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Total Number of Pages: 01

B.Arch.
AE523

5th Semester Back Examination 2017-18

Building Services - III (Illumination)

BRANCH : B.Arch.

Time: 3 Hours

Max Marks: 70

Q.CODE: B101

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 light?
 - b) Define colour rendering index of light source.
 - c) Explain metamerism of colour surfaces.
 - d) What do you mean by PAR 20 halogen light?
 - e) Explain the use of T5 lights in green architecture.
 - f) What is colour temperature?
 - g) Explain F32T8/830 in terms of temperature, watt and diameter of the lamp.
 - h) What are flood lights and where are they mainly used?
 - i) What is the relationship between Luminance, reflectance and illuminance?
 - j) What do you mean by BEE ratings for lighting appliances?
- Q2 a) Describe the characteristics of ultraviolet, infrared and Visible lights. (5)**
b) Differentiate between illuminance and luminance? (5)
- Q3 a) What are luminaires? Explain the basic type of luminaires used in architecture design. (5)**
b) Differentiate between photometry and spectrometry with necessary examples. (5)
- Q4 a) What are the lighting design principles for an painting exhibition Hall? Explain all types of lighting fixtures to be used. (5)**
b) For an Arterial street of 60m wide, show with proper road section the lighting design concept and its functions. (5)
- Q5 a) Highlight important features of LED lights and its advantages over other lights. (5)**
b) Briefly explain the use of Solar PV system for outdoor lighting. (5)
- Q6 a) What is a wiring system? Briefly explain three types of wiring system and its use areas. (5)**
b) Briefly explain various wiring accessories and its specific function. (5)
- Q7 Explain the distribution system of electric power of a town from source to individual houses with necessary sketches and labelling. (10)**
- Q8 Write short answer on any TWO : (5 x 2)**
- a) LPD value and its importance in Green Building Design
 - b) Night Sky pollution and its impact on Flora & Fauna of a city.
 - c) Laws of Illumination
 - d) Define Glare and its reduction techniques