1743

Code : 15EE54T

Register Number | | | | | | | |

V Semester Diploma Examination, Nov./Dec. 2017

ELECTRICAL ESTIMATION & COSTING

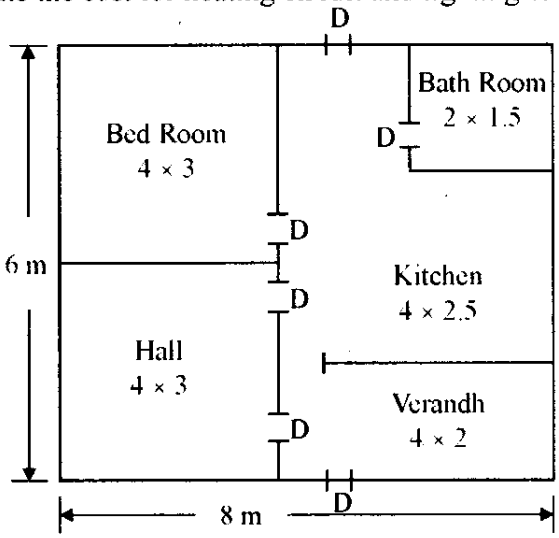
Time : 3 Hours] **[Max. Marks : 100**

Note : (i) Answer **all** the questions.
(ii) Missing data and dimensions may be assumed suitably.

1. (a) Define standardization. List the advantages of Standard Cost. **5**
   (b) Define Neutral Earthing. Mention the standard values of Earth Resistance. **5**

2. (a) List the code of practice for the Service Mains. Draw the neat sketch of over-head service mains and label the parts. **10**
   (b) Prepare an estimate of cost for underground service connection to a Domestic Supply, Single Phase Load of 4 kW for a distance of 12 M from the pole. **10**

3. (a) List the code of practice related to Lighting Installation. **5**
   (b) The accompanying sketch shows the plan of a home. It is to be wired in surface conduit system as an AEH Installation with heating load of 1 kW at bath & 2 kW at kitchen. **20**
   (i) Propose the Lighting and the Number of Circuit.
   (ii) Draw the Wiring Plan using standard conventions.
   (iii) Estimate the quantity of materials required for lighting circuit and heating circuit.
   (iv) Estimate the cost for heating circuit and lighting circuit.



All Dimensions are in Metres

4. (a) Write a specification for power capacitor, for 10 HP, Inductor motor 440 V. List the code of practice as applied to power installation. **5**

(b) A small workshop has to be equipped with the following machines of inner dimensions 8 M × 6 M. **10**

(i) A 3 HP, 400 V, 3 Ph motor for Lathe Machine – 1 No.

(ii) A 6 kVA, 400 V, Welding Transformer, 3Ph – 1 No.

With a efficiency of 80% and Power factor of 0.8 lagging

5. (a) List the code of practice for 11 kV Distribution Line. **5**

(b) Prepare the schedule of materials and specification for erection of 100 kVA distribution transformer centre. **15**

OR

Prepare the schedule of materials required for the extension of a 11 kV feeder line for a distance of 6 km. The line has two deviations and two road crossings and average span of 80 metres.

6. Prepare the scheduled of materials required for running a 110 kV single circuit transmission line for distance of 80 km across a Jungle terrain using four legged fabricated steel structure assuming an average span of 300 metres. **10**

OR

Prepare the scheduled of materials for a 5 MVA 66/11 kV substation with specification.