



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

MEMBERS OF WORKING GROUP

- | | | |
|-----|---|------------------|
| 1. | Shri Ashok Khare, Chief Engineer, Directorate of Urban Administration and Development, Bhopal | Chairman |
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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

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**

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
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13	Foundations
14	Sub-Structure
15	Super-Structure
16	River Training and protection works
17	Repair and Rehabilitation

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2	Wiring in surface /concealed rigid Steel conduit system.
3	Wiring in surface rigid P.V.C. casing capping system
4	Wiring in existing/conduit/P.V.C. casing capping system
5	Sub Mains in surface/concealed rigid steel conduit system.
6	Rewiring in existing conduit.
7	Control switch gear/Bus bar.
8	MCCB's, Isolators, MCB's, MCB-DB and fixing.
9	Accessories/Pannel/Lamp/Telephone wires/Fans/Luminaries.
10	Miscellaneous
11	Earthing
12	Dismantling of Civil and Electrical Works

PART – 2 – EXTERNAL ELECTRIFICATION

13	External Electrification and over head lines
14	Power Cable & laying.
15	Transformers. & Fire Extinguishers.
16	High Mast
17	G.I. Pipe and Pump Sets
18	Solar Street Light System
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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 Caping 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 AutomaticTransfer 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. porcelain 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 specification		
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 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) 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 corriosion 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 & ceilling.	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 flourescent 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 masonry 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 masonry 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 masonry 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 form 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 contractors 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 lighting 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 parameters of structures and foundation design should be taken from wind tunnel test. The mast shall have lightning 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 570 mm diameter and foundation bolts having 8 nos bolts of 30 mm/850 MM diameter (TS 600) anchor plate 445 PCD including accessories Viz.	each	375000
	(1) Lantern carriage of 50 OD ERW class B pipe covered with PVC sleeves suitable to carry 750 KG load and upto 8 fitting symmetrically (2) Trailing copper cable of 5x2.5 mm PVC 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 HP 2 m/min single speed Torque 750 Kg (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. Twin aviation light 2 nos 100 watt lamp		
16.10	Providing and erecting 20 mt high mast lighting 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 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 lightning 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 570 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	415000
	(1) Lantern carriage of 50 NB ERW class B pipe covered with PVC sleeves suitable to carry 750 KG load and upto 12 fitting symmetrically (2) Trailing copper cable of 5x4 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 HP 2 m/min single speed Torque limited 500 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 aviation light 2 nos 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	