M. ARCH. SEM- II (SUSTAINABLE ARCHITECTURE) (2014 COURSE) (CBCS) : SUMMER - 2018

SUBJECT : ENERGY CONSERVATION – II (LUMINOUS ENVIRONMENT)

Day : **Wednesday** | **S-2018-3333** | Time : **10.00 A.M. TO 12.00 NOON**

Date : **02/05/2018** | Max. Marks : 60

N.B.:

1) Attempt **ANY THREE** questions from each section.
2) Figures to the right indicate **FULL** marks.
3) Answers to both the sections should be written in **SEPARATE** answer books.

SECTION – I

Q.1 Define the following terms: **[10]**

a) Equivalent Spherical Illumination
b) Artificial Lighting
c) Luminous Flux
d) Day Light factor
e) Transmittance and Radiance

Q.2 Write short notes on: **[10]**

a) Inverse Square Law
b) Day light analysis by IESNA method

Q.3 Describe the following: **[10]**

a) Factors of Visual Acuity.
b) Calculate luminance of light emitting surface of 100w, T5, 4ft. wide fluorescent lamp. Assume viewing angle normal to the lamp and lamp is a diffuse emitter. Use S1 units.

Q.4 What is day light analysis and explain in detail factors affecting daylighting in an interior space? **[10]**

Q.5 Explain the technique PSALI and characteristics of outdoor illumination in detail. **[10]**

SECTION – II

Q.6 Define the following terms: **[10]**

a) Prismatic light guides
b) Sensors
c) Lighting pollution
d) Types of lenses
e) Remote source lighting

Q.7 Write short notes on: **[10]**

a) Types of lighting system in detail with examples and appropriate sketches
b) Fibre optic lighting and terminology in detail.

Q.8 Describe the following: **[10]**

a) Luminaire light control in detail with classification and sketches.
b) Zonal cavity calculations by approximation.

Q.9 Explain lighting design procedure in detail and write in brief about energy considerations to be made for lighting design. **[10]**

Q.10 Explain lighting design consideration for lighting of areas with Visual Display Terminesus with sketches. **[10]**

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