire in 15mm dia G.I. Pipe(B class) from earth electrode as required. | meter | 159.00 |
| 11.14 | Providing & fixing 25mm X 5mm copper strip on surface or recessed for connection etc. as required. | meter | 833.00 |
| 11.15 | Providing and fixing 25mm X 4mm G.I. strip on surface or in recessed/concealed for connection etc. as required. | meter | 107.00 |
| 11.16 | Providing and fixing 4.00mm G.I. wire on surface or in recessed/concealed for loop earthing as required. | meter | 35.00 |
| 11.17 | Providing and fixing 4.00mm copper wire on surface or in recessed/concealed for loop earthing as required. | meter | 105.00 |
| 11.18 | Supplying and drawing 4.00 sq.mm.Aluminium conductor wire for loop earthing in the existing surface/ recessed/concealed conduit along other wires as required. | meter | 28.00 |
| | LIGHTNING CONDUCTOR | | |
| 11.19 | Providing and fixing of lightning conductor finial made of 25mm dia 300mm long copper tube having single prong at top with 85 mm dia 3 mm thick copper base plate including holes complete as required. | Each | 1373.00 |
| 11.20 | Providing and fixing of lightning conductor finial made of 25mm dia 300mm long G.I. tube having single prong at top with 85 mm dia 6 mm thick G.I. base plate including holes complete as required. | Each | 502.00 |
| 11.21 | Fixing of lightning conductor finial made of 25mm dia 300mm long copper tube / G.I. tube having single prong at top with base plate etc.complete as required. | Each | 141.00 |
| 11.22 | Rivetting / Sweating and soldering of copper / G.I. Tape (with another copper / G.I. Tape, base of finial or any other metallic object) as required. | Each | 93.00 |
| 11.23 | Providing and fixing copper tape 20mm X 3mm thick on parapet and surface of wall of lightening conductor as required (for Horizontal runs) | meter | 367.00 |
| 11.24 | Providing and fixing copper tape 20mm X 3mm thick on parapet and surface of wall of lightening conductor as required (for Vertical runs) | meter | 382.00 |

| S.No. | Description of Items | Unit | Rate |
|-------|--|-------|---------|
| 11.25 | Providing and fixing G.I. tape 20mm X 3mm thick on parapet and surface of wall of lightening conductor as required (for Horizontal runs) | meter | 47.00 |
| 11.26 | Providing and fixing G.I. tape 20mm X 3mm thick on parapet and surface of wall of lightening conductor as required (for Vertical runs) | meter | 62.00 |
| 11.27 | Fixing of copper / G.I. Tape 20mm X 3mm thick on parapet and surface of wall for lightening conductor as required (for Horizontal runs) | meter | 20.00 |
| 11.28 | Fixing of copper / G.I. Tape 20mm X 3mm thick on parapet and surface of wall for lightening conductor as required (for Vertical runs) | meter | 35.00 |
| 11.29 | Providing and fixing " Testing Joint" made by 20mm X 3mm thick copper strip 125mm long with 4 Nos of tinned Brass bolts, Nut, check nuts and spring washers etc. complete as required . | Each | 235.00 |
| 11.30 | Providing and fixing " Testing Joint" made by 20mm X 3mm thick G.I. strip 125mm long with 4 Nos of G.I. bolts, Nut, check nuts and spring washers etc. complete as required . | Each | 68.00 |
| 11.31 | Providing and laying copper tape 32mm X 6mm thick for earth electrode directly in ground as required | meter | 1128.00 |
| 11.32 | Providing and laying G.I. tape 38mm X 6mm thick for earth electrode directly in ground as required . | meter | 114.00 |
| 11.33 | Laying of copper / G.I. tape 32mm X 6mm thick for earth electrode directly in ground as required. | meter | 18.00 |
| | EARTHING FOR DOMESTIC ELECTRIC INSTALLATION | | |
| 11.34 | Providing and fixing earthing arrangement with 16mm dia 2.5 meter long galvanized iron or steel rod electrode including packing of charcoal powder and salt as per specification watering pipe 19mm dia G.I. Connection etc. complete with refilling the pit as required, but excluding the excavation of earth pit. | Each | 667.00 |
| 11.35 | Providing and fixing earthing arrangement with 38.1mm dia 2.5 meter long galvanized iron pipe electrode including packing of charcoal powder and salt as per specification watering pipe 19mm dia G.I. Connection etc. complete with refilling the pit as required, but excluding the excavation of earth pit. | Each | 1002.00 |
| 11.36 | Supplying and laying G.I. earth lead duly installed on wall or in G.I. Pipe including connections etc.complete as required. | | |
| 1 | 13 sq mm (4 mm dia) | meter | 10.00 |
| 2 | 25 sq mm (5.6 mm dia) | meter | 15.00 |
| 3 | 40 sq mm (7.1 mm dia) | meter | 20.00 |

| S.No. | Description of Items | Unit | Rate |
|-------|--|-------|--------|
| 11.37 | Providing and laying earth continuity conductor including fixing with | | |
| (A) | Aluminium Earth Continuity Conductor :- | | |
| 1 | 6 Sq mm. | meter | 10.00 |
| 2 | 10 Sq mm. | meter | 12.00 |
| 3 | 16 Sq mm | meter | 16.00 |
| 4 | 25 Sq mm. | meter | 23.00 |
| (B) | G.I. Or Steel Earth Continuity Conductor :- | | |
| 1 | 6 Sq mm. | meter | 7.00 |
| 2 | 10 Sq mm. | meter | 9.00 |
| 11.38 | Providing and laying earth Continuity Conductor of 4 Sq mm Aluminium along the run of final sub circuit in PVC conduit in an approved manner. | meter | 8.00 |
| 11.39 | Supplying and drawing PVC insulated copper cable (Earth Continuity Conductor) of Green colour FR with copper multi strand conductor ISI marked in existing conduit along with other wires as required as per specification : | | |
| 1 | 4 Sq mm | meter | 45.00 |
| 2 | 6 Sq mm. | meter | 58.00 |
| 3 | 10 Sq mm. | meter | 94.00 |
| 4 | 16 Sq mm | meter | 146.00 |
| 11.40 | Supplying and erecting earth pit of minmum bore dia 150 mm size, approved make safe earthing electrode consiting pipe in pipe tecnologie as per IS 3043-1987 made of corriasion free GI pipes having outer pipe dia of 50 mm having 80-200 micron galvanising, inner pipe dia of 25 mm having 20-250 micron galavinsing, connection teriminal dia of 12 mm with constent OHMIC value sourrounded by highly conductiv compund with high charge disipation sutible for effective and maintence free earthing | | |
| 1 | with 2 mtr. Pipe in normal soil with 25 kg (one bag) back filling compound | each | 7200 |
| 2 | with 3 mtr. Pipe in normal soil with 50 kg (two bag) back filling compound | each | 10800 |
| 3 | with 2 mtr. Pipe of 80 mm outer dia, 40 mm inner dia and 14 mm terminal dia, in soft rock/marshy soil with 25 kg (one bag) back filling compound | each | 8800 |
| 4 | with 3 mtr. Pipe of 80 mm outer dia, 40 mm inner dia and 14 mm terminal dia, in soft rock/marshy soil with 25 kg (two bag) back filling compound | each | 13300 |
| 11.41 | Providing back filling compund suitable for safe earthing divice. | kg | 36 |

| CHAPTER - 12 | | | |
|--|--|-------|--------|
| Dismantling of Civil and Electrical Works | | | |
| S.No. | Description of Items | Unit | Rate |
| 12.1 | Dismantling of existing light / Fan / Bell / Socket out let point on separate board / Wiring with insulated wire in casing / conduit / Batten complete with fitting and accessories | point | 10.00 |
| 12.2 | Making the site clear of the dismantling installation by refilling the hole with cement mortar & finished with paint gitties and replacing to match the colour of wall & ceiling. | point | 12.00 |
| 12.3 | Dismantling of existing socket outlet point on same board in any system of wiring | point | 8.00 |
| 12.4 | Dismantling the existing armoured / unarmoured cable or single core wires of submain, main , circuit in any system of wiring including recoiling. | meter | 9.00 |
| 12.5 | Dismantling of existing underground cable safely with its accessories and refilling the trench to ground level including recoiling of dismantled cable. | meter | 18.00 |
| 12.6 | Dismantling of D.F. Board, D.P. Switch, T.P. & T.P.N. Switch or D.B. of any size complete with board or angle / flat iron frame and making site clear including the refilling hole & repainting to match colour of wall. | Each | 11.00 |
| 12.7 | Dismantling of D.F. Board , D.P.Switch , T.P. & T.P.N. Switch or D.B. of any size only | Each | 9.00 |
| 12.8 | Dismantling the existing Ceiling / exhaust / cabin fan with complete accessories and making the site clear. | Each | 19.00 |
| 12.9 | Dismantling of existing steel pole, R.S.Joist, girder with bracket clamps insulator or stay from the cement concrete foundation and making the site clear by refilling the pit to ground level. | Each | 301.00 |
| 12.10 | Dismantling of existing water tight fluorescent tube fitting / M.V. Lamp fitting with making the site clear. | Each | 14.00 |
| 12.11 | Dismantling of existing water tight fitting / M.V. Lamp fitting with extension bracket, clamp from pole or wall with making the site clear. | Each | 19.00 |
| 12.12 | Dismantling of existing geyser or storage type water heater and making the site good by colour wash etc.as required. | Each | 36.00 |
| 12.13 | Providing recess in brick wall suitable for erection of exhaust fan up to 450 sweep complete with grouting of nut bolts, plastering and colour wash to match the colour of wall. | | |
| 1 | For wall thickness up to 9" | Each | 269.00 |
| 2 | For wall thickness up to 15" | Each | 473.00 |
| 3 | For the stone wall thickness up to 15" | Each | 609.00 |

EXTERNAL

| CHAPTER- 13 | | | |
|---|--|-------|--------------|
| EXTERNAL ELECTRIFICATION AND OVERHEAD LINES | | | |
| S.No. | Description of Item | Unit | Rate (in Rs) |
| | <u>SUPPORT FOR OVER HEAD LINE</u> | | |
| 13.1 | Supply of support for overhead line Rail pole of I.S. standard including welding, drilling of required hole etc. complete as required. | | |
| 1 | Rail pole standard weight 52 kg per meter | meter | 2655.00 |
| 2 | Rail pole std. weight 26 kg per meter | meter | 1327.00 |
| 3 | Rail pole std. weight 21 kg per meter | meter | 1072.00 |
| | | | |
| 13.2 | Supply of support for overhead line RS joist / H-beam of I.S. standard including welding, drilling of required hole etc. complete as required. | | |
| 1 | R.S. Joist 100x200-25.4 kg per meter | meter | 1354.00 |
| 2 | R.S. Joist 175 x 90 - 19.3 kg per meter | meter | 1029.00 |
| 3 | R.S. Joist 150 x 100 - 17 kg per meter | meter | 906.00 |
| 4 | R.S. Joist 150 x 80 - 14.9 kg per meter | meter | 794.00 |
| 5 | R.S. Joist 125 x 75 - 13 kg per meter | meter | 693.00 |
| 6 | H-Beam 152x152mm , Std weight 37.1 kg per meter | meter | 1977.00 |
| | | | |
| 13.3 | Supply of steel tubular pole swaged type as per IS:2713-1980 Complete with baseplate and top Canopy | | |
| 1 | 410 SP-2 - 7.00 meter | Each | 6954.00 |
| 2 | 410 SP-5 - 7.50 meter | Each | 7451.00 |
| 3 | 410 SP-8 - 7.50 meter | Each | 9438.00 |
| 4 | 410 SP-11 - 8.00 meter | Each | 7782.00 |
| 5 | 410 SP-14 - 8.00 meter | Each | 10100.00 |
| 6 | 410 SP-17 - 8.50 meter | Each | 8279.00 |
| 7 | 410 SP-20 - 8.50 meter | Each | 10432.00 |
| 8 | 410 SP-23 - 8.50 meter | Each | 13164.00 |
| 9 | 410 SP-26 - 9.00 meter | Each | 8527.00 |
| 10 | 410 SP-29 - 9.00 meter | Each | 11259.00 |
| 11 | 410 SP-32 - 9.00 meter | Each | 13660.00 |
| 12 | 410 SP-35 - 9.50 meter | Each | 11591.00 |
| 13 | 410 SP-38 - 9.50 meter | Each | 14157.00 |
| 14 | 410 SP-41 - 10.00 meter | Each | 12087.00 |
| 15 | 410 SP-44 - 10.00 meter | Each | 14819.00 |
| 16 | 410 SP-47 - 10.00 meter | Each | 19207.00 |
| 17 | 410 SP-50 - 11.00 meter | Each | 13081.00 |
| 18 | 410 SP-53 - 11.00 meter | Each | 16061.00 |
| 19 | 410 SP-56 - 11.00 meter | Each | 20863.00 |
| 20 | 410 SP-59 - 12.00 meter | Each | 17220.00 |
| 21 | 410 SP-62 - 12.00 meter | Each | 22353.00 |
| 22 | 410 SP-65 - 12.00 meter | Each | 26824.00 |
| 23 | 410 SP-68 - 13.00 meter | Each | 24175.00 |
| 24 | 410 SP-71 - 13.00 meter | Each | 20201.00 |
| 25 | 410 SP-73 - 14.50 meter | Each | 26741.00 |
| 26 | 410 SP-76 - 14.50 meter | Each | 32371.00 |
| 27 | 410 SP-77 - 16.00 meter | Each | 29142.00 |
| 28 | 410 SP-80 - 16.00 meter | Each | 35351.00 |
| 29 | 410 SP-10 (Bend type) 8.00 meter | Each | 7186.00 |
| 30 | 410 SP-16 (Bend type) 8.50 meter | Each | 7600.00 |
| 31 | 410 SP-25 (Bend type) 9.00 meter | Each | 7849.00 |
| 32 | 410 SP-34 (Bend type) 9.50 meter | Each | 11574.00 |
| 33 | 410 SP-40 (Bend type) 10.00 meter | Each | 12071.00 |

| S.No. | Description of Item | Unit | Rate (in Rs) |
|-------|--|------|--------------|
| 34 | 410 SP-49 (Bend type) 11.00 meter | Each | 13064.00 |
| 13.4 | Supplying of prestressed cement concrete (PCC) pole conforming to IS 785 at work site including required transportation. | | |
| 1 | PCC pole 8 mtrs. Long 140 kg | Each | 1806.00 |
| 2 | PCC pole 9.1 mtrs. Long 272 kg | Each | 3537.00 |
| 13.5 | Supplying and drawing All Aluminium Alloy conductor (AAAC) of approved make confirming to IS 398-1979 Pt. IV, including binding at existing insulator, jointing, jumpering, tearing off, connecting etc. as required including clearing of obstacles (if any) | | |
| 1 | 0.03 sq.inch / 20 sq.mm Alloy Aluminium Conductor | Km. | 23930.00 |
| 2 | 0.04 sq.inch / 25 sq.mm Alloy Aluminium Conductor | Km. | 39609.00 |
| 3 | 0.05 sq.inch / 30 sq.mm Alloy Aluminium Conductor | Km. | 39884.00 |
| 4 | 0.075 sq.inch / 48 sq.mm Alloy Aluminium Conductor | Km. | 59138.00 |
| 13.6 | Supplying and drawing of stranded Aluminium Conductor Steel Reinforced (ACSR) confirming to IS:398-1976 of approved make, stringing, making off complete with binding at existing insulator, jointing, jumpering, tearing off, connecting etc. as required and clearing of obstacles (if any) etc. | | |
| 1 | ACSR 6/1 - 2.11mm dia (Squirrel) with equivalent copper area 13Sq.mm (or 0.02Sq.inch) & calculated Alu. Area 20.71 Sq.mm. | Km. | 20795.00 |
| 2 | ACSR 6/1 - 2.36mm dia (Gopher) with equivalent copper area 16Sq.mm or 0.025 inches and calculated aluminium area 25.91 Sq.mm. | Km. | 25933.00 |
| 3 | ACSR 6/1 - 2.59mm dia (Weasel)with equivalent copper area 20.00 Sq.mm (0.03 sq inch) with calculated aluminium area 31.21 Sq.mm | Km. | 31315.00 |
| 4 | ACSR 6/1 - 3.00mm dia (Ferret) with equivalent copper area 25Sqmm (0.04 sq inch) calculated aluminium area 41.87 Sq.mm. | Km. | 41835.00 |
| 5 | ACSR 6/1 - 3.35mm dia (Rabbit) with equivalent copper area 30Sqmm (0.05 sq inch) calculated aluminium area 52.21Sq.mm. | Km. | 55278.00 |
| 6 | ACSR 6/1 - 3.66mm dia (Mink) with equivalent copper area 40 Sqmm (0.06 sq inch) calculated aluminium area 62.32 sq.mm. | Km. | 65868.00 |
| 7 | ACSR 6/1 - 3.99mm dia (Beaver)with equivalent copper area 45 Sqmm (0.07 sq inch) calculated aluminium area 74.07 Sq.mm | Km. | 78267.00 |
| 8 | ACSR 6/1 - 4.09mm dia (Raccoon) with equivalent copper area 48 Sqmm (0.075 sq inch) equivalent calculated Aluminium area 77.83 Sq.mm. | Km. | 71547.00 |
| 13.7 | Supplying and fixing guard insulator or split insulator complete: | | |
| 1 | 25x25mm | Pair | 24.00 |
| 2 | 37x37mm | Pair | 30.00 |
| 3 | 50x50mm | Pair | 41.00 |

| S.No. | Description of Item | Unit | Rate (in Rs) |
|---------|--|-------|--------------|
| 13.8 | Supplying and drawing guard wire/earth wire/bearer wire 13mm ² (4mm. Dia) G.I. including stringing, binding at existing insulators or brackets, jointing, jumpering, connecting etc. as required and clearing of obstacles (if any) | Km. | 9176.00 |
| 13.9 | Supplying and erection of guards for existing overhead lines as required including split insulator required as per specification: | | |
| 1 | Cradle type | Each | 34.00 |
| 2 | Hexagonal type | Each | 22.00 |
| 3 | Ring type | Each | 19.00 |
| 13.10 | Supplying and erection of water tight terminal box of 14 SWG M.S. Sheet 4mm thick box of required size to erect the suitable kit kat/ MCB/Switch with Top & bottom folded fitted with rubber ring to make it water tight with pole clamp made from 40x3mm M.S. flat iron with 2 Nos. Nut and Bolts duly painted with 2 coat of Red Oxide paint and 2 coat of Aluminium silver paint erected with cable gland but excluding the cost of the Kit Kat/MCB/Switch complete as per specification: | | |
| 1 | 20x15x15Cms. | Each | 286.00 |
| 2 | 30x20x15 Cms. | Each | 390.00 |
| 13.11 | Installing iron clad weather proof cut outs on existing pole or surface board/boxes with necessary materials complete including fixing and connection etc. excluding cost of cutouts as required: | | |
| 1 | 15/16 Amps. 250 volts. | Each | 32.00 |
| 2 | 15/16 Amps. 500 volts. | Each | 54.00 |
| 3 | 30/32 Amps. 500 volts. | Each | 64.00 |
| 4 | 60/63 Amps. 500 volts | Each | 144.00 |
| 5 | 100 Amps. 500 volts. | Each | 238.00 |
| 13.12 | Supplying and installing (overhead) service main with PVC insulated & PVC seathed cable suspended on existing bearer wire in approved manner as per specification with bobin insulators etc. including drawing in existing G.I. pipe brackets or conduit pipe etc. wherever required, including connection, testing etc.: | | |
| 13.12.1 | Aluminium Two wire (single core) | | |
| 1 | 2.5 Sq.mm | meter | 17.00 |
| 2 | 4.0 Sq.mm | meter | 19.00 |
| 3 | 6.0 Sq.mm | meter | 23.00 |
| 13.12.2 | Three Wire (Single core) | | |
| 1 | 4.0 Sq.mm | meter | 24.00 |
| 2 | 6.0 Sq.mm | meter | 30.00 |
| 3 | 10 Sq.mm | meter | 44.00 |
| 4 | 16 Sq.mm | meter | 52.00 |
| 13.12.3 | Four Wire (Single core) | | |
| 1 | 4 Sq.mm | meter | 29.00 |
| 2 | 6 Sq.mm | meter | 36.00 |
| 3 | 10 Sq.mm | meter | 54.00 |
| 4 | 16 Sq.mm | meter | 65.00 |

| S.No. | Description of Item | Unit | Rate (in Rs) |
|--------------|--|-------------|---------------------|
| 13.13 | Erection of steel tubular or steel rail pole or H-Beam of length exceeding 8 meters but not exceeding 10 meters in cement concrete 1:3:6 (1 cement : 3 coarse sand: 6 graded stone aggregate 40mm nominal size) foundation, base padding & muffing including excavation and refilling etc. as required.(4.55 bags of cement/cmt.) | Each | 2163.00 |
| 13.14 | Erection of steel tubular or steel rail pole or H-Beam of length exceeding 10 meters but not exceeding 13 meters in cement concrete 1:3:6 (1 cement :3 coarse sand: 6 graded stone aggregate 40mm nominal size) foundation , base padding & muffing including excavation and refilling etc. as required.(4.55 bags of cement/cmt.) | Each | 2563.00 |
| 13.15 | Erection of R.C.C./P.C.C. pole of length exceeding 8 meters but not exceeding 11 meters in brick ballast and ramming the foundation including excavation and refilling etc.as required. | Each | 1871.00 |
| 13.16 | Erection of R.C.C./P.C.C. pole of length exceeding 11 meters but not exceeding 13 meters in brick ballast and ramming the foundation including excavation and refilling etc. as required. | Each | 2064.00 |
| 13.17 | Erection of metallic street light standard of length exceeding 4.5 meters but not exceeding 6.5 meters in cement concrete 1:3:6 (1cement:3coarse sand:6 graded stone aggregate 40mm nominal size) foundation with cement concrete collar of size 0.4 meters dia x 0.5 meters height to accommodate the looping type cable end box including excavation and refilling etc. as required. | Each | 1642.00 |
| 13.18 | Erection of metallic street light standard of length exceeding 6.5 meters but not exceeding 8 meters in cement concrete 1:3:6 (1cement:3coarse sand:6 graded stone aggregate 40mm nominal size) foundation with cement concrete collar of size 0.4 meters dia x 0.5 meters height to accommodate the looping type cable end box including excavation and refilling etc. as required. | Each | 1977.00 |
| 13.19 | Erection of steel tubular or rail pole strut in cement concrete 1:3:6 (1cement:3coarse sand: 6 aggregate 40mm nominal size) foundation including excavation and refilling and secured with holding clamps, nuts and bolts, etc. as required. | Each | 2526.00 |
| 13.20 | Erection of RCC/PCC pole struct in bricballast and ramming the foundation including excavation and refilling and secured with holding clamps nuts and bolts etc. as required. | Each | 2391.00 |

| S.No. | Description of Item | Unit | Rate (in Rs) |
|--------------|---|-------------|---------------------|
| 13.21 | Supplying and erection of stay set complete (Galvanized) 19mm. Dia x 1.8 meter long stay rod anchor plate of size 300 mm x 300 mm x6.4mm thimble stay clamps, turn buckle (19mm dia x60cm),7/4.00mm dia G.I. Stay wire and strain insulator etc. in cement concrete 1:3:6 (1 Cement : 3 Coarse sand : 6 graded stone aggregate 40mm nominal size) foundation including excavation and refilling etc. as required. | Each | 2811.00 |
| 13.22 | Supplying and erection of stay set complete (Galvanized) with 19mm dia x1.8 meter long stay anchor plate of size 300mm x 300mm x 6.4mm thimble stay clamps turn buckle 19mmx560cm 7/3.15mm dia G.I. stay wire and strain insulator etc. in cement concrete 1:3:6 (1 Cement : 3 Coarse and : 6 graded stone aggregate 40mm nominal size) foundation including excavation and refilling etc. as required. | Each | 2642.00 |
| 13.23 | Supplying and erection of stay set complete (Galvanized) with 19mm.dia 1.8 meter long stay rod, anchor plate of size 300mm x 300mm x 6.4mm thimble stay clamps, bow tightener, 7/4.00 dia G.I. stay wire and strain insulator etc. in cement concrete 1:3:6 (1 Cement : 3 Coarse and : 6 graded stone aggregate 40mm nominal size) foundation including excavation and refilling etc. as required. | Each | 2818.00 |
| 13.24 | Supplying and erection of stay set complete (Galvanized) with 19mm.dia 1.8 meter long stay rod, anchor plate of size 300mm x 300 mm x 6.4mm thimble stay clamps,bow tightener, 7/3.15 dia G.I. stay wire and strain insulator etc. in cement concrete 1:3:6 (1 Cement : 3 Coarse and : 6 graded stone aggregate 40mm nominal size) foundation including excavation and refilling etc. as required. | Each | 2634.00 |
| 13.25 | Erection of stay set complete (Galvanized) in cement concrete 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size) foundation including excavation and refilling etc. as required. | Each | 1366.00 |
| 13.26 | Supplying and erection of bow stay set complete (galvanized) with 19mm dia x 1.8m long stay rod, anchor plate of size 300mmx300mm x 6.4mm thimble stay clamps, turn buckle 19mmx60cm, 7/4.00mm dia G.I. stay wire and strain insulator etc. in cement concrete 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size) foundation including excavation and refilling and also with 0.6m long brace of size 50mmx 50mmx6mm angle iron with 50mm dia pulley fixed at one end of the brace as required. | Each | 3135.00 |

| S.No. | Description of Item | Unit | Rate (in Rs) |
|-------|---|------|--------------|
| 13.27 | Supplying and erection of bow stay set complete (galvanized) with 19mm dia. X 1.8m long stay rod anchor plate of size 300mmx300mmx6.4mm thimble stay clamps turn buckle 19mmx60cm, 7/3.15mm dia G.I. Stay wire and strain insulator etc. in cement concrete 1:3:6 (1cement : 3 coarse sand : 6 graded stone aggregate 400mm nominal size foundation including excavation and refilling and also with 0.6m long brace of size 50mmx50mmx6mm angle iron with 50mm dia pulley fixed at one end of the brace as required. | Each | 2967.00 |
| 13.28 | Supplying of channel iron 75mmx40mm (5.7kg/ m) cross arm for 2 wire overhead line complete with clamps, bolts and nuts etc.including painting as required | Set | 364.00 |
| 13.29 | Supplying of channel iron 75mmx40mm(5.7kg/ m) cross arm for 4 wire overhead line complete with clamps, bolts and nuts etc.including painting as required | Set | 634.00 |
| 13.30 | Supplying of channel iron 100mmx50mmx7.9kg.Per M cross arm for 4 wire overhead line complete with clamps, bolts and nuts etc..including painting as required | Set | 1009.00 |
| 13.31 | Supplying of angle iron 50mmx50mmx6mm (4.5 kg /m) cross arm for 2 wire overhead line complete with clamps, bolts and nuts etc.including painting as required. | Set | 257.00 |
| 13.32 | Supplying of angle iron 50mmx50mmx6mm(4.5 kg /m) cross arm for 4 wire overhead line complete with clamps, bolts and nuts etc.including painting .as required. | Set | 409.00 |
| 13.33 | Erection of angle iron/channel iron cross arm on existing pole etc. as required. | Set | 66.00 |
| 13.34 | Supply and Erection of galvanized 'D' iron bracket complete with shackle insulator (75mmx90mm) bolts and nuts, coach screws etc..including painting as required. | Set | 187.00 |
| 13.35 | supply & Erection of galvanized 'D' iron complete with shackle insulator (100mmx110mm) bolts and nuts, coach screws etc..including painting as required. | Set | 213.00 |
| 13.36 | Erection of galvanized 'D' iron and insulator on pole as required. | Set | 16.00 |
| 13.37 | Supplying and erection of 75mm x 90mm shackle insulator with G.I. bolts, nuts and straps etc. as required. | Each | 103.00 |

| S.No. | Description of Item | Unit | Rate (in Rs) |
|-------|---|------|--------------|
| 13.38 | Supplying and erection of 100mmx110mm shackle insulator with G.I. bolts, nuts and straps etc. as required. | Each | 129.00 |
| 13.39 | Supplying and erection of 100mmx65mm pin insulator complete with G.I. spindle and nuts etc. as required. | Each | 63.00 |
| 13.40 | Supplying and erection of 100mmx80mm pin insulator complete with G.I. spindle and nuts etc. as required. | Each | 59.00 |
| 13.41 | Erection of shackle/pin insulator etc. as required. | Each | 18.00 |
| 13.42 | Erection of G.I. wire No.8 SWG including binding etc.as required. | Km. | 682.00 |
| 13.43 | Erection of hexagonal type guard as required (labour only) | Each | 48.00 |
| 13.44 | Erection of ring type guard as required (Labour only) | Each | 16.00 |
| 13.45 | Erection of cradle guard as required (Labour only) | Each | 32.00 |
| 13.46 | Supplying and erection of 15A aerial fuse complete as required. | Each | 51.00 |
| 13.47 | Supplying and erection of 30A aerial fuse complete as required. | Each | 61.00 |
| 13.48 | Erection of aerial fuse as required. | Each | 24.00 |
| 13.49 | Fixing of lightning arrestor (labour only) | Each | 36.00 |
| 13.50 | Supplying and fixing of 20mm dia. G.I. pipe A class 3 mtrs. in length for street light water tight bracket including bending to shape and wiring with 1.5sqmm W.P./PVC wire alongwith water proof controlling switch etc. as required. | Each | 623.00 |
| 13.51 | Supplying and fixing of 20mm dia. G.I. pipe A class 2 mtrs. Long for street light water tight bracket including bending to shape and wiring with 1.5sqmm W.P./PVC wire alongwith water proof controlling switch etc. as required. | Each | 859.00 |
| 13.52 | Supplying and fixing of 32mm dia. X 2.00 mtr. Long G.I. pipe B class bracket for mounting of flourescent street light fittings on poles including bending the pipe to the required shape and wiring with 1.5Sq.mm W.P./PVC wire etc. as required. | Each | 676.00 |
| 13.53 | Providing and fixing 50mmx3.2M.G.I. Long pipe (including accessories) complete with 50mmx50mmx6mm angle iron bracket on wall and 75mmx90mm shackle insulator with straps for house service connection. | Each | 1390.00 |

| S.No. | Description of Item | Unit | Rate (in Rs) |
|-------|--|------|--------------|
| 13.54 | Providing and fixing 50mmx5.6M.G.I. Long pipe (including accessories) complete with 50mmx50mmx6mm angle iron cross arm and M.S. flat iron, bends for guard wire 75mmx90mm shackle insulator with straps 7/3.15mm G.I. wire, stay set for house service connection. | Each | 2306.00 |
| 13.55 | Dismantling of over head lines comprising of copper / aluminium overhead conductor, G.I. wire, cross arm, insulators etc. as required. | Kg | 1203.00 |
| 13.56 | Dismantling poles/street light standards/struts embedded in brick ballast etc. as required. | Each | 445.00 |
| 13.57 | Dismantling poles/street light standards/struts embedded in cement concrete foundation etc. as required. | Each | 609.00 |
| 13.58 | Supplying of angle/channel flat iron fitting for overhead lines such as cross arms, clamps, brackets, welding and other necessary materials as per specifications. | Kg. | 54.00 |
| 13.59 | Labour charges for fixing 'D' brackets of angle iron 50x50x6mm size on existing pole as required | Each | 30.00 |
| 13.60 | Labour charges for fixing 'D' brackets of angle iron 50x50x6 mm size on existing wall masonry with required materials complete. | Each | 32.00 |
| 13.61 | Supplying and erection of galvanised stay set for 11kV overhead line complete with 19/20mm dia x 1.8 meters long stay rod, anchor plate of size 45cm x 45cm x 7.5mm thick, thimble, stay clamps, turn buckle (20mmx 600mm), 7/4.00mm dia G.I. stay wire and 11kV strain insulator etc. in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm. nominal size) foundation including excavation and refilling etc. as required. | Set | 2873.00 |
| 13.62 | Supplying and erection of galvanised stay set for 33kV overhead line complete with 19/20mm dia x 1.8 meters long stay rod, anchor plate of size 45cm x 45cm x 7.5mm thick, thimble, stay clamps, turn buckle (20mmx 600mm), 7/4.00mm dia G.I. stay wire and 33kV strain insulator etc. in cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm. nominal size) foundation including excavation and refilling etc. as required. | Set | 2906.00 |
| 13.63 | Supplying of channel iron 75mm x 40mm x 7.14 Kg/mtr. Pole top bracket/cross arm for single 11kV overhead line conductor complete with 50mm x 6mm flat iron clamp, bolts and nuts including drilling holes for insulator pins, bolts and nuts etc. 'and painting with primer and finish paint as required | Each | 240.00 |
| 13.64 | Supplying of channel iron 75mm x 40mm x 7.14 Kg/mtr. Pole top bracket/cross arm for single 33kV overhead line conductor complete with 50mm x 6mm flat iron clamp, bolts and nuts including drilling holes for insulator pins, bolts and nuts etc. 'and painting with primer and finish paint as required | Each | 259.00 |

| S.No. | Description of Item | Unit | Rate (in Rs) |
|--------------|---|-------------|---------------------|
| 13.65 | Supplying of 50mmx 8mm M.S. Flat iron pole top bracket/cross arm for single 11/22/33kV overhead line conductor complete with fixing bolts, nuts and washers drilling holes for insulator pins, painting with primer and finish paint as required. | Each | 280.00 |
| 13.66 | Supplying of channel iron 75mm x 40mm x 7.14Kg / Mtr.cross arm for two 11kV overhead line conductors complete with 50mm x 50mm x 6mm angle iron bracket welded to the channel iron and complete with 50mm x 6mm M.S. flat iron clamps, bolts and nuts including drilling holes for insulator pins, bolts and nuts etc. and painting with primer and finish as required. | Each | 1211.00 |
| 13.67 | Supplying of channel iron 75mmx 40mmx 7.14Kg /Mtr.cross arm for two 33kV overhead line conductors complete with 50mm x 50mm x 6mm angle iron bracket welded to the channel iron and complete with 50mm x 6mm M.S. flat iron clamps, bolts and nuts including drilling holes for insulator pins, bolts and nuts etc. and painting with primer and finish as required. | Each | 1558.00 |
| 13.68 | Supplying of channel iron 75mm x 40mm x 7.14 kg/Mtr. V-shape cross arm for two 11 kV overhead line conductors complete with 50 mm x 6mm M.S. flat iron clamp, bolts and nuts including drilling holes for insulator pins, bolts and nuts etc. and painting with primer and finish paint as required. | Each | 948.00 |
| 13.69 | Supplying of channel iron 75mm x 40mm x 7.14 kg/Mtr. V-shape cross arm for two 33 kV overhead line conductors complete with 50 mm x 6mm M.S. flat iron clamp, bolts and nuts including drilling holes for insulator pins, bolts and nuts etc. and painting with primer and finish paint as required. | Each | 1117.00 |
| 13.70 | Erection of pole top/straight two wire/V-shape two wire/angle iron/channel iron, Cross arm on steel tubular/Rail/Channel iron/PCC pole for 11kV/33kV as required. | Set | 120.00 |
| 13.71 | Supplying of two lengths of channel iron 75mm x 40mm x 7.14 kg/mtr . Double pole cross arm for three wire 11kV overhead line conductors complete with through bolts and nuts for clamping to the poles, 50mm x 6mm m.s flats welded on one side to the channel iron and with bolts and nuts on the other side for tying the cross arms together, including drilling holes for insulator pins/fittings, bolts and nuts etc. and painting with primer and finish paint as required. | Set | 2620.00 |
| 13.72 | Supply and erection of a set of cross bracing frame work for 11 kv overhead line double pole structure having four members fabricated out of 50mmx50mmx6mm angle iron to form a rectangle of minimum size 1400mm width x 2500mm height, complete with 50mm x 6mm flat iron clamps, bolts and nuts including drilling holes and painting with primer and finish paint as required. | Set | 3439.00 |

| S.No. | Description of Item | Unit | Rate (in Rs) |
|--------------|--|-------------|---------------------|
| 13.73 | Supplying of channel iron 100mmx50mm x 9.56kg/mtr, pole top bracket/cross arm for single 33kV overhead line conductor complete with 50mmx6mm flat iron clamp, bolts and nuts including holes for insulator pins, bolts and nuts etc. and painting with primer and finish as required. | Each | 324.00 |
| 13.74 | Supplying of channel iron 100mmx50mm x 9.56kg/mtr, cross arm for two wire 33kV overhead line conductors complete with 50mmx50mmx6mm angle iron bracket welded to the channel iron and complete with 50mmx6mm flat iron clamps, bolts and nuts including drilling holes for insulator pins/fitting, bolts and nuts etc. and painting with primer and finish paint as required. | Each | 1844.00 |
| 13.75 | Supplying of channel iron 100mm x 50mm x 9.56Kg/Mtr. V-Shape cross arm for two 33kV overhead line conductors complete with 50mm x 6mm x M.S. flat iron clmps, bolts and nuts including drilling holes for insulator pins, bolts and nuts etc. painting with primer and finish paint as required. | Each | 1435.00 |
| 13.76 | Supplying of two lengths of channel iron 100mmx50mmx9.56kg/mtr. Double pole cross arm for three wire 33kV overhead line conductors complete with through bolts and nuts for clamping to the poles, 50mmx6mm m.s flat welded on one side to the channel iron and with bolts and nuts on the other side for tying the cross arms together including drilling holes for insulator pins/fittings, bolts and nuts etc. and painting with primer and finish paint as required. | Set | 3500.00 |
| 13.77 | Erection of double pole 3-wire cross arm for 11kV /22kV/33 overhead lines as required. | Each | 279.00 |
| 13.78 | Supplying and erection of a set of cross bracing frame work for 33kV overhead line double pole structure having four members fabricated out of 65mmx65mmx6mm angle iron to form a rectangle of minimum size 2400mm width x 2800mm height, complete with 50mmx6mm M.S. flat iron clamps, bolts and nuts including drilling holes and painting with primer and finish as required. | Set | 5393.00 |
| 13.79 | Supplying and erection of 11kV pin insulator complete with large steel head G.I. pin, nut, washer etc. as required. | Set | 375.00 |
| 13.80 | Supplying and erection of 11kV disc insulator for 11kV overhead lines with galvanised insulator fittings, ball and socket type, and complete with galvanised strain clamp, bolts, nuts washer etc. as required. | Set | 1089.00 |
| 13.81 | Supplying and erection of 33kV pin insulator complete with large steel head G.I. pin, nut, washer etc. as required | Set | 1012.00 |
| 13.82 | Supplying and erection of a set of three 11kV disc insulators for 33kV overhead lines with galvanised insulator fittings, ball and socket type, and complete with galvanised strain clamp, bolts, nuts, washers etc. as required. | Set | 3067.00 |

| S.No. | Description of Item | Unit | Rate (in Rs) |
|--------------|---|-------------|---------------------|
| 13.83 | Erection of disc/pin insulator for 11kV overhead line as required | Set | 36.00 |
| | | | |
| 13.84 | Supplying and erection of three piece nonlinear resistor type lightning arrester suitable for 3 wire, 11kV overhead lines with rated voltage of 9kV (rms) with a nominal discharge current rating of 5 KA and complete with galvanised clamping arrangement, G.I. bolts, nuts, washer etc. as required. | Set | 4284.00 |
| 13.85 | Supplying and erection of single piece non-linear resistor type lightning arrester for 3 wire, 33kV overhead lines with rated voltage of 30kV (rms) with a nominal discharge current rating of 5 KA and complete with galvanised clamping arrangement, G.I. bolts, nuts, washer etc. as required. | Set | 39170.00 |
| | | | |
| 13.86 | Painting of pole bracket cable protecting pipe and its clamps in two coatings of All. enamel based primer as directed by Engineer-in-Charge. | | |
| 13.86.1 | Removing of old paint from steel and other metallic surface and making surface even. | Sqm | 11.00 |
| 13.86.2 | Primer coat over new steel and other metallic surface with red oxide/zinc chromide paint complete with supply of material labour etc. including preparation of surface. | Sqm | 21.00 |
| 13.86.3 | Primer coat with aluminium paint, brushing complete with material and labour including preparation of surface. | Sqm | 28.00 |

| CHAPTER -14 | | | |
|----------------------------------|---|-------------|-------------|
| POWER CABLES & LAYING | | | |
| S.No. | Description of Item | Unit | rate |
| 14.1 | Supply of XLPE Insulated power cable (conforming IS-7098) 1100 Volt grade/Heavy duty power cable conforming to IS 1554-1100 Volts grade , 2 core /3½ core/4 core SI MARKED with Alu. Stranded /solid conductor | | |
| 14.1.1 | UNARMOURED 2 Core | | |
| 1 | 2.5 Sq.mm.(Heavy Duty) | meter | 47.00 |
| 2 | 4 Sq.mm.((Heavy Duty) | meter | 56.00 |
| 3 | 6 Sq.mm.(XLPE) | meter | 71.00 |
| 4 | 10 Sq.mm.(XLPE) | meter | 91.00 |
| 5 | 16 Sq.mm.(XLPE) | meter | 119.00 |
| 14.1.2 | ARMOURED 2 Core | | |
| 1 | 2.5 Sq.mm.(Heavy Duty) | meter | 103.00 |
| 2 | 4 Sq.mm.(Heavy Duty) | meter | 114.00 |
| 3 | 6 Sq.mm.(XLPE) | meter | 138.00 |
| 4 | 10 Sq.mm.(XLPE) | meter | 154.00 |
| 5 | 16 Sq.mm.(XLPE) | meter | 180.00 |
| 14.1.3 | UNARMOURED 3 Core | | |
| 1 | 6 Sq.mm.(XLPE) | meter | 88.00 |
| 2 | 10 Sq.mm.(XLPE) | meter | 115.00 |
| 3 | 16 Sq.mm.(XLPE) | meter | 151.00 |
| 4 | 25 Sq.mm(XLPE) | meter | 188.00 |
| 5 | 35 Sq.mm(XLPE) | meter | 240.00 |
| 6 | 50 Sq.mm(XLPE) | meter | 315.00 |
| 7 | 70 Sq.mm(XLPE) | meter | 436.00 |
| 8 | 95 Sq.mm.(XLPE) | meter | 555.00 |
| 14.1.4 | ARMOURED 3 Core | | |
| 1 | 6 Sq.mm.(XLPE) | meter | 158.00 |
| 2 | 10 Sq.mm.(XLPE) | meter | 180.00 |
| 3 | 16 Sq.mm.(XLPE) | meter | 198.00 |
| 4 | 25 Sq.mm(XLPE) | meter | 246.00 |
| 5 | 35 Sq.mm(XLPE) | meter | 313.00 |
| 6 | 50 Sq.mm(XLPE) | meter | 392.00 |
| 7 | 70 Sq.mm(XLPE) | meter | 519.00 |
| 8 | 95 Sq.mm.(XLPE) | meter | 643.00 |
| 14.1.5 | UNARMOURED 3½ CORE | | |
| 1 | 25 Sq.mm(XLPE) | meter | 227.00 |
| 2 | 35 Sq.mm(XLPE) | meter | 278.00 |
| 3 | 50 Sq.mm(XLPE) | meter | 370.00 |
| 4 | 70 Sq.mm(XLPE) | meter | 508.00 |
| 5 | 95 Sq.mm.(XLPE) | meter | 649.00 |
| 6 | 120 Sq.mm.(XLPE) | meter | 808.00 |
| 7 | 150 Sq.mm.(XLPE) | meter | 975.00 |
| 8 | 185 Sq.mm.(XLPE) | meter | 1224.00 |
| 9 | 240 Sq.mm.(XLPE) | meter | 1586.00 |
| 10 | 300 Sq.mm.(XLPE) | meter | 1951.00 |
| 11 | 400 Sq.mm.(XLPE) | meter | 2488.00 |

| S.No. | Description of Item | Unit | rate |
|--------|---|-------|---------|
| 14.1.6 | ARMOURED 3½ CORE | | |
| 1 | 25 Sq.mm(XLPE) | meter | 289.00 |
| 2 | 35 Sq.mm(XLPE) | meter | 345.00 |
| 3 | 50 Sq.mm(XLPE) | meter | 452.00 |
| 4 | 70 Sq.mm(XLPE) | meter | 597.00 |
| 5 | 95 Sq.mm.(XLPE) | meter | 740.00 |
| 6 | 120 Sq.mm.(XLPE) | meter | 931.00 |
| 7 | 150 Sq.mm.(XLPE) | meter | 1084.00 |
| 8 | 185 Sq.mm.(XLPE) | meter | 1350.00 |
| 9 | 240 Sq.mm.(XLPE) | meter | 1716.00 |
| 10 | 300 Sq.mm.(XLPE) | meter | 2097.00 |
| 11 | 400 Sq.mm.(XLPE) | meter | 2639.00 |
| 14.1.7 | UNARMOURED 4 CORE | | |
| 1 | 6 Sq.mm.(XLPE) | meter | 100.00 |
| 2 | 10 Sq.mm.(XLPE) | meter | 123.00 |
| 3 | 16 Sq.mm.(XLPE) | meter | 176.00 |
| 4 | 25 Sq.mm(XLPE) | meter | 214.00 |
| 5 | 35 Sq.mm(XLPE) | meter | 285.00 |
| 6 | 50 Sq.mm(XLPE) | meter | 381.00 |
| 7 | 70 Sq.mm(XLPE) | meter | 512.00 |
| 8 | 95 Sq.mm.(XLPE) | meter | 669.00 |
| 9 | 120 Sq.mm.(XLPE) | meter | 838.00 |
| 10 | 150 Sq.mm.(XLPE) | meter | 1036.00 |
| 14.1.8 | ARMOURED 4 CORE | | |
| 1 | 6 Sq.mm.(XLPE) | meter | 168.00 |
| 2 | 10 Sq.mm.(XLPE) | meter | 183.00 |
| 3 | 16 Sq.mm.(XLPE) | meter | 229.00 |
| 4 | 25 Sq.mm(XLPE) | meter | 281.00 |
| 5 | 35 Sq.mm(XLPE) | meter | 358.00 |
| 6 | 50 Sq.mm(XLPE) | meter | 463.00 |
| 7 | 70 Sq.mm(XLPE) | meter | 604.00 |
| 8 | 95 Sq.mm.(XLPE) | meter | 774.00 |
| 9 | 120 Sq.mm.(XLPE) | meter | 953.00 |
| 10 | 150 Sq.mm.(XLPE) | meter | 1155.00 |
| 14.2 | Supply of approved HighTension XLPE cable 11kVgrade as per ISI standard 3 core Armoured with Alu. Solid/stranded conductor ISI MARKED as required | | |
| 14.2.1 | XLPE CABLE 11 KV GRADE | | |
| 1 | 50 Sq.mm | meter | 1405.00 |
| 2 | 70 Sq.mm | meter | 1577.00 |
| 3 | 95 Sq.mm. | meter | 1729.00 |
| 14.2.2 | XLPE CABLE 33 KV GRADE | | |
| 1 | 50 Sq.mm | meter | 2100.00 |
| 2 | 70 Sq.mm | meter | 2418.00 |
| 3 | 95 Sq.mm. | meter | 2498.00 |

| S.No. | Description of Item | Unit | rate |
|---------|---|------|----------|
| 14.3 | Providing & Erecting M-Seal Push - on Kit for 11 kV/33 kV XLPE-Cable with kit content, stress cone, H.L. pad, Top Cap, rain shed, self bounding insulating tape, sliding cone leakage current collector, P.V.C. boot earth continuity connection mould adhesive cum solvent, P.V.C. (N.A.) tape, silicon grease Aluminium lugs, Aluminium Oxide cloth,nylong string, copper binding wire, Adopter etc. duty erected on pole/support & connected to D.O. fuse unit as required as per accepted standard, as required complete. | | |
| 14.3.1 | M-seal push on kit 33 kV XLPE cable | | |
| 1 | M-seal push on kit 33 kV XLPE cable O.D. termination | | |
| | a. 3x50 sq.mm | Each | 45232.00 |
| | b. 3x70to3x120 sq.mm. | Each | 49299.00 |
| 2 | M-seal push on kit 33 kV XLPE cable I.D. termination | | |
| | a. 3x50 sq.mm | Each | 18055.00 |
| | b. 3x70to3x120 sq.mm. | Each | 21584.00 |
| 14.3.2 | M-seal push on kit 11 kV XLPE cable | | |
| 1 | M-seal push on kit 11 kV XLPE cable O.D. termination | | |
| | a. 3x25,3x35 | Each | 20739.00 |
| | b. 3x50,3x70 | Each | 21180.00 |
| | c. 3x95 | Each | 22048.00 |
| 2 | M-seal push on kit 11 kV XLPE cable I.D. termination | | |
| | a. 3x25,3x35 | Each | 11521.00 |
| | b. 3x50,3x70 | Each | 12038.00 |
| | c. 3x95 | Each | 13778.00 |
| 14.4 | Providing & Making cable end termination with HEAT SHRINKABLE jointing kit complete with all accessories including lugs suitable for 33 kV/11 kV 3 core XLPE alum. conductor cable as required as per specification and as per accepted standard complete. | | |
| 14.4.1 | Heat shrinkable joint,kit 33 kV XLPE | | |
| 1 | Heat shr.jointg. kit 33 kV XLPE cable O.D. termination | | |
| | a. 3x50 | Each | 35293.00 |
| | b. 3x70,95 | Each | 36335.00 |
| | c. 3x120,185 | Each | 56722.00 |
| 2 | Heat shrinkable joint. kit 33 kV XLPE cable I.D. termination | | |
| | a. 3x50 | Each | 25016.00 |
| | b. 3x70,95 | Each | 29045.00 |
| | c. 3x120,185 | Each | 56722.00 |
| 14.4.2 | Heat shrinkable joint,kit 11 kV XLPE | | |
| 1 | Heat shr.jointg. kit 11 kV XLPE cable O.D. termination | | |
| | a. 3x25, 3x35 | Each | 27334.00 |
| | b. 3x50, 3x70 | Each | 32783.00 |
| | c. 3x95 | Each | 32783.00 |
| 2 | Heat shrinkable joint. kit 11 kV XLPE cable I.D. termination | | |
| | a. 3x25, 3x35 | Each | 15701.00 |
| | b. 3x50, 3x70 | Each | 20201.00 |
| | c. 3x95 | Each | 20201.00 |
| 14.5(A) | End termination | | |

| S.No. | Description of Item | Unit | rate |
|---------|---|------|----------|
| 14.5.1 | Providing and erecting epoxy resin end termination/joint for low tension P.V.C./XLPE insulated cable of 1100 Volt grade complete with cable jointing compound, Harner, Plastic mould adhesive cum solvent epoxy putty, spacer, tapes etc. as per I.S. specification 8438. 1977 for cable duty erected on existing pole/support/switch gears and connection to supply for all core cable as under. | | |
| 14.5.1. | id/od epoxy resin end termination | | |
| | a. 10-50 sqmm 2 / 3 / 3½ core | Each | 524.00 |
| | b. 70-120 sqmm 2 / 3 / 3½ / 4core | Each | 702.00 |
| | c. 150-300 sqmm 2 / 3 / 3½ / 4core | Each | 1167.00 |
| | d. 350-500sqmm 3½ core | Each | 1644.00 |
| 14.5.2 | Supply and making cable end termination with all necessary materials including lugs etc.Heat shr.jointg. kit 1.1 kV XLPE/HD cable O.D. termination | | |
| | a. 10-50 sqmm 2 / 3 / 3½ / 4core | Each | 7439.00 |
| | b. 70-150 sqmm 2 / 3 / 3½ / 4core | Each | 8665.00 |
| | c. 150-300 sqmm 2 / 3 / 3½ / 4core | Each | 10466.00 |
| | d. 350-500 sqmm 2 / 3 / 3½ / 4core | Each | 12688.00 |
| 14.5.3 | Supply and making cable end termination with all necessary materials including lugs etc.Heat shr.jointg. kit 1.1 kV XLPE/HD cable I.D. termination | | |
| | a. 10-50 sqmm 2 / 3 / 3½ / 4core | Each | 3917.00 |
| | b. 70-150 sqmm 2 / 3 / 3½ / 4core | Each | 4725.00 |
| | c. 150-300 sqmm 2 / 3 / 3½ / 4core | Each | 7663.00 |
| | d. 350-500 sqmm 2 / 3 / 3½ / 4core | Each | 8941.00 |
| 14.5(B) | Cable Jointing | | |
| 14.5.1 | Straight through cable jointing kit including compound, hardener, plastic mould with other accessories for the following aluminium conductor PVC insulated and PVC sheathed cable//XLPE of 1.1 kV grade:(I.D./O.D.) | | |
| | a. 6-16 sqmm 2 / 3 / 3½ / 4core | Each | 1062.00 |
| | b. 25-35 sqmm 2 / 3 / 3½ / 4core | Each | 1421.00 |
| | c. 50-95 sqmm 2 / 3 / 3½ / 4core | Each | 1802.00 |
| | d. 120-240 sqmm 2 / 3 / 3½ / 4core | Each | 2991.00 |
| | e. 300-350 sqmm 2 / 3 / 3½ / 4core | Each | 3806.00 |
| | f. 400-500 sqmm 2 / 3 / 3½ / 4core | Each | 5503.00 |
| 14.5.2 | Supply and makingHeat shr.jointg. kit 1.1 kV XLPE/HD cable straightthrough jointing.kit complete with all accessories including lugs etc. (I.D../O.D.) | | |
| | a. 6-16 sqmm 2 / 3 / 3½ / 4core | Each | 2789.00 |
| | b. 25-35 sqmm 2 / 3 / 3½ / 4core | Each | 3768.00 |
| | c. 50-95 sqmm 2 / 3 / 3½ / 4core | Each | 4725.00 |
| | d. 120-240 sqmm 2 / 3 / 3½ / 4core | Each | 7177.00 |
| | e. 300-350 sqmm 2 / 3 / 3½ / 4core | Each | 13580.00 |
| | f. 400-500 sqmm 2 / 3 / 3½ / 4core | Each | 14338.00 |
| 14.6 | BRASS COMPRESSION GLAND | | |
| 14.6.1 | Supplying and fixing heavy duty cable gland for P.V.C. insulated armoured cable with brass washer, Rubber ring complete erected with cable and lead connection etc. as per specification complete. | | |

| S.No. | Description of Item | Unit | rate |
|--------|---|------|--------|
| 1 | Gland Size 22mm suitable for cable 2,3,3½ & 4 x upto 6 Sq.mm | Each | 38.00 |
| 2 | Gland Size 22mm suitable for cable 2,3, 3½, 4 x 10 Sq.mm or 2x 16 Sq.mm | Each | 44.00 |
| 3 | Gland size 28mm for 3,4 x 16 Sq.mm | Each | 66.00 |
| 4 | Gland size 32mm for 2,3, 3½, 4 x 25 Sq.mm OR 2,3, 3½ x 35 Sq.mm OR 2,3 x 50 Sq.mm. | Each | 76.00 |
| 5 | Gland size 38mm 3½ x 70 Sq.mm, 3x95 Sq.mm | Each | 119.00 |
| 6 | Gland Size 45mm 3/3½ x 120 Sq.mm 3½ x 95 Sq.mm 3 x 150 Sq.mm. | Each | 149.00 |
| 7 | Gland Size 50 mm 3½ x 150 Sq.mm 3 x 185 Sq.mm | Each | 191.00 |
| 8 | Gland Size 57mm 3 x 225 Sq.mm 3 ½ x 185 Sq.mm | Each | 248.00 |
| 9 | Gland Size 70mm 3 x 240 Sq.mm 3½ x 300 Sq.mm | Each | 353.00 |
| 10 | Gland Size 82mm 3½ x 400 Sq.mm | Each | 501.00 |
| 14.7 | Supplying and fixing ferrules. (Aluminium in Line connector) As per IS - specification suitable for following size of cable with Aluminium stranded/solid conductor evently cramped with high pressure tool including connection as required complete | | |
| 14.7.1 | For Conductor Size- | | |
| 1 | 2.5 to 6.00 Sq.mm | Each | 2.00 |
| 2 | 10.00 Sq.mm | Each | 2.00 |
| 3 | 16.00 Sq.mm | Each | 4.00 |
| 4 | 25.00 Sq.mm | Each | 5.00 |
| 5 | 35.00 Sq.mm | Each | 5.00 |
| 6 | 50.00 Sq.mm | Each | 8.00 |
| 7 | 70.00 Sq.mm | Each | 14.00 |
| 8 | 95.00 Sq.mm | Each | 15.00 |
| 9 | 120.00 Sq.mm | Each | 22.00 |
| 10 | 150.00 Sq.mm | Each | 31.00 |
| 11 | 185.00 Sq.mm | Each | 38.00 |
| 12 | 240.00 Sq.mm | Each | 62.00 |
| 13 | 300.00 Sq.mm | Each | 89.00 |
| 14 | 400.00 Sq.mm | Each | 131.00 |
| 14.8 | LUGS:- | | |
| | Supplying and fixing cramping type Alum. lugs as per I.S.S. Specification suitable for following size of cable with Alu. /Copper solid/stranded conductor evently cramped with high/pressure tool and connected to switch gear/Bus/M.C.C.B./ M.C.B. etc. as required complete.For Conductor Size- | | |
| 1 | 6mm to 16 Sq.mm | Each | 5.00 |
| 2 | 25 Sq.mm | Each | 7.00 |
| 3 | 35 Sq.mm | Each | 9.00 |
| 4 | 50 Sq.mm | Each | 14.00 |
| 5 | 70 Sq.mm | Each | 22.00 |
| 6 | 95 Sq.mm. | Each | 24.00 |
| 7 | 120 Sq.mm. | Each | 34.00 |
| 8 | 150 Sq.mm. | Each | 44.00 |
| 9 | 180 Sq.mm | Each | 53.00 |
| 10 | 240 Sq.mm. | Each | 93.00 |
| 11 | 300 Sq.mm. | Each | 129.00 |
| 12 | 400 Sq.mm. | Each | 189.00 |

| S.No. | Description of Item | Unit | rate |
|-------|---|-------|--------|
| 14.9 | Supplying & fixing pin terminal lugs as per ISS specification suitable for cable evenly cramped with high pressure tool & connection to switch gear terminal. | | |
| 1 | Aluminum Lugs Pin Type | | |
| | a. Upto 16 Sq.mm Conductor Size | Each | 5.00 |
| | b. Upto 25 Sq.mm Conductor Size | Each | 7.00 |
| | c. 35 Sq.mm Conductor Size | Each | 9.00 |
| 2 | Copper Lugs Pin Type | | |
| | a. Upto 16 Sq.mm Conductor Size | Each | 12.00 |
| | b. Upto 25 Sq.mm Conductor Size | Each | 26.00 |
| | c. 35 Sq.mm Conductor Size | Each | 27.00 |
| 3 | Copper Lugs Tube Type | | |
| | a. Upto 16 Sq.mm Conductor Size | Each | 12.00 |
| | b. Upto 25 Sq.mm Conductor Size | Each | 26.00 |
| | c. 35 Sq.mm Conductor Size | Each | 27.00 |
| | d. 50 Sq.mm. Conductor Size | Each | 35.00 |
| 14.10 | CABLE LAYING | | |
| 1 | Laying of one number PVC insulated and PVC sheathed power cable of 1.1kV grade of size not exceeding 25 Sq.mm direct in ground including excavation, sand cushioning, protective covering and refilling the pit etc. as required. | meter | 247.00 |
| 2 | Laying of one number PVC insulated power cable of 1.1.kV grade of size exceeding 25Sq.mm but not exceeding 120 Sq.mm direct in ground including excavation, sand cushioning, protective covering and refilling the pit etc. as required. | meter | 255.00 |
| 3 | Laying of one number PVC Insulated and PVC sheathed power cable of 1.1.kV grade of size exceeding 120 Sq mm but not exceeding 400 Sq.mm direct in ground including excavation and cushioning protective covering and refilling the pit etc. as required. | meter | 269.00 |
| 4 | Laying of one number additional PVC insulated PVC sheathed power cable of 1.1kV grade of size not exceeding 25Sq.mm direct in ground in the same trench in one tier horizontal formation including excavation sand cushioning protective covering and refilling the pit etc. as required. | meter | 163.00 |
| 5 | Laying of one number additional PVC insulated and PVC sheathed power cable of 1.1kV grade of size exceeding 25 Sq.mm but not exceeding 120 Sq.mm direct in ground in the same trench in one tier horizontal formation including excavation, sand cushioning, protective covering and refilling the pit etc. as required. | meter | 167.00 |
| 6 | Laying of one number additional PVC insulated and PVC sheathed power cable of 1.1kV grade of size exceeding 120 Sq mm but not exceeding 400 Sq mm direct in ground in the same trench in one tier horizontal formation including excavation, sand cushioning, protective covering and refilling the pit etc. as required. | meter | 171.00 |

| S.No. | Description of Item | Unit | rate |
|--------------|---|-------------|-------------|
| 7 | Laying of one number PVC insulated and PVC sheathed power cable of 1:1 kV grade of size not exceeding 25 Sq.mm in the existing RCC Hume/Stone/Ware/G.I. pipe as required. | meter | 20.00 |
| 8 | Laying of one number PVC insulated and PVC sheathed power cable of 1.1 kV grade of size exceeding 25 Sq.mm but not exceeding 400 Sq mm in the existing RCC/Hume Stoneware/G.I. Pipe as required. | meter | 28.00 |
| 9 | Laying of one number PVC insulated and PVC sheathed power cable of 1.1 kV grade of size not exceeding 25 Sq.mm in th existing masonary open duct as required. | meter | 16.00 |
| 10 | Laying of one number PVC insulated and PVC sheathed power cable of 1.1kV grade of size exceeding 25Sq.mm but not exceeding 400 Sq.mm in the existing masonary open duct as required. | meter | 139.00 |
| 11 | Laying of one number PILC/PVC insulated and PVC sheathed power cable of grade exceeding 1.1kV but not exceeding 11kV of size not exceeding 120 Sq.mm direct in ground including excavation sand cushioning, protective covering and refilling the trench etc. as required. | meter | 84.00 |
| 12 | Laying of one number PILC/PVC insulated and PVC sheathed power cable of grade exceeding 11kV of size exceeding 120 Sq.mm but not exceeding 400 Sq.mm direct in ground including excavation sand cushioning, protective covering and refilling the trench etc. as required | meter | 86.00 |
| 13 | Laying of one number additional PILC/PVC insulated and PVC sheathed power cable of grade exceeding 1.1kV but not exceeding 11kV of size not exceeding 120 Sq.mm direct in ground in the same trench in one tier horizontal formation including excavation, sand cusioning, protective covering and refilling the trench as required. | meter | 194.00 |
| 14 | Laying of one number additional PILC/PVC insulated and PVC sheathed power cable of grade exceeding 1.1kV but not exceeding 11kV of size exceeding 120 Sq.mm but not exceeding 400 Sq.mm. direct in ground in the same trench in one tier horizontal formation including excavation, sand cushioning, protective covering and refilling the trench etc. as required. | meter | 301.00 |
| 15 | Laying of one number PILC/PVC insulated and PVC sheathed power cable of grade exceeding 1.1kV but not exceeding 11kV of size not exceeding 400 Sq.mm in the existing RCC / Hume / Stoneware / G.I. Pipe as required. | meter | 40.00 |
| 16 | Laying of one number PILC/PVC insulated and PVC sheathed power cable of grade exceeding 1.1kV but not exceeding 11kV of size not exceeding 400 Sq.mm. in the existing masonary open duct as required. | meter | 32.00 |

| S.No. | Description of Item | Unit | rate |
|-------|---|----------|--------|
| 17 | Laying and fixing of one number PVC insulated and PVC sheathed aluminium conductor cable of 1.1kV grade of size not exceeding 25 Sq.mm on surface etc. as required. | meter | 35.00 |
| 18 | Laying and fixing of one number PVC insulated and PVC sheathed aluminium conductor cable of 1.1kV grade of size exceeding 25 Sq.mm but not exceeding 120 Sq.mm on surface etc. as required. | meter | 80.00 |
| 19 | Laying and fixing of one number PVC insulated and PVC sheathed aluminium conductor cable of 1.1kV grade of size exceeding 120 Sq.mm but not exceeding 300 Sq.mm on surface etc. as required. | meter | 88.00 |
| 14.11 | Excavation of the trenches in Hard Rock not exceeding 1.5 meter in width and lift upto 1.5 meter including getting out the excavated soil and disposal of surplus excavated soil as directed within the lead of 50 meter (without blasting) | Cu. Mtr. | 348.00 |
| 14.12 | Laying of underground cable armoured./ unarmoured as per specification in air with approved type of iron clamps complete. | | |
| 1 | 2 / 3 / 4 Core cable upto 16 Sq.mm | meter | 20.00 |
| 2 | 3 / 3½ / 4 Core cable 25 Sq.mm to 120 Sq.mm | meter | 28.00 |
| 3 | 3 / 3½ / 4 Core cable 150 Sq.mm and above | meter | 36.00 |
| 14.13 | Laying of cement concrete or approved type of cable cover/flag stone over L.T. cover trench as per specification. | meter | 25.00 |
| 14.14 | Supplying of approved type precast R.C.C. cable cover class EHV/HVP at site inclusive of transport required. | | |
| 1 | Cable cover class EHV-type-I with peak size 450 x 230 x 50mm. | Each | 59.00 |
| 2 | Cable cover class EHV-type-I with peak size 600 x 230 x 50mm. | Each | 80.00 |
| 3 | Cable cover class HVP-type-I with peak size 300 x 180 x 40mm. | Each | 31.00 |
| 4 | Cable cover class HVP-type-II with peak size 450 x 180 x 40mm. | Each | 45.00 |
| 5 | Cable cover class HV-type-I flat size 300 x 180 x 40mm | Each | 28.00 |
| 6 | Cable cover class HV-type-II flat size 450 x 180 x 40mm | Each | 44.00 |
| 7 | Cable cover class LV-type-I flat size 250 x 150 x 40mm | Each | 20.00 |
| 8 | Cable cover class LV-type-II flat size 300 x 180 x 40mm | Each | 28.00 |
| 9 | Cable cover class LV-type-III flat size 450 x 180 x 40mm | Each | 45.00 |
| 14.15 | Fixing Route Marker with cement concrete 1:2:4 (1cement and 2 coarse sand :4graded stone aggregate 20mm nominal size) of size 60cm x 60cm at the bottom and 50cm x 50cm at the top with a thickness of 10cm including inspection duly engraved as required. | Each | 193.00 |
| 14.16 | Supplying Route Marker with 10cm x 10cm G.I. Plate 5mm. Thick with Inspection thereon bolted/welded to 35mm x 35mm x 6mm angle iron 60cm long and fixing the same in ground as required. | Each | 211.00 |

| CHAPTER -15 | | | |
|----------------------------------|--|------|-----------|
| TRANSFORMERS & FIRE EXTINGUISHER | | | |
| S.No. | Description of Item | Unit | Rate |
| 15 | Supplying, installing, testing and commissioning of 11/0.4 K.V. 3 Phase 50 Cycle oil immersed, naturally cooled, out door type transformer connected delta on H.T. side and star on L.T. side hand operated off load, Tap changer switch, above 100 kVA rating and diagram plate, two earthing terminal, lifting lugs, oil level guage, drain valve with plug, temperature not exceeding 50°C on load, oil conservator with drain plug, oil filling hole with plug dehydrating silica gel breather, four unidirectional roller, arcing horns, explosion vent, terminal arrangement bushing on H.V. side and cable box on LV side, first filling of oil upto desired level and transformer installing on existing structure with all Required materials arrangements as required as per IS specification. | | |
| 15.1 | Aluminium wound | | |
| 1 | 25 kVA | Each | 72273.00 |
| 2 | 63 kVA | Each | 100665.00 |
| 3 | 100 kVA | Each | 123896.00 |
| 4 | 200 kVA | Each | 212946.00 |
| 15.2 | Copper wound | | |
| 1 | 200 kVA | Each | 322645.00 |
| 2 | 315 kVA | Each | 477515.00 |
| 3 | 500 kVA | Each | 516232.00 |
| 15.3 | Supplying installing and testing of AB isolating switch assembly set gang operated suitable for 11/0.4 KV, DP structure with brass part contacts, operating rod with required GI pipe, handle locking arrangement on On-Off position conforming to IS complete with required material and installing on existing structure to complete the job as required as per specification. | | |
| 1 | 11 kV | set | 7099.00 |
| 2 | 33kV | set | 15416.00 |
| 15.4 | Supplying, installing ,testing of 11 KV D.O. fuse assembly with brass part contact for 11/0.4 KV DP Structure set of 3 with fuse with barrel with required fuse element & other materials as per specification on existing D.P. structure as required.(set of 3nos.) | | |
| 1 | 11kV | set | 4700.00 |
| 2 | 33kV | set | 11531.00 |
| 15.5 | Supplying & fixing of Fire Extinguisher/Refills as per IS specification | | |
| 1 | Dry chemical powder (DCP) type- 5kg duly refilled and ready to use | each | 2658.00 |
| 2 | ABC type duly refilled and ready to used | each | 5113.00 |
| 3 | Co2 type dully refilled and ready to used | each | 8010.00 |
| 4 | Dry chemical powder (DCP) type- 5kg refill only | each | 492.00 |
| 5 | ABC type refill only | each | 923.00 |
| 6 | Co2 type Refill only | each | 615.00 |
| 7 | 4 bucket set with stand and sand dully painted red | each | 2096.00 |
| 15.6 | Supplying, installing, testing and commissioning of 11/root3/ KV 250V (Aluminium) core wound type distribution transformers : | | |
| | (i) 10 KVA | Each | 38717.00 |
| | (ii) 16 KVA | Each | 43880.00 |
| | (iii) 25 KVA | Each | 51623.00 |

| | | | |
|-------|---|------|-----------|
| 2 | 63 kVA | Each | 100665.00 |
| 15.7 | Supplying, installing, testing and commissioning of LT Distribution Box with TPN isolator 200 amper on incoming,bus bar and 66 S.P.M.C.C.B.of 60 A" .on outgoing side for 63 KVA transformer | | |
| | (i)Supplying, installing, testing and commissioning of LT Distribution Box with TPN isolator 200 amper on incoming,bus bar and 66 S.P.M.C.C.B.of 60 A" .on outgoing side for 63 KVA transformer | Each | 15616.00 |
| | (i)Supplying, installing, testing and commissioning of LT Distribution Box with TPN isolator 200 amper on incoming,bus bar and 6 S.P.M.C.C.B.of 90 A" .on outgoing side for 100 KVA transformer | Each | 17036.00 |
| | (i)Supplying, installing, testing and commissioning of LT Distribution Box with TPN isolator of 600 amper on incoming,bus bar and 6 S.P.M.C.C.B.of 120 A" .on outgoing side for 200 KVA transformer | Each | 28393.00 |
| | | | |
| 15.8 | Supplying, installing, or stay wires | | |
| | (i) 7/4.00 mm (7/8 SWG) | KG | 76.00 |
| | (ii) M.S. Nuts and Bolts | KG | 55.00 |
| | | | |
| 15.9 | Supplying, installing, testing 1100 Volts Grade Aluminium conductor XLPE, LT Cable Single core Armored | | |
| | (i) 25 Sq.mm. | Kms | 29683.00 |
| | (ii) 50 Sq.mm. | Kms | 43880.00 |
| | (iii) 120 Sq.mm. | Kms | 109054.00 |
| | (iv) 185 Sq.mm. | Kms | 161323.00 |
| | | | |
| 15.10 | Supplying, installing, testing and commissioning of 11 KV C.Ts. (Outdoor oil filled type) : with accuracy class 0.5 | | |
| | (i) 200-100/5 Amp | Each | 10325.00 |
| | (ii) 300-150/5 Amps | Each | 10325.00 |
| | (iii) 500-250/5 Amps | Each | 11873.00 |
| | | | |
| 15.11 | Supplying, installing, testing and commissioning of 33 KV C.Ts. (Outdoor oil filled type) : with accuracy class 0.5 | | |
| | (i) 200-100/5 Amp | Each | 14971.00 |
| | (ii) 300-150/5 Amps | Each | 14971.00 |
| | (iii) 500-250/5 Amps | Each | 18713.00 |
| | | | |
| 15.12 | Supplying, installing, testing and commissioning of Lightning Arrestors | | |
| | (i) 11 KV Gapless, line type | Each | 532.00 |
| | (ii) 33 KV Gapless line type | Each | 5679.00 |
| | (iii) 33 KV Gapless StationType | Each | 12583.00 |
| | | | |
| 15.13 | Supplying, installing, testing of earth Coil (coil of 115 turns of 50mm dia, and 2.5 Mtrs. Lead of 4 mm G.I wire. | Each | 219.00 |

Technical Specification of the High Mast Unit of 9 Mtrs. To 30 Mts. Length

MAST:-

Mast should be made of the hot dipped galvanized MS material, and shall be of one of approved

The types of the plates sheets used for the mast should be specified along with their sizes/gauges and also the national (IS) or international specifications to which these conform.

The design of the Mast for bearing the wind pressure should be as per the requirements of the Indian and International Standards for SAFETY. It shall be the sole responsibility of the company supplying and installing the high mast unit to study record and assess the wind pressure in the location proposed for high mast installation and to supply and install the high mast unit accordingly so that it is a totally safe and hazard-free installation. This shall be based on the HIGHEST wind pressure recoded in LAST 25 YEARS IN THE REGION where the High Mast Unit is to be installed.

The number of pieces that will constitute this mast and the overall length of the Mast above the ground level should be clearly specified. The overlapping MUST be as per the I.S Standards/International Standard.

The welding and bolting or breaking due to wind pressure and / or due to its own weight and / or due to the weights of flood lights, control gear boxes, lamps or due to improper design. The relevant or International standards to which this conforms should be specified.

FOUNDATION:-

The foundation of the complete High Mast Unit shall be RCC Foundation suitable for the soil where the High Mast Unit is proposed to be installed complete with the required foundation bolts.

The soils at that proposed location should be tested by the bidding company, at its own cost and the design of the proposed foundation with its foundation bolts should be prepared and certified by a registered structural engineer/ consultant having at least 15 years experience and should be got approved from the Civil Department of desired local Engineering College before the execution of the foundation.

The curing of the foundation must be done very thoroughly as per standard practice. The cured foundation should be got certified by a licensed structural engineer/consultant having at least 15 years experience.

These certificates should be given in original to the Engineer-in charge.

WIRE ROPES:-

Non corrodible, ISI mark, stainless steel wire ropes of AISI 316 grade should only provided to raise and lower the lantern carriage and should be of flexible type as is recommended for use in such Masts and it should be of such a size that the factor of safety is 500%. These stainless steel wire ropes shall be ISI marked and the test certificate or rope should be supplied after installation of the unit but before commissioning it. These wire ropes should have no joints.

WINCH ASSEMBLY:-

A suitable winch assembly should be provided having required winch drums so that raising, lowering and leveling of lantern carriage is possible and that no inter winding of the wire ropes takes place. This should be self lubricating type by means of oil-bath having recommended lubricant.

The driver spindle must be able to be positively locked, when not in use, by automatic means.

The winch assembly should be capable of operation by hand and also by means of a power device.

ELECTRIC DRIVE OR POWER TOOL:-

If power tool or electric drive is specified in the schedule of items then heavy duty ISI marked electric motor should be provided as the electric drive. The specifications of this motor must be mentioned in the offer.

LANTERN CARRIAGE:-

A suitable and a totally safe and hot dipped galvanized lantern carriage with 300% factor of safety, should be provided having provision for installation of flood light fittings and their CG boxes and the required balancing weights etc.

OUTDOOR TYPE ELECTRICAL CONTROL PANEL:-

The necessary outdoor type electrical control panel provided with a suitable circuit breaker, earth fault protection, inter connections and double earthing arrangement should be provided. This should have a facility to lock. This shall be as per enclosed technical specification for external electrification.

AVIATION OBSTRUCTION LIGHT:-

One number twin dome type Aviation obstruction light with 100 W GLS lamp is to be supplied and commissioned with all required cable at the top of the High Mast Unit to meet the statutory requirements of Department of Civil Aviation.

EARTHING & LIGHTING PROTECTION:-

Two numbers, 300 mm x 300 mm x 6 mm GI plate earthing with 2 Mt. long 19 mm dia "B" class GI pipe wood coal, salt lumps etc, as per IS: 3043 should be provided and 25 mm x 3 mm GI strips should be laid at least 600 mm below ground and should be firmly connected to the two earth terminals of the Mast. Lightning Final should be solidly fixed to the centre of the head frame and should be earthed as per relevant IS by a separate earthing other than those mentioned above.

TEST CERTIFICATES:-

The certificates of the Mast, winch drive, stainless steel wire ropes etc. duly signed by the competent Authority of the Company should be submitted to the Engineer-in-Charge after installation of the Unit but before commissioning it.

APPROVAL FROM ELECTRICAL INSPECTORATE:-

The complete installations should be got approved from the Competent Authority of the Electrical Inspectorate and it should be submitted to the Engineer –in-charge before commissioning of the High

LITERATURE:-

Your literature giving the details of High Mast Unit and lanterns should be submitted with the offer.

TECHNICAL SPECIFICATION SHEETS:-

These technical specification sheets should be duly signed by the authorized signatory of the manufacturing company on every page and these should also be enclosed with the offer.

ERECTION OF THE HIGH MAST UNIT:-

The use of proper erection devices and equipments should be made all persons involved with erection & commissioning must be insured and no persons unauthorized should be allowed by the erecting company to be present in 50 mts. Radius from the foundation till the erection is completed.

Any accident caused because of falling, breaking, crippling or bending of the High Mast at any point of time shall be the total responsibility of the company which is supplying and erecting the High Mast Unit.

GUARANTEE:-

The complete High Mast Unit should be guaranteed for two years from the date of commissioning.

APPLICABLE STANDARDS:

The following will be applicable:

a) IS 875 (Part 3) – 1987 Code of practice for Design Loads (other than Earth-quakes) for

Buildings and structures.

b) BE EN 10025/DIN 17100: Grades of M. S. Plates.

c) BS ISO 1461 Galvanizing

d) BS 5135/AWS Welding

e) TR No. 71996 of ILE, UK: Specification for Mast and foundation.

| Chapter - 16 | | | |
|---------------------|--|-------------|-------------|
| High Mast | | | |
| S.No. | Description of Item | Unit | Rate |
| 16.1 | Providing and erecting 12.5mt High Mast Lighting sytem with 6 No. 2 x 400 w flood light fixture flood light fitting 400 Watt each complete with control gear and lamps with integral Power tool, weight 340 kg. comprising of 1 section of hot dipped galvanized materials as per BSEN ISO 1461 thickness 3 mm, dia 100mm & 360mm for top and bottom respectively, stress fitting arrangement on site with 350mm overlap dynamic loading to withstand max wind pressure as per -IS 875 part III, parameters for structural & foundation design must be taken from Wind Tunnel test. Lightning protection of GI single spike 800mm at top and at base inside compartment with double internal lock with adequate size of MCB erected on PVC board complete with base plate of 25mm thick 520mm dia. and foundation bolts having 4 nos. bolts of 24mm dia (6.8E grade) Anchor plate 445 PCD, including accessories viz.(1) Lantern carriage of 50 NB ERW class-B,PI pipe covered with PVC sleeve suitable to carry 250kg. load and upto 6 fittings symmetrically.(2) Trailing Copper cable 5x2.5 sq.mm, EPR insulated PCP Sheatehed (3) Double Drum Winch having gear 53:1, oil bath | each | 313956.00 |
| | (SAE90/140) arrangement (4)2 nos. Stainless steel wire ropes 5mm dia (7/19) breaking load capacity 1600 kg.x2,(5) Integral power tool 3-phase, 1HP 2m/min single speed. (6) Feeder pillar fabricated out of 14 SWG CRCA sheet and comprise of incoming 32 A TPN switch, HRC fuses, single dial timer,suitable size of contactors for lighting and power tool, 2 nos. outgoing, reversing switch for motor. | | |
| 16.2 | Providing and erecting 16mt High Mast Lighting sytem with8 No. 2 x 400 w flood light fitting 400 Watt each complete with control gear and lamps with integral Power tool, weight 550 kg. comprising of 2 sections of hot dipped galvanized materials as per BSEN ISO 1461 thickness 3 mm & 4 mm, dia 150mm & 460mm for top and bottom respectively, stress fitting arrangement on site with 500mm overlap dynamic loading towithstand max wind pressure as per -IS 875 part III, parameters for structural & foundation design must be taken from Wind Tunnel test. Lightning protection of GI single spike 1200mm at top and at base inside compartment with double internal lock with adequate size of MCB erected on PVC board complete with base plate of 25mm thick 670mm dia. and foundation bolts having 8 nos. bolts of 30mm dia 850 mm long (E 6.8 grade) Anchor plate 590 PCD,670X670x8mm including accessories viz.(1) Lantern carriage of 50 NB ERW class-B ,PI pipe covered with PVC sleeve suitable to carry 500kg. load and upto 8 fittings symmetrically.(2) Trailing Copper cable 5x2.5 sq.mm, EPR insulated PCP Sheatehed (3) Double Drum | each | 395457.00 |
| | Winch having gear 53:1, oil bath (SAE90/140) arrangement (4)2 nos. Stainless steel wire ropes 6 mm dia (7/19) breaking load capacity 2400 kg.x2,(5) Integral power tool 3-phase, 1HP 2m/min single speed .torque limiter upto 500 kg adjustable (6)Twin door aviation light of type of BJAOL 2 with two numbers 100W lamps (7) Feeder pillar fabricated out of 14 SWG CRCA sheet and comprise of incoming 32 A TPN switch, HRC fuses, single dial timer, suitable size of contactors for lighting and power tool, 2 nos.outgoing, reversing switch for motor. | | |

| S.No. | Description of Item | Unit | Rate |
|-------|--|------|-----------|
| 16.3 | Providing and erecting 9 mtrs. High hot dipped galvanized octagonal poles with bottom of 200mm A/F, top 100mm, A/F made from 3mm thick HT plate & 290x290x16mm base plate with 1500mm long decorative sword type double arm bracket complete erected in an approved manner on provided foundation. Suitable size & type of foundation bolts. 4 nos. bolts type M20x750mm 'J' type foundation bolts (EN8 grade) | each | 32999.00 |
| 16.4 | Providing and erecting 9mtrs. High hot galvanized octagonal poles with bottom of 155mm A/F, top 70mm A/F made from 3mm thick HT plate & 260x260x16mm base plate with 1500mm long decorative sword type double arm bracket complete erected in an approved manner on provided foundation. Suitable size & type of foundation bolts. 4 nos. bolts type M20x750mm 'J' type foundation bolts (EN8 grade) | each | 24148.00 |
| 16.5 | Designing & casting of Open raft shallow footing foundation with M-20 cement concrete suitable for 12.5mtrs. High Mast considering the safe soil bearing capacity at site as 10 T/sqm at 2mtrs. Depth including excavation, foundation nut bolts in an approved manner. | each | 38500.00 |
| 16.6 | Designing & casting of Open raft shallow footing foundation with M-20 cement concrete suitable for 16mtrs. High Mast considering the safe soil bearing capacity at site as 10 T/sqm at 2mtrs. Depth including excavation, foundation nut bolts in an approved manner. | each | 52000.00 |
| 16.7 | Designing & casting with M-20 cement concrete foundation suitable for 9 mtrs. Octagonal poles considering the safe soil bearing capacity at site as 10 T/sqm at 2 mtrs. Depth including excavation, foundation nut bolts in an approved manner. | each | 13500.00 |
| 16.8 | Providing and erecting 12.5 mt high mast lighting system with 6 nos metal halide flood light fittings of 400 watt each complete with control gear and lamps with integral power tool, weight 340 kg having two section hot dip galvanized material as per BSEN ISO 1461 thick of 3 mm dia 100 top and 360 bottom respectively. the mast shall be stress fitted at site with 250 mm over dynamic loading to without maximum wind pressure as per IS 875 part III and parameters of structures and foundation design should be taken from wind tunnel test. the mast shall have lighting protection of GI single spike of designated length at top. the base inside compartment with double internal lock with adequate size of MCB mounted on PVC board complete with base plate of 25 mm thick 520 mm diameter and foundation bolts having 4 nos bolts of 24 mm diameter (TS 600) anchor plate 445 PCD including accessories Viz | each | 275000.00 |
| | (1) Lantern carriage of 50 OD ERW class B pipe covered with PVC sleeves suitable to carry 250 KG load and upto 6 fitting symmetrically (2) Trailing copper cable of 5x2.5 mm PVC insulated PVC sheathed (3) Double drum winch having gear ratio 5:3:1 oil bath (SAE/90/140) arrangement to be Type tested from NIT or IIT for (4) 2 nos stainless wire ropes 6 mm diameter (7/19) breaking load capacity 1450 kg x2 (5) integral power tool 3 phase 0.75 HP 2 m/min single speed (6) Feeder pillar out of 14 SWG CRCA sheet and comparison of incoming 32 A TPN MCB single dial timer, suitable size of contactors for lighting and power tool, 2 nos. outgoing and reversing switch of motor. | | |

| S.No. | Description of Item | Unit | Rate |
|-------|---|------|--------|
| 16.9 | Providing and erecting 16 mt high mast lighthing system with 6 nos metal halide flood light fittings of 2x400 watt each complete with control gear and lamps with integral power tool, weight 550 kg having two section hot dip galvanized material as per BSEN ISO 1461 thick of 3 mm & 4 mm dia 150 top and 410 bottom respectively. The mast shall be stress fitted at site with 500 mm over dynamic loading to without maximum wind pressure as per IS 875 part III and parmeters of structures and foundation desingn should be taken form wind tunnel test. The mast shall have lighting protection of GI single spike of designated length at top. The base inside compartment with double internal lock with adequate size of MCB mounted on PVC board complete with base palte of 25 mm thick 570 mm diameter and foundation bots having 8 nos bots of 30 mm/850 MM daimeter (TS 600) anchor plate 445 PCD including accessories Viz. | each | 375000 |
| | (1) Lantern carriage of 50 OD ERW calss B pipe covered with PVC sleeves suitable to carry 750 KG load and upto 8 fitting symmmetricaly (2) Traliling copper cable of 5x2.5 samm PVC insulated PVC shetehed (3) Double drum winch having gear ration 531 oil bath (SAE/90/140) arrangement to be Type tested from NIT or IIT for (4) 2 nos stainless wire ropes 6 mm diameter(7/19) oreaing load capacity 2400 kg x2 (5) integral power tool 3 phase 1 HP 2 m/min single speed Tourque 750 Kg (6) Feeder pillar out of 14 SWG CRCA sheet and comparaise of incoming 32 A TPN MCB single dial timer, sutiable size of contractotrs for lighting and power tool, 2 nos. outgoing and reversing switch of motor.Twin avation light 2 no.s 100 watt lamp | | |
| 16.10 | Providing and erecting 20 mt high mast lighthing system with 6 nos metal halide flood light fittings of 2x400 watt each complete with control gear and lamps with integral power tool, weight 680 kg having two section hot dip galvanized material as per BSEN ISO 1461 thick of 3 mm & 4 mm dia 150 top and 460 bottom respectively. The mast shall be stress fitted at site as per IS overlap dyanamic loading to with standard maximum wind pressure as per IS 875 part III and parmeters of structures and foundation desingn should be taken form wind tunnel test. The mast shall have lighting protection of GI single spike of designated length at top. The base inside compartment with double internal lock with adequate size of MCB mounted on PVC board complete with base palte of 25 mm thick 570 mm diameter and foundation bots having 8 nos bots of 30 mm/850 MM daimeter (TS 600) anchor plate 590 PCD including accessories Viz | each | 415000 |
| | (1) Lantern carriage of 50 NB ERW calss B pipe covered with PVC sleeves suitable to carry 750 KG load and upto 12 fitting symmmetricaly (2) Traliling copper cable of 5x4 sqmm EPR insulaed PVC shetehed (3) Double drum winch having gear ration 531 oil bath (SAE/90/140) arrangement to be Type tested from NIT or IIT for (4) 2 nos stainless wire ropes 6 mm diameter(7/19) oreaing load capacity 2400 kg x2 (5) integral power tool 3 phase 1 HP 2 m/min single speed Tourque limited 500 Kg (6) Feeder pillar out of 14 SWG CRCA sheet and comparaise of incoming 63 A TPN MCB single dial timer, sutiable size of contractotrs for lighting and power tool, 2 nos. outgoing and reversing switch of motor.Twin doam avation light 2 no.s 100 watt lamp. | | |

| S.No. | Description of Item | Unit | Rate |
|-------|--|------|------------|
| 16.11 | Providing and erecting 25 mt high mast lighting system with 12 nos metal halide flood light fittings of 2x400 watt each complete with control gear and lamps with integral power tool, weight 1000 kg having 3 section hot dip galvanized material as per BSEN ISO 1461 thick of 3 mm & 4 mm dia / 5 mm 150 top and 460 bottom respectively. The mast shall be stress fitted at site as per IS overlap dynamic loading to with standard maximum wind pressure as per IS 875 part III and parameters of structures and foundation design should be taken from wind tunnel test. The mast shall have lighting protection of GI single spike of 1200 mm length at top. The base inside compartment with double internal lock with adequate size of MCB mounted on PVC board complete with base plate of 30 mm thick 670 mm diameter and foundation bolts having 8 nos bolts of 30 mm/850 MM diameter (TS 600) anchor plate 590 PCD including accessories Viz | each | 4750000.00 |
| | (1) Lantern carriage of 50 NB ERW class B pipe covered with PVC sleeves suitable to carry 750 KG load and upto 16 fitting symmetrically (2) Trailing copper cable of 8x2.5 sqmm EPR insulated PVC sheathed (3) Double drum winch having gear ratio 531 oil bath (SAE/90/140) arrangement to be Type tested from NIT or IIT for (4) 2 nos stainless wire ropes 6 mm diameter(7/19) breaking load capacity 2400 kg x2 (5) integral power tool 3 phase 1.5 HP 2 m/min single speed Torque limited 750 Kg (6) Feeder pillar out of 14 SWG CRCA sheet and comparison of incoming 63 A TPN MCB single dial timer, suitable size of contactors for lighting and power tool, 2 nos. outgoing and reversing switch of motor. Twin dome aviation light 2 nos 100 watt lamp. | | |
| 16.12 | Providing and erecting 30 mt high mast lighting system with 16 nos metal halide flood light fittings of 2x400 watt each complete with control gear and lamps with integral power tool, weight 1650 kg having 3 section hot dip galvanized material as per BSEN ISO 1461 thick of 4 mm & 4 mm dia / 6 mm 150 top and 610 bottom respectively. The mast shall be stress fitted at site as per IS overlap dynamic loading to with standard maximum wind pressure as per IS 875 part III and parameters of structures and foundation design should be taken from wind tunnel test. The mast shall have lighting protection of GI single spike of 1200 mm length at top. The base inside compartment with double internal lock with adequate size of MCB mounted on PVC board complete with base plate of 30 mm thick 840 mm diameter and foundation bolts having 12 nos bolts of 30 mm/850 MM diameter (TS 600) anchor plate 740 PCD including accessories Viz | each | 550000.00 |
| | (1) Lantern carriage of 50 NB ERW class B pipe covered with PVC sleeves suitable to carry 1000 KG load and upto 20 fitting symmetrically (2) Trailing copper cable of 8x4 sqmm EPR insulated PVC sheathed (3) Double drum winch having gear ratio 531 oil bath (SAE/90/140) arrangement to be Type tested from NIT or IIT for (4) 2 nos stainless wire ropes 6 mm diameter(7/19) breaking load capacity 3450 kg x2 (5) integral power tool 3 phase 2 HP 2 m/min single speed Torque limited 1000 Kg (6) Feeder pillar out of 14 SWG CRCA sheet and comparison of incoming 63 A TPN MCB single dial timer, suitable size of contactors for lighting and power tool, 2 nos. outgoing and reversing switch of motor. Twin dome aviation light 2 nos 100 watt lamp. | | |
| | | | |

| S.No. | Description of Item | Unit | Rate |
|--------------|--|-------------|-------------|
| 16.13 | Supply of non integral flood fittings of 2x400 watt MH asymmmercial 6 folld light type BGENF 22 (without lamp) | eahc | 16150.00 |
| 16.14 | Supply of non integral flood fittings of 1x400 watt MH asymmmercial 7 folld light type BGENF 21 S (without lamp) | each | 9000.00 |
| 16.15 | Maintenance of High mast panel :- all material to be used shall be ISI marked. | | |
| 16.15.1 | Change of timer renowned make. | Each | 3680.00 |
| 16.15.2 | Change of Contactor renowned make. | Each | 3036.00 |
| 16.15.3 | Change of MCB'S 63 amp TPN | Each | 184.00 |
| 16.15.4 | Change of digital timer | Each | 1380.00 |
| 16.15.5 | Holder 500 W | Each | 184.00 |
| 16.16.6 | Connector Cable Catcher | Each | 46.00 |
| 16.16.7 | Male/Female Socket | Each | 138.00 |
| | | | |

| Chapter-17 | | | |
|---------------------------------|---|-------------|-------------|
| G.I. Pipes and Pump Sets | | | |
| S.No. | Description of Item | Unit | Rate |
| 17 | Supplying & installing G.I. Pipe for protection of underground cable fixed on wall/support/in trench/fixed between two rigid existing support of wall/beam for erection of ceiling Fan/down rod for stiff pendent for light luminaries /fan/protective for earthing, lightening conductor down strip/everhead service line/for submer cable or centrifugal pump for water supply with necessary iron clamp coupler, bend, te, elbow, nuts and bolts etc. complete in an approved manner as required to complete the job excluding cost of excavation/dismateling & other finished masonary Item complete. | | |
| 17.1 | For 'B' Class G.I.pipe ISI Marked (IS-1161-68) | | |
| 1 | 15mm | meter | 91.00 |
| 2 | 20.00mm | meter | 109.00 |
| 3 | 25.00mm | meter | 150.00 |
| 4 | 32.00mm | meter | 187.00 |
| 5 | 40.00mm | meter | 227.00 |
| 6 | 50.00mm | meter | 285.00 |
| 7 | 65.00mm | meter | 365.00 |
| 8 | 80.00mm | meter | 478.00 |
| 9 | 100.00mm | meter | 756.00 |
| 10 | 125.00mm | meter | 1009.00 |
| 11 | 150.00mm | meter | 1201.00 |
| 17.2 | A' Class G.I.Pipe ISI Marked (IS-1161-69) | | |
| 1 | 32.00mm | meter | 177.00 |
| 2 | 40.00mm | meter | 227.00 |
| 3 | 50.00mm | meter | 277.00 |
| 4 | 65.00mm | meter | 375.00 |
| 5 | 80.00mm | meter | 445.00 |
| 6 | 100.00mm | meter | 632.00 |
| 17.3 | Supply and laying rigid PVC single socket end, non-metallic pipe ISI Marked (IS-4985-2000)class 5 for protection of under ground cable/or for water pump delivery side, for water supply complete with necessary clamp coupler, band, Tee, Elbow etc. in an approved manner excluding cost of excavation etc. | | |
| 1 | 50.00mm O.D | meter | 102.00 |
| 2 | 75.00mm O.D | meter | 221.00 |
| 3 | 110.00mm O.D | meter | 466.00 |
| 17.4 | Supplying and installing Double wall corrugated pipes (DWC) of HDPE (IS 14930 Part II -marked) for cable laid under ground with necessary connecting sockets/ couplings,tees of same material and at required depth upto 90cm. below road/ground surface,including excavation, back filling with excavated material with ramming and making the surface good. | | |
| 1 | 50.00mm outside dia. | meter | 207.00 |
| 2 | 63.00mm outside dia. | meter | 210.00 |
| 3 | 77.00mm outside dia. | meter | 222.00 |
| 4 | 90.00mm outside dia. | meter | 254.00 |

| S.No. | Description of Item | Unit | Rate |
|--------------|--|-------------|-------------|
| 5 | 110.00mm outside dia. | meter | 309.00 |
| 6 | 120.00mm outside dia. | meter | 333.00 |
| 7 | 145.00mm outside dia. | meter | 376.00 |
| 8 | 160.00mm outside dia. | meter | 407.00 |
| 9 | 175.00mm outside dia. | meter | 432.00 |
| 10 | 200.00mm outside dia. | meter | 481.00 |
| | | | |
| 17.5 | "B" Monoblock type pumping sets | | |
| | (a) 2 H.P. | Each | 11478.00 |
| | (b) 3 H.P. | Each | 14308.00 |
| | (c) 5 H.P. | Each | 18038.00 |
| | (d) 7.5 H.P. | Each | 22424.00 |
| | (e) 10 H.P. | Each | 29308.00 |
| 17.6 | Supplying of ISI Marked Direct On-Line Starters confirming to IS : 13947-4 with suitable over load relay range and contactor size, 415 V , 3 -Phase with two earthing terminals | | |
| 17.6.1 | 0.75 / 1.0 / 2.0 / 3.0 / 5.0 / 7.5 HP | Each | 1420.00 |
| 17.6.2 | 10 HP | Each | 1630.00 |
| 17.7 | Supplying of ISI Marked Automatic Star-Delta Starters confirming to IS : 13947-4 with suitable over load relay range and contactor size & timer 415 V , 3 -Phase with two earthing terminals | | |
| 1 | 10.0 HP | Each | 5325.00 |
| 2 | 12.5 / 15.0 HP | Each | 5550.00 |
| 3 | 20 HP | Each | 6500.00 |
| 4 | 25 HP | Each | 6725.00 |
| 5 | 30 HP | Each | 8500.00 |
| 6 | 35 HP | Each | 10800.00 |
| 7 | 50 HP | Each | 16350.00 |
| 8 | 60 HP | Each | 26500.00 |
| 9 | 75 HP | Each | 27200.00 |
| 17.8 | Labour charges for taking out the submerisable pumping set for tubewell after completion of yield test or development of tubewell. | | |
| 1 | submerisable pumping sets upto 2.2 KW | Each | 852.00 |
| 2 | submerisable pumping sets upto 2.2 KW to 7.5 KW | Each | 953.00 |
| 3 | submerisable pumping sets above 7.5 KW | Each | 1003.00 |
| | | | |
| note:- | rate for item no. 17.9 adopted from DUAD SSR part 1 of PHE works 2010 chapter 14 | | |

SOLAR DRIVEN LED STREETLIGHT

Advantages:

Low-cost installation. No trenching, no heavy cable, quick and easy installation anywhere, has lights in days not months.

Ultra-low maintenance and long product life. LED/Induction lighting fixture is rated for 60,000 hours of maintenance free operation, sealed deep cycle maintenance free battery.

Green light source. 40-70% less power consumption than traditional light sources. Global green LED/Induction lights emit no light pollution, provides bright white light which improves color recognition and improves night visibility from 400%-1000% over traditional light sources.

Flexible configuration. Global Green solar lights can be easily configured to suite your requirements with solar module, wind module and battery of various sizes.

Solar light controller provides easy configuration, automatic operations and advanced work modules.

3-5 days backup power for rainy, cloudy days.

Grid-independent and No Bill to pay. Global Green Street light still operates even when the power grid is down, and there will never be an electricity bill to pay.

Solar Street Light vs. Traditional Street Light.

| Traditional street light | | Solar street light |
|---------------------------------|---|--|
| Installation cost | Avg. installation cost range from Rs. 3500-7000 | No trenching, no cabling low, installation cost of LED solar streetlight. |
| Equipment cost | Less investment initially | Initially the investment is high due to high cost of solar PV, battery and LED lamps |
| Running cost | Very high electricity cost per street light annually. | No running cost, free renewable power from SUN. |
| Maintenance cost | Higher maintenance cost Re planning 5000-8000 Hrs | Long life of solar panel and LED lamp makes system maintenance free or minimal. |



| | | |
|---------------|--|--|
| Environmental | Avg. streetlight consumes 600 KWH of fossil fuel energy annually which translates to about 500 kg of carbon dioxide emission, Light glare, tree pass and pollution | Does not generate any gases environment friendly. |
| Performance | Low CRI and recognition | Excellent CRI (>80-90) hence quick recognitions. |
| Safety | Risk prone to construction with glass and gasses. Risky in case of short circuit. | No glass or any risk prone parts, Electrically protected from short circuit. |

| | | | | |
|---------------------------|--|--|--|--|
| Applications | | | | |
| v Major Roadways | | | | |
| v Residential Streets | | | | |
| v Pedestrian Walkways | | | | |
| v Docks and Piers | | | | |
| v Remote & Rural Location | | | | |
| v High Crime areas | | | | |
| Carbon Credit | | | | |

Use of solar and wind energy and LED lighting helps in reducing generation of carbon and other gases thus helps in generating carbon credits which are saleable.



| | | | | |
|--------------------------|--|--|--|--|
| SOLAR LIGHTING | | | | |
| ABOUT SOLAR POWER | | | | |

| | | | | |
|---|--|--|--|--|
| About Photovoltaic | | | | |
| Photovoltaic are best known as a method for generating solar power by using solar cells packaged in photovoltaic modules, often electrically connected in multiples as solar photovoltaic arrays to convert energy from the sun into electricity. | | | | |
| Advantages of Solar PV System | |  | | |
| *Long Life – 25 years of long operational life span. | | | | |
| *Utilizes solar energy : Free, Abundant , Clean | |  | Traditional | |
| *Modular : flexibility while designing PV system | | | Solar Panels | |
| *Reliable : works efficiently | | | | |
| *No need of long transmission lines, hence savings | | | | |
| *Can be installed right at the place of utility. | | | | |
| *Environment friendly, no net greenhouse gas emissions. | | | New Generation Concentrated PV Panels (CPV) | |



Solar - LED lit Hoarding & Signage

**PV Panel with reflector
Product Advantage**

Technical Specification

| | | |
|-------------------------|---------------|---|
| Battery voltage : | 12V | Solar photo-voltaic based stand alone lighting system with |
| Battery capacity : | 12AV | long life LED's |
| LED output power : | 2W-5W | High efficiency crystalline silicon cell based solar modules |
| Daily operation : | 4 Hours | In-built battery for operation during no-sunny days |
| Autonomy : | 3 Days | Easy to install and maintain |
| Operating Temperature : | -10° to 50° c | High efficiency electronics ensures long life of the system |
| | | Ideal for small homes, shops, clinics, banks, postal offices and small living and working places. |

Chapter 19
Supply of Material List
ELECTRICAL INTERNAL MATERIAL LIST

| SNO. | Description of Item | Unit | Rate |
|------|---|-----------|----------|
| 1 | 1.5 sq mm ISI marked FR PVC insulated, single core copper Multi strand conductor cable. | 100meters | 1034.00 |
| 2 | 2.5 sq mm ISI marked, FR PVC insulated, single core copper Multi strand conductor cable. | 100meters | 1704.00 |
| 3 | 4.0 sq mm ISI marked, FR PVC insulated, single core copper Multi strand conductor cable. | 100meters | 2511.00 |
| 4 | 6.0 sq mm ISI marked, FR PVC insulated, single core copper Multi strand conductor cable. | 100meters | 3877.00 |
| 5 | 10 sq mm ISI marked, FR PVC insulated, single core copper Multi strand conductor cable. | 100meters | 6993.00 |
| 6 | 16 sq mm ISI marked, FR PVC insulated, single core copper conductor cable | 100meters | 11318.00 |
| 7 | 25 sq mm ISI marked, FR PVC insulated, single core copper conductor cable | 100meters | 18299.00 |
| 8 | 16/0.20 mm twin core FR PVC sheated, flat flexible copper cable | 100meters | 554.00 |
| 9 | 16/0.20 mm twin circular FR PVC sheated, workshop flexible copper cable | 100meters | 738.00 |
| 10 | 16/0.20 mm twin twisted, flexible FR PVC sheathed, flexible copper cable | 100meters | 758.00 |
| 11 | 1 pair, 0.5 sq mm copper conductor, FR PVC insulated unarmoured, telephone cable | 100meters | 3.00 |
| 12 | 2 pair, 0.5 sq mm copper conductor, FR PVC insulated unarmoured, telephone cable | 1 meters | 6.00 |
| 13 | 4 pair, 0.5 sq mm copper conductor, FR PVC insulated, unarmoured, telephone cable | 1 meters | 7.00 |
| 14 | Co-axial TV cable RG-6 grade, 0.7 mm solid copper conductor PE insulated, shielded with fine tinned copper braid and protected with FR PVC sheath | 1 meters | 24.00 |
| 15 | 20 mm dia. ISI marked, steel conduit | 1 meters | 6791.00 |
| 16 | 25 mm dia. ISI marked, steel conduit | 100 mtrs | 4370.00 |
| 17 | 32 mm dia. ISI marked, steel conduit | 100 mtrs | 5729.00 |
| 18 | 40 mm dia. ISI marked, steel conduit | 100 mtrs | 7396.00 |
| 19 | 50 mm dia. ISI marked, steel conduit | 100 mtrs | 10505.00 |
| 20 | 20 mm junction box, one way (metal) | 100 no. | 1134.00 |
| 21 | 20 mm junction box, two way (metal) | 100 no. | 1134.00 |
| 22 | 20 mm iron stabpples/ saddles/screws | 100 no. | 99.00 |
| 23 | 25 mm iron stabpples/ saddles/screws | 100 no. | 270.00 |
| 24 | 32 mm iron stabpples/ saddles/screws | 100 no. | 174.00 |
| 25 | 40 mm iron stabpples/ saddles/screws | 100 no. | 201.00 |
| 26 | 50 mm iron stabpples/ saddles/screws | 100 no. | 307.00 |
| 27 | 20 mm dia ISI marked, PVC conduit | 100 no. | 2079.00 |
| 28 | 25 mm dia ISI marked, PVC conduit | 100 mtrs | 2573.00 |
| 29 | 32 mm dia ISI marked, PVC conduit | 100 mtrs | 2032.00 |
| 30 | 40 mm dia ISI marked, PVC conduit | 100 mtrs | 2807.00 |
| 31 | 50 mm dia ISI marked, PVC conduit | 100 mtrs | 4460.00 |
| 32 | 20 mm PVC junction box, one way | 100 no. | 763.00 |
| 33 | 20 mm PVC junction box, two way | 100 no. | 763.00 |
| 34 | 20 mm M.S clamps | 100 no. | 454.00 |

| SNO. | Description of Item | Unit | Rate |
|------|---|----------|---------|
| 35 | 25 mm M.S clamps | 100 no. | 605.00 |
| 36 | 75 mm X 75 mm X 50 mm PVC box | 100 no. | 907.00 |
| 37 | Modular GI box for 2 module | 100 no. | 16.00 |
| 38 | Modular GI box for 4 module | 1 no. | 56.00 |
| 39 | Modular GI box for 6 module | 1 no. | 34.00 |
| 40 | Modular GI box for 8 module | 1 no. | 42.00 |
| 41 | Modular GI box for 12 module | 1 no. | 57.00 |
| 42 | 75 mm X 75 mm X 60 MM deep metal box | 1 no. | 2245.00 |
| 43 | 100 mm X 100 mm X 60 MM deep metal box | 100 nos | 1985.00 |
| 44 | 150 mm X 75 mm X 60 MM deep metal box | 100 nos | 2174.00 |
| 45 | 150 mm X 150 mm X 60 MM deep metal box | 100 nos | 3024.00 |
| 46 | 180 mm X 100 mm X 60 MM deep metal box | 100 nos | 2693.00 |
| 47 | 200 mm X 125 mm X 60 MM deep metal box | 100 nos | 3638.00 |
| 48 | 200 mm X 150 mm X 60 MM deep metal box | 100 nos | 3544.00 |
| 49 | 200 mm X 150 mm X 75 MM deep metal box | 100 nos | 3780.00 |
| 50 | 200 mm X 250 mm X 75 MM deep metal box | 100 nos | 5387.00 |
| 51 | 200 mm X 150 mm X 100 MM deep metal box | 100 nos | 5670.00 |
| 52 | 200 mm X 250 mm X 100 MM deep metal box | 100 nos | 6237.00 |
| 53 | 200 mm X 300 mm X 100 MM deep metal box | 100 nos | 7088.00 |
| 54 | 250 mm X 300 mm X 100 MM deep metal box | 100 nos | 7371.00 |
| 55 | 200 mm X 250 mm X 60 MM deep metal box | 100 nos | 4914.00 |
| 56 | 200 mm X 300 mm X 60 MM deep metal box | 100 nos | 5576.00 |
| 57 | 250 mm X 300 mm X 60 MM deep metal box | 100 nos | 6332.00 |
| 58 | Ceiling rose, 5 amps bakelite | 100 mtrs | 1260.00 |
| 59 | S.P 5/6 amps, one way modular switch, ISI marked | 100 no. | 32.00 |
| 60 | S.P 5/6 amps, two way modular switch, ISI marked | 1 no.s | 33.00 |
| 61 | S.P 15/16 amps, one way modular switch, ISI marked | 1 no.s | 102.00 |
| 62 | 3 pin 5/6 amps, modular socket outlet, ISI marked | 1 no.s | 50.00 |
| 63 | 6 pin 15/16 amps, modular socket outlet, ISI marked | 1 no.s | 174.00 |
| 64 | Moudular bell push, ISI Marked | 1 no.s | 34.00 |
| 65 | Steped type Modular fan regulator | 1 no.s | 217.00 |
| 66 | Telephone socket outlet modular type | 1 no.s | 45.00 |
| 67 | T.V socket outlet modular type | 1 no.s | 44.00 |
| 68 | S.P 5/6 amps, one way switch, piano type ISI marked | 1 no.s | 1302.00 |
| 69 | S.P 5/6 amps, two way switch, piano type ISI marked | 100 no. | 2025.00 |
| 70 | S.P 15/16 amps, one way switch, piano type ISI marked | 100 no. | 2381.00 |
| 71 | 3 pin 5/6 amps, socket outlet,piano type ISI marked | 100 no. | 2122.00 |
| 72 | 3 pin 15/16 amps, socket outlet,piano type ISI marked | 100 no. | 2797.00 |
| 73 | Bell push, piano type | 100 no. | 1860.00 |
| 74 | Telephone socket outlet piano type | 1 no.s | 14.00 |
| 75 | T.V socket outlet piano type | 1 no.s | 14.00 |
| 76 | call bell/ buzzer, AC/DC, single phase | 100 no. | 1260.00 |
| 77 | Ball and socket | 100 no. | 1040.00 |
| 78 | Iron swcrews, 35 mm X 6 mm | 100 no. | 38.00 |
| 79 | Iron swcrews, 40 mm X 6 mm | 100 no. | 42.00 |
| 80 | Iron swcrews, 45 mm X 6 mm | 100 no. | 47.00 |
| 81 | 250 mm X 200 mm H.T. danger notice plate | 1 no. | 32.00 |
| 82 | 200 mm X 150 mm M.V. danger notice plate | | 26.00 |
| 83 | 6 SWG G.I wire | | 40.00 |
| 84 | 8 SWG G.I wire (4.0 mm dia) | | 36.00 |
| 85 | 8 SWG copper wire (4.0 mm dia) | | 239.00 |

| SNO. | Description of Item | Unit | Rate |
|------|--|------|---------|
| 86 | G.I wire, 10 SWG | | 33.00 |
| 87 | Buzzer | Each | 42.00 |
| 88 | Ding Dong Bell | Each | 79.00 |
| 89 | Musical bell | Each | 189.00 |
| 90 | Condencer 2.5 mfd | Nos | 21.00 |
| 91 | Condencer 3.15 mfd | Each | 28.00 |
| 92 | Condencer 4.00 mfd | Each | 40.00 |
| 93 | Condencer 6.00 mfd | Each | 66.00 |
| 94 | Condencer 10.00 mfd | Each | 106.00 |
| 95 | Condencer 25.00 mfd | Each | 159.00 |
| 96 | Condencer 30.00 mfd | Each | 194.00 |
| 97 | Condencer 33.00 mfd | Each | 229.00 |
| 98 | Flourecent tube rod 4' X 40 watt | Each | 40.00 |
| 99 | Flourecent tube rod 4' X 36 watt | Each | 36.00 |
| 100 | Flourecent tube rod 2' X 20 watt | Each | 36.00 |
| 101 | Flourecent tube rod 2' X 18 watt | Each | 34.00 |
| 102 | M.V. Lamp 80 Watt | Each | 132.00 |
| 103 | M.V. Lamp 125 Watt | Each | 137.00 |
| 104 | M.V. Lamp 250 Watt | Each | 326.00 |
| 105 | M.V. Lamp 400 Watt | Each | 485.00 |
| 106 | S.V. Lamp 70 Watt | Each | 344.00 |
| 107 | S.V. Lamp 150 Watt | Each | 459.00 |
| 108 | S.V. Lamp 250 Watt | Each | 512.00 |
| 109 | S.V. Lamp 400 Watt | Each | 635.00 |
| 110 | S.V. Lamp 70 Watt (son-T type) | Each | 331.00 |
| 111 | S.V. Lamp 150 Watt (son-T type) | Each | 494.00 |
| 112 | S.V. Lamp 250 Watt (son-T type) | Each | 547.00 |
| 113 | S.V. Lamp 400 Watt (son-T type) | Each | 670.00 |
| 114 | M.H. Lamp 70 Watt (Single ended type) | Each | 816.00 |
| 115 | M.H. Lamp 150 Watt(Single ended type) | Each | 882.00 |
| 116 | M.H. Lamp 250 Watt(Single ended type) | Each | 1103.00 |
| 117 | M.H. Lamp 400 Watt(Single ended type) | Each | 1169.00 |
| 118 | M.H. Lamp70 Watt (Double ended type) | Each | 573.00 |
| 119 | M.H.Lamp150 Watt(Double ended type) | Each | 578.00 |
| 120 | C.F.L 5 Watt | Each | 99.00 |
| 121 | C.F.L 8 Watt | Each | 110.00 |
| 122 | C.F.L 11 Watt | Each | 119.00 |
| 123 | C.F.L 15 Watt | Each | 128.00 |
| 124 | C.F.L 18 Watt | Each | 150.00 |
| 125 | C.F.L 20 Watt | Each | 198.00 |
| 126 | C.F.L 23 Watt | Each | 213.00 |
| 127 | C.F.L 26 Watt | Each | 221.00 |
| 128 | C.F.L 36 Watt | Each | 353.00 |
| 129 | C.F.L 45 Watt | Each | 573.00 |
| 130 | C.F.L 65 Watt | Each | 662.00 |
| 131 | C.F.L 85 Watt | Each | 706.00 |
| 132 | Helogen lamp 500 Watt | Each | 71.00 |
| 133 | Helogen lamp 1000 Watt | Each | 88.00 |
| 134 | Sodium Chock ISI Mark 70 watt renowned make | Each | 400.00 |
| 135 | Sodium Chock ISI Mark 150 watt renowned make | Each | 550.00 |
| 136 | Sodium Chock ISI Mark 250 watt renowned make | Each | 750.00 |

| SNO. | Description of Item | Unit | Rate |
|------|--|------|---------|
| 137 | Sodium Chock ISI Mark 400 watt renowned make | Each | 1000.00 |
| 138 | Ignitor ISI mark 70 watt Phillips/Bajaj/Osram/other renowned make | Each | 130.00 |
| 139 | Ignitor ISI mark 150/250/400 watt Phillips/Bajaj/Osram/other renowned make | Each | 135.00 |
| 140 | Metal helide Lamp Tubler 70 watt Phillips/Bajaj/Osram/other renowned make | Each | 825.00 |
| 141 | Metal helide Lamp Tubler 150 watt Phillips/Bajaj/Osram/other renowned make | Each | 925.00 |
| 142 | Metal helide Lamp Tubler 250 watt Phillips/Bajaj/Osram/other renowned make | Each | 1100.00 |
| 143 | Metal helide Lamp Green colour 70 watt Phillips/Bajaj/Osram/other renowned make | Each | 1000.00 |
| 144 | Metal helide Lamp Green colour 150 watt Phillips/Bajaj/Osram/other renowned make | Each | 1100.00 |
| 145 | Metal helide Lamp Green colour 250 watt Phillips/Bajaj/Osram/other renowned make | Each | 1200.00 |
| 146 | Metal helide Lamp Green colour 400 watt Phillips/Bajaj/Osram/other renowned make | Each | 1750.00 |
| 147 | Holder for sodium fittings 400 watts ISI marked best quality | Each | 125.00 |
| 148 | Helogen holder set ISI mark ED best quality | Set | 50.00 |
| 149 | Starter with condensor ISI marked | Each | 3.00 |
| 150 | Tuberod (short length) 30/33 watt G.E./Silwania/Surya or equilent make | Each | 120.00 |
| 151 | Tuberod 4 Feet T-5 best quality | Each | 130.00 |
| 152 | Alluminium wire 2.5mm ISI marked roll of standard length | Roll | 400.00 |
| 153 | Alluminium wire 4mm ISI marked roll of standard length | Roll | 500.00 |
| 154 | Alluminium wire 6mm ISI marked roll of standard length | Roll | 600.00 |
| 155 | Alluminium wire 10mm ISI marked roll of standard length | Roll | 1000.00 |
| 156 | Switch Flush Type 15Amp (Western/Anchor/other equivalent make) | Each | 35.00 |
| 157 | Switch Flush Type 5Amp (Western/Anchor/other equivalent make) | Each | 15.00 |
| 158 | Bell Switch 5Amp (Western/Anchor/other equivalent make) | Each | 15.00 |
| 159 | Ceiling Rose (Western/Anchor/other equivalent make) | Each | 15.00 |
| 160 | Fastner Anchor nut bolt complete best quality | Each | 40.00 |
| 161 | Three pin top 15 Amp (Western/Anchor/other equivalent make) | Each | 50.00 |
| 162 | Three pin top 5 Amp (Western/Anchor/other equivalent make) | Each | 35.00 |
| 163 | Two pin top 5 Amp (Western/Anchor/other equivalent make) | Each | 20.00 |
| 164 | Adaptor (Western/Anchor/other equivalent make) | Each | 8.00 |
| 165 | Bulb 15W Phillips/Bajaj/Surya/other renowned make | Each | 15.00 |
| 166 | Bulb 25W Phillips/Bajaj/Surya/other renowned make | Each | 16.00 |
| 167 | Bulb 40W Phillips/Bajaj/Surya/other renowned make | Each | 17.00 |
| 168 | Bulb 60W Phillips/Bajaj/Surya/other renowned make | Each | 18.00 |
| 169 | Bulb 100W Phillips/Bajaj/Surya/other renowned make | Each | 20.00 |
| 170 | Bulb 200W Phillips/Bajaj/Surya/other renowned make | Each | 35.00 |
| 171 | PL Lamp 8/11Watt Phillips/Bajaj/Crompton/ Hawells/other renowned make | Each | 100.00 |
| 172 | PL Lamp 14/15Watt Phillips/Bajaj/Crompton/ Hawells/other renowned make | Each | 125.00 |
| 173 | PL Lamp 18/20 Watt Phillips/Bajaj/Crompton/ Hawells/other renowned make | Each | 130.00 |
| 174 | PL Chock 8/11Watt Phillips/Bajaj/Crompton/ Hawells/other renowned make | Each | 100.00 |
| 175 | PL Chock 14/15Watt Phillips/Bajaj/Crompton/ Hawells/other renowned make | Each | 150.00 |
| 176 | PL Chock 18/20Watt Phillips/Bajaj/Crompton/ Hawells/other renowned make | Each | 165.00 |
| 177 | Main switch ICTP 16 Amp renowned make | Each | 150.00 |
| 178 | Main switch ICTP 32 Amp renowned make | Each | 550.00 |
| 179 | Chock 12 v 50 W Best Quality | Each | 240.00 |

| SNO. | Description of Item | Unit | Rate |
|------|--|----------|---------|
| 180 | Starter 20W Phillips/Bajaj/Crompton/other renowned make | Each | 20.00 |
| 181 | Cable connector 16mm | Each | 60.00 |
| 182 | Cable connector 25mm | Each | 75.00 |
| 183 | Cable connector 35mm | Each | 90.00 |
| 184 | Tublight fixture without tuberod 36/40 W renowned make | Each | 490.00 |
| 185 | Helogen Lamp 50W x 12 V Best quality | Each | 125.00 |
| 186 | Modular One way switch 6A (Western/Anchor/Hawells/ other renowned make) | Each | 40.00 |
| 187 | Modular Two way switch 6A (Western/Anchor/Hawells/ other renowned make) | Each | 50.00 |
| 188 | Modular Bell push 6A (Western/Anchor/Hawells/ other renowned make) | Each | 50.00 |
| 189 | Modular One way switch with Ind. 6A (Western/Anchor/Hawells/ other renowned make) | Each | 55.00 |
| 190 | Modular One way switch 20A (Western/Anchor/Hawells/ other renowned make) | Each | 60.00 |
| 191 | Modular One way switch with Ind 20A (Western/Anchor/Hawells/ other renowned make) | Each | 75.00 |
| 192 | Modular Telephone Top only 2 Pin (Western/Anchor/Hawells/ other renowned make) | Each | 20.00 |
| 193 | Co-axial T.V. cable RG-6 Grade 07mm solid copper conductor PE insulated shielded with fine tined copper braid and protected with PVC sheath. | Meter | 35.00 |
| 194 | resistanc type Fan regulator | Each | 40.00 |
| 195 | step type fan regulator | Each | 167.00 |
| 196 | dimmer / regulator 650 Watt | Each | 161.00 |
| 197 | dimmer / regulator 1000 Watt | Each | 197.00 |
| 198 | step type Modular fan regulator 450 Watt | Each | 220.00 |
| 199 | step type Modular fan regulator 650 Watt | Each | 328.00 |
| 200 | step type Modular fan regulator 1000 Watt | Each | 481.00 |
| 201 | Flexible wire 23/.0076 | each | 11.00 |
| 202 | Steel conduit for fixing of tube light & down rod | mtr | 54.00 |
| 203 | Iron rod of 16 mm dia | mtr | 32.00 |
| 204 | Flat iron clamp for wooden beam | Kg | 36.00 |
| 205 | Rag bolt with nut (for fixing of exhaust fan) | each | 8.00 |
| 206 | Wooden board 12" X 18" | each | 65.00 |
| 207 | Wooden board 12" X 18" | each | 65.00 |
| 208 | switch 5 Amps F/T | each | 10.00 |
| 209 | lamp holder | each | 9.00 |
| 210 | Copper wound choke 40 Watt VPIT | 1000 Gms | 167.00 |
| 211 | Starter 40 watts& 250 V & Holders | Each | 12.00 |
| 212 | Copper PVC insulated wire | Each | 9.00 |
| 213 | 300 mm Sweep (Wall Mounting fan) | meter | 1785.00 |
| 214 | 400 mm Sweep (Wall Mounting fan) | Each | 1890.00 |
| 215 | 300 mm Sweep (Cabin fan) | Each | 1811.00 |
| 216 | 400 mm Sweep (Cabin fan) | Each | 1945.00 |
| 217 | 225 mm Sweep ('Fresh Air Fan') | Each | 1024.00 |
| 218 | 305 mm Sweep('Fresh Air Fan') | Each | 1224.00 |
| 219 | 300 mm Sweep (Exhaust Fan heavy duty) | Each | 2573.00 |
| 220 | 380 mm Sweep (Exhaust Fan heavy duty) | Each | 2755.00 |
| 221 | 450 mm Sweep (Exhaust Fan heavy duty) | Each | 3901.00 |
| 222 | 400 mm Sweep (Pedestal fan) | Each | 2260.00 |
| 223 | 450 mm Sweep (Pedestal fan) | Each | 2116.00 |
| 224 | 500 mm Sweep (Pedestal fan) | Each | 2620.00 |
| 225 | Ceiling Fan 1200 mm Sweep | Each | 1717.00 |

| SNO. | Description of Item | Unit | Rate |
|------|---|-------|---------|
| 226 | Ceiling Fan 1400 mm Sweep | Each | 1817.00 |
| 227 | LED lamps | KG | 160.00 |
| 228 | fluorescent tube fitting 36/40 watt, rust resistant, stove enamelled paint, box type channel with cover, complete with electronic ballast (HF) complete duly wired (without tube rod) | Each | 683.00 |
| 229 | fluorescent tube fitting 36/40 watt, rust resistant, stove enamelled paint, CRCA sheet steel housing with white stove enamelled reflector complete with copper ballast complete duly wired (without tube rod) | meter | 429.00 |
| 230 | fluorescent Double tube fitting 36/40 watt, rust resistant, stove enamelled paint, CRCA sheet steel housing with opal acrylic diffuser and decorative end plates complete with copper ballast complete duly wired (without tube rod) | Each | 1349.00 |
| 231 | surface mounting mirror optics luminaires for single/twin 1x36/40 watt fluorescent lamp comprising of white powder coated CRCA sheet steel housing raw silk / navy brown / white colour M.S. low profile flat housing complete with all accessories i.e. electronic ballast (HF) duly wired (without tube rod) etc. | Each | 1775.00 |
| 232 | surface mounting mirror optics luminaires for single/twin 2x40 watt fluorescent lamp comprising of white powder coated CRCA sheet steel housing raw silk / navy brown / white colour M.S. low profile flat housing complete with all accessories i.e. electronic ballast (HF) duly wired (without tube rod) etc. | Each | 2714.00 |
| 233 | surface mounting mirror optics luminaires for single/twin 36/40 watt fluorescent lamp comprising of white powder coated CRCA sheet steel housing raw silk / navy brown / white colour M.S. low profile flat housing complete with all accessories i.e. copper ballast duly wired (without tube rod) etc. | Each | 1418.00 |
| 234 | surface mounting mirror optics luminaires for single/twin 2x40 watt fluorescent lamp comprising of white powder coated CRCA sheet steel housing raw silk / navy brown / white colour M.S. low profile flat housing complete with all accessories i.e. copper ballast (HF) duly wired (without tube rod) etc. | Each | 1987.00 |
| 235 | street/ road light fitting complete with copper wound polyster choke, lamp holder,starter holder, starter duly wired, side entry with clear acrylic cover with fixing clamps (without tube rod) 1x40 Watt | Each | 866.00 |
| 236 | street/ road light fitting complete with copper wound polyster choke, lamp holder,starter holder, starter duly wired, side entry with clear acrylic cover with fixing clamps (without tube rod) 2x40w | meter | 1129.00 |
| 237 | Bulk head luminaire consisting of pressure die aluminium housing lamp holder, prismatic glass cover, rubber gasket and wire guard, delux type | Each | 368.00 |
| 238 | high pressure M.V. fitting, consisting of cast aluminium cotrol gear housing, highly polished reflector, highly transparent acrylic hinged cover, complete with taped polyster choke, capacitor, connector etc. suaitable for end mounting duly wired (without lamp) 80 watt | Each | 1680.00 |
| 239 | high pressure M.V. fitting, consisting of cast aluminium cotrol gear housing, highly polished reflector, highly transparent acrylic hinged cover, complete with taped polyster choke, capacitor, connector etc. suaitable for end mounting duly wired (without lamp) 125 watt | Each | 1678.00 |

| SNO. | Description of Item | Unit | Rate |
|------|--|------|---------|
| 240 | high pressure M.V. fitting, consisting of cast aluminium control gear housing, highly polished reflector, highly transparent acrylic hinged cover, complete with taped polyester choke, capacitor, connector etc. suitable for end mounting duly wired (without lamp) 250 watt | Each | 2783.00 |
| 241 | high pressure M.V. fitting, consisting of cast aluminium control gear housing, highly polished reflector, highly transparent acrylic hinged cover, complete with taped polyester choke, capacitor, connector etc. suitable for end mounting duly wired (without lamp) 400 watt | Each | 3549.00 |
| 242 | H.D. Sodium vapour fitting consisting of metallic cast aluminium alloy housing highly polished anodised aluminium reflector clear acrylic cover, gasket and equipped with accessories; such as ballast, condenser, ignitor, skirted ceramic lamp holder (without lamp) 70 watt | Each | 1650.00 |
| 243 | H.D. Sodium vapour fitting consisting of metallic cast aluminium alloy housing highly polished anodised aluminium reflector clear acrylic cover, gasket and equipped with accessories; such as ballast, condenser, ignitor, skirted ceramic lamp holder (without lamp) 150 watt | Each | 2851.00 |
| 244 | H.D. Sodium vapour fitting consisting of metallic cast aluminium alloy housing highly polished anodised aluminium reflector clear acrylic cover, gasket and equipped with accessories; such as ballast, condenser, ignitor, skirted ceramic lamp holder (without lamp) 250 watt | Each | 3329.00 |
| 245 | H.D. Sodium vapour fitting consisting of metallic cast aluminium alloy housing highly polished anodised aluminium reflector clear acrylic cover, gasket and equipped with accessories; such as ballast, condenser, ignitor, skirted ceramic lamp holder (without lamp) 400 watt | Each | 4358.00 |
| 246 | H.P.Sodium vapour side road lighting/ main road lighting lantern consisting of single piece cast aluminium housing complete with all accessories suitable for tubular 70W /150W /250W/HPSV lamp pot type high purity ALGLAS coated electromechanically brightened anodized aluminium reflector/ with ripples embossing above the lamp, lamp holder, clear acrylic cover & 3/5 stainless steel toggle, ignitor & ballast, condenser(without lamp)70 watt | Each | 2041.00 |
| 247 | H.P.Sodium vapour side road lighting/ main road lighting lantern consisting of single piece cast aluminium housing complete with all accessories suitable for tubular 70W /150W /250W/HPSV lamp pot type high purity ALGLAS coated electromechanically brightened anodized aluminium reflector/ with ripples embossing above the lamp, lamp holder, clear acrylic cover & 3/5 stainless steel toggle, ignitor & ballast, condenser(without lamp)150 watt | Each | 3482.00 |
| 248 | H.P.Sodium vapour side road lighting/ main road lighting lantern consisting of single piece cast aluminium housing complete with all accessories suitable for tubular 70W /150W /250W/HPSV lamp pot type high purity ALGLAS coated electromechanically brightened anodized aluminium reflector/ with ripples embossing above the lamp, lamp holder, clear acrylic cover & 3/5 stainless steel toggle, ignitor & ballast, condenser(without lamp)250 watt | Each | 3917.00 |
| 249 | intergal type compact flood light fitting consisting of cast aluminium housing complete with all accessories ALGLAS coated aluminium reflector, lamp holder heat resisting toughened clear glass cover and mounting bracket with aiming disc (150 watt) | Each | 2949.00 |

| SNO. | Description of Item | Unit | Rate |
|------|---|------|---------|
| 250 | integral type compact flood light fitting consisting of cast aluminium housing complete with all accessories ALGLAS coated aluminium reflector, lamp holder heat resisting toughned clear glass cover and mounting bracket with aiming disc (250 watt) | Each | 2995.00 |
| 251 | H.D. asymmetrical beam flood light fitting suitable for tubular single lamp consisting of cast aluminium housing 'ALGLAS coated aluminium faceted reflector assly toughned glass cover, mounting bracket and aiming disc, seperate control gear box required for HPSV/M.H. Lamp (without lamp) 250Watt | Each | 4725.00 |
| 252 | H.D. asymmetrical beam flood light fitting suitable for tubular single lamp consisting of cast aluminium housing 'ALGLAS coated aluminium faceted reflector assly toughned glass cover, mounting bracket and aiming disc, seperate control gear box required for HPSV/M.H. Lamp (without lamp) 400 Watt | Each | 6618.00 |
| 253 | integral type decorative post top lantern consisting of aluminium canopy opal acrylic bottom cover and cast aluminium spigot complete with all accessories and control gear box (without lamp) 125 watt | Each | 3043.00 |
| 254 | integral type decorative post top lantern consisting of aluminium canopy opal acrylic bottom cover and cast aluminium spigot complete with all accessories and control gear box (without lamp) 70 watt | Each | 3283.00 |
| 255 | integral mushroom type roto moulded/Diamond shaped roto moulded post top lantern, consisting of cast aluminium spigot complete with all accessories, lamp holder, control gear box(without lamp) 125 watt | Each | 3043.00 |
| 256 | integral mushroom type roto moulded/Diamond shaped roto moulded post top lantern, consisting of cast aluminium spigot complete with all accessories, lamp holder, control gear box(without lamp) 70 watt | Each | 3193.00 |
| 257 | low watt surface mounting luminaires, made of white powder coated CRCA sheet steel housing with aluminium mirror reflector complete with control gear, wired upto terminal block on a detachable tray without lamp (2nos. 11 watt CFL) | Each | 1137.00 |
| 258 | low watt surface mounting luminaires, made of white powder coated CRCA sheet steel housing with aluminium mirror reflector complete with control gear, wired upto terminal block on a detachable tray without lamp (2nos. 18 watt CFL) | Each | 1148.00 |
| 259 | low watt surface mounting luminaires, made of white powder coated CRCA sheet steel housing with aluminium mirror reflector complete with control gear, wired upto terminal block on a detachable tray without lamp (2nos. 36 watt CFL) | Each | 2041.00 |
| 260 | low watt surface/recess mounting luminaires, made of white powder coated CRCA sheet steel housing with aluminium mirror reflector complete with control gear, wired upto terminal block on a detachable tray without lamp (2nos. 36 watt CFL) | Each | 3062.00 |
| 261 | low watt surface / recessed mounting CFL down lighter luminaire with white powder coated aluminium cover with anodised aluminium reflector with necessary materials connection etc. complete as required (without lamp) CFL 1 X 10 / 13 / 18 watt | Each | 476.00 |

| SNO. | Description of Item | Unit | Rate |
|------|--|------|---------|
| 262 | low watt surface / recessed mounting CFL down lighter luminaire with white powder coated aluminium cover with anodised aluminium reflector with necessary materials connection etc. complete as required (without lamp) CFL 2 X 13 / 18 watt | Each | 693.00 |
| 263 | low watt CFL roadway / street light luminaire with epoxy powder coated sheet aluminium / steel housing with epoxy white powder coated CRCA sheet steel gear tray ,clear acrylic cover with necessary materials connection including mounting with GI pipe 32 mm OD, clamps on existing wall / pole etc. complete as required (without lamp) CFL 1 X 9 / 11 watt | Each | 834.00 |
| 264 | low watt CFL roadway / street light luminaire with epoxy powder coated sheet aluminium / steel housing with epoxy white powder coated CRCA sheet steel gear tray ,clear acrylic cover with necessary materials connection including mounting with GI pipe 32 mm OD, clamps on existing wall / pole etc. complete as required (without lamp) CFL 1 X 13 / 18 watt | Each | 888.00 |
| 265 | low watt CFL roadway / street light luminaire with epoxy powder coated sheet aluminium / steel housing with epoxy white powder coated CRCA sheet steel gear tray ,clear acrylic cover with necessary materials connection including mounting with GI pipe 32 mm OD, clamps on existing wall / pole etc. complete as required (without lamp) CFL 2 X 11 watt | Each | 964.00 |
| 266 | low watt CFL roadway / street light luminaire with epoxy powder coated sheet aluminium / steel housing with epoxy white powder coated CRCA sheet steel gear tray ,clear acrylic cover with necessary materials connection including mounting with GI pipe 32 mm OD, clamps on existing wall / pole etc. complete as required (without lamp) CFL 2 X 18 watt | Each | 1106.00 |
| 267 | low watt CFL roadway / street light luminaire with epoxy powder coated sheet aluminium / steel housing with epoxy white powder coated CRCA sheet steel gear tray ,clear acrylic cover with necessary materials connection including mounting with GI pipe 32 mm OD, clamps on existing wall / pole etc. complete as required (without lamp) CFL 1 X 36 watt | Each | 1106.00 |
| 268 | T- 5 lamp channel luminaire with plastic extruded housing with in-built electronic control gear with decorative end caps with necessary materials connection etc. complete as required (with lamp) T - 5 Lamp 1 X 28 watt | Each | 558.00 |
| 269 | T- 5 lamp channel luminaire with epoxy white powder coated CRCA sheet steel housing with reflector cover with necessary materials connection etc. complete as required (with lamp) T - 5 Lamp 1 X 28 watt | Each | 970.00 |
| 270 | Delux fresh air fan with louvers (ventilating fan) with self closing louvers of decorative PVC blades mounting square frame of approved maked complete (150 mm) | Each | 859.00 |
| 271 | Delux fresh air fan with louvers (ventilating fan) with self closing louvers of decorative PVC blades mounting square frame of approved maked complete (200 mm) | Each | 919.00 |
| 272 | Delux fresh air fan with louvers (ventilating fan) with self closing louvers of decorative PVC blades mounting square frame of approved maked complete (250 mm) | Each | 1012.00 |
| 273 | cooler kit | Each | 257.00 |

| SNO. | Description of Item | Unit | Rate |
|------|--|------|---------|
| 274 | cooler fan 450mm ISI mark | Each | 1162.00 |
| 275 | cooler vertical pump | Each | 368.00 |
| 276 | cooler / A.C. MS angle iron stand including flat iron supports | Each | 33.00 |
| 277 | Fluorescent Single tube fitting 36/40 watt, rust resistant, stove enamelled paint, CRCA sheet steel housing with opal acrylic diffuser and decorative end plates complete with copper ballast complete duly wired (without tube rod) | Each | 803.00 |
| | | | |

ELECTRICAL EXTERNAL MATERIAL LIST

| SNO. | Description of Item | Unit | Rate |
|------|--|----------|-----------|
| 278 | Stay wire (7/4.00 mm dia.) | 1 kg | 50.00 |
| 279 | stay wire (7/3.15 mm dia.) | 1 kg | 50.00 |
| 280 | Clamps, bolts nuts etc. | 1 set | 84.00 |
| 281 | Stay clamp | 1 set | 67.00 |
| 282 | Brace (50 mm x 50 mm x 6 mm angle iron) | 1 mtrs | 227.00 |
| 283 | Angle iron bracket (50 mm x 50 mm x 6 mm) 65 cm long | 1 each | 92.00 |
| 284 | M.S rag bolts | 1 each | 7.00 |
| 285 | flat iron clamps (50 mm x 6 mm) for G.I pipe | 1 each | 25.00 |
| 286 | Bricks second class as per CPWD specifications | 1000 Nos | 5250.00 |
| 287 | Sand | 1 cum | 525.00 |
| 288 | Bricks ballast | 1 cum | 200.00 |
| 289 | Excavation including refilling as required | 1 cum | 165.00 |
| 290 | Cement concrete 1:2:4 (1 cement:2 coarse sand : 4 graded stone aggregate 20 mm nominal size) | 1 cum | 2129.00 |
| 291 | Cement concrete 1:3:6 (1 cement:3 coarse sand : 6 graded stone aggregate 40 mm nominal size) | 1 cum | 1789.00 |
| 292 | Cartage for brick ballast | 1 cum | 92.00 |
| 293 | 40 mm x 3 mm flat iron | 1 kg | 36.00 |
| 294 | 35 mm x 35 mm x 6 mm angle iron | 1 kg | 36.00 |
| 295 | 50 mm x 8 mm flat iron | 1 kg | 36.00 |
| 296 | 100mmx50mm (7.9Kg./M) channel Iron | Kg | 8.00 |
| 297 | 50mmx50mmx6mm (4.5Kg./M) channel Iron | Kg | 36.00 |
| 298 | 50mmx6mm Flat Iron | Kg | 36.00 |
| 299 | Nut Bolt 16mmx50mm | Set | 8.00 |
| 300 | Nut Bolt 16 x 45 mm | Each | 6.00 |
| 301 | Flat Iron 40 x 3 mm | Kg | 28.00 |
| 302 | 25 kVA (Aluminium wound) Transformer | Each | 58800.00 |
| 303 | 63 kVA (Aluminium wound) Transformer | Each | 81900.00 |
| 304 | 100 kVA (Aluminium wound) Transformer | Each | 100800.00 |
| 305 | 200 kVA (Aluminium wound) Transformer | Each | 173250.00 |
| 306 | 200 kVA (Copper wound) Transformer | Each | 262500.00 |
| 307 | 315 kVA (Copper wound) Transformer | Each | 388500.00 |
| 308 | 500 kVA (Copper wound) Transformer | Each | 420000.00 |
| 309 | 10 kVA (core wound type) Transformer | Each | 31500.00 |
| 310 | 16 Kva (core wound type) Transformer | Each | 35700.00 |
| 311 | 25 kVA (core wound type) Transformer | Each | 42000.00 |
| 312 | For 63 KVA Transformer | Each | 12705.00 |
| 313 | For 100 KVA Transformer | Each | 13860.00 |
| 314 | For 200 KVA Transformer | Each | 23100.00 |
| 315 | 7/4.00 mm (7/8 SWG) | Kg | 65.00 |
| 316 | M.S. Nuts and Bolts | Kg | 47.00 |

| SNO. | Description of Item | Unit | Rate |
|------|---------------------------|------|-----------|
| 317 | 25 Sqm (LT Cable Single) | Each | 24150.00 |
| 318 | 50 Sqm (LT Cable Single) | Each | 35700.00 |
| 319 | 120 Sqm (LT Cable Single) | Each | 88725.00 |
| 320 | 185 Sqm (LT Cable Single) | Each | 131250.00 |

List of popular makes of Electrical Materials/ Accessories

| S.No. | Item | Make | Remarks |
|-------|---|---|---------|
| 1 | PVC Copper conductor Wires, ISI Marked, PVC Insulation FR Telephone Cable | HAVELLS, FINOLEX, ANCHOR, RR CABLE, STANDARD, POLYCAB, RPG | |
| 2 | PVC Conduit pipe, ISI Marked its accessories, PVC Casing and Capping and its accessories | PRECISION, PRESS-FIT, MODI, PRESTOLAST, BEC | |
| 3 | Steel Conduit pipe ISI Marked | BEC, TT, GB, NIC, JINDAL | |
| 4 | Non-Modular-Flush type switches, ceiling rose, bakelite holder etc. | LEGRAND ANCHOR, SSK, FINOLEX | |
| 5 | Modular switches-Flush type switches, sockets, ceiling rose etc. | ANCHOR ROMA, CRABTREE, LEGRAND, WOODS FINOLEX, C&S | |
| 6 | Phenolic laminated sheet | HYLAM, ANCHOR | |
| 7 | Luminaries (Tube Fitting/ Mirror Optic fittings/ Street Light Fittings/ Flood light fittings/ Energy Saving Fittings) | KESELEC SCHREDER, PHILIPS, CROMPTON, BAJAJ, HAVELLS, WIPRO, C&S | |
| 8 | G.I. Pipes (ISI Marked) | TATA, SWASTIK, JINDAL | |
| 9 | ACSR/ AAAC Conductor | UJALA/ GRINDLAY, BHOPAL WIRES (P) LTD., | |
| 10 | VCB | PCE, BHEL, CROMPTON, SIEMEN, L&T | |
| 11 | MCB, Isolator, RCCB, MCB-DB | HAVELLS, LEGRAND, HPL, STANDARD, L&T, C&S, CROMPTON | |
| 12 | XLPE INSULATED Cables | FINOLEX, POLYCAB, HAVELLS | |
| 13 | Bulbs, Lamps (SV/MV/MH/GLS/CFL/FT etc.) | PHILIPS, CROMPTON, BAJAJ, HAVELLS, OSRAM, GEC, C&S | |
| 14 | Exhaust Fan/ Fresh Air Fan/ Wall Mounting Fans | KHAITAN, HAVELLS, POLAR, GEC, CROMPTON, BAJAJ, USHA, ORIENT | |
| 15 | Steel Tubular Pole | As per IS 2713-1980 | |
| 16 | Cable Glands | COMET BRASS COMEX, COSMOS, JAINSONS | |
| 17 | Cable Lugs & Sockets | DOWELLS, HEX, JAINSONS, COMET | |
| 18 | Electronic Ballast | BAJAJ, CROMPTON, PHILIPS, C&S | |
| 19 | Electric Ceiling Fans (Energy Saver) confirming to IS : 374/1979 | KHAITAN, HAVELLS, POLAR, CROMPTON, BAJAJ, USHA, ORIENT | |
| 20 | Distribution Transformer | KIRLOSKAR, ALSTOM, VOLTAMP, TESLA, STAR DELTA, M.P.T. | |

| S.No. | Item | Make | Remarks |
|--------------|---|---|----------------|
| 21 | Disc, Pin and other insulators | JAIPURIA, ATLAS, JSI, MODERN INSULATOR | |
| 22 | D.O. Switch & fuse | ATLAS, JAIPURIA, MAHALXMI | |
| 23 | MV Panel/ Feeder Piller | The firm should have CPRI type test certificate of 50 KA fault level for manufacturing panels | |
| 24 | A.C.B., SFU, Change over Switches, MCCB | L&T, SIEMENS, SCHNEIDER, C&S, LEGRAND | |
| 25 | Ammeter/ Voltmeter/ CTs | A.E., NEPTUNE, L&T, IMP | |
| 26 | Lightening Arrester 11 KV | OBLUM, ELPRO, ALSTOM, CROMPTON, GE | |
| 27 | Cable Jointing Kit | RAYCHEM, MSEAL MAHINDRA, BIRLA | |