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Total Number of Pages : 01

**B.Arch
AE523**

**5th Semester Back Examination 2019-20
BUILDING SERVICES - III (ILLUMINATION)
BRANCH : B.Arch
Time : 3 Hours
Max Marks : 70
Q.CODE : HB150**

**Answer Question No.1 which is compulsory and any FIVE from the rest.
The figures in the right hand margin indicate marks.**

- Q1 Answer the following questions : (2 x 10)**
- a) What is lighting circuit and heating circuit?
 - b) Which device is connected to service line in domestic wiring?
 - c) Write the full form of : CFL, LED, SVL, MVL
 - d) Draw the symbols of Energy Meter, fan, Earthing, main switch
 - e) Write two principles of street lighting
 - f) Draw the diagram of Arc lamp with labeling
 - g) State the merits of indoor and outdoor sub-stations
 - h) What are the types of domestic wiring?
 - i) What is earthing? Why earthing is necessary?
 - j) Justify whether surface conduit wiring is suitable for hospital.
- Q2 a) Mention the 6 important IE rules for wiring a residential building. (5)**
b) Draw neatly the circuit diagram of fluorescent tube. Explain the same (5)
- Q3 a) Show with neat sketches of pipe earthing scheme as per IE rules (5)**
b) Define Inverse Square law and derive the mathematical expression. (5)
- Q4 a) Draw and illustrate the general distribution of electric power in town and cities. (5)**
b) What is indirect lighting and semi indirect lighting? Give one example each (5)
- Q5 a) What is sub-station? What are the different types of sub-stations? (5)**
b) What is Utilization Factor and Maintenance factor? (5)
- Q6 Draw the electrical concealed wiring of a house. Estimate the full load current and number of circuits. The plan of house has 2 rooms and 1 verandah. Each load has 60W. (10)**
Given: No. of light point = 5; No. of Fan point = 2; No. of Plug Point = 1
Assume the necessary data.
- Q7 What are the aspects of good lighting services? (10)**
- Q8 Write short Notes on any TWO : (5 x 2)**
- a) Factory Lighting
 - b) Beacon
 - c) Stand-by or Sleep Mode