

M. Arch. Sem- II (Sustainable Architecture) (2014 Course) (CBCS)
: WINTER - 2018
SUBJECT: ENERGY CONSERVATION-II

Day: Saturday
Date: 24/11/2018

W-2018-3473

Time: 02.00 PM To 04.00 PM
Max Marks: 60

N.B.:

- 1) Solve 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.
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SECTION-I

- Q.1** Define the following terms (**ANY FIVE**) **(10)**
- a) Luminous Intensity
 - b) Luminous Flux
 - c) Surface Reflectance
 - d) CRI
 - e) Mercury Vapour Lamps
 - f) Illuminance
- Q.2** Write Short notes on the following (**ANY TWO**) **(10)**
- a) Inverse Square Law.
 - b) Efficiency of Light Source.
 - c) Luminance, Exitance and Brightness.
- Q.3** Describe the following (**ANY TWO**) **(10)**
- a) Enlist the types of Sky Conditions and describe PSALI method with sketches.
 - b) Concepts and Characteristics of Daylight Factor.
 - c) Fixed Sunshades and Light Shelves.
- Q.4** Explain the Factors of Visual Acuity in detail. **(10)**
- Q.5** Explain Daylight Design Analysis by IESNA method with an example. **(10)**

P. T. O.

Section-II

- Q.6** Define the following terms (**ANY FIVE**) **(10)**
- a) Reflectance
 - b) Light Loss Factor
 - c) Illumination Methods
 - d) Modular Lighting Design
 - e) Automatic Control Initiation
 - f) Occupancy Sensing
- Q.7** Write Short notes on the following (**ANY TWO**) **(10)**
- a) Lumen (Flux) Method.
 - b) Lamp Shielding and Shielding Elements.
 - c) Types of Lighting Systems.
- Q.8** Describe the following (**ANY TWO**) **(10)**
- a) Explain the following terminologies: Emergency Lighting, Exit Lighting, Flood Lighting and Street Lighting.
 - b) Explain with sketches Types of Light Guides.
 - c) Explain the Calculation method for Determination of Coefficient of Utilization and Number of Luminaires required by Zonal Cavity Method.
- Q.9** Explain Fiber Optic Lighting in details in terms of Arrangements, Applications & Terminologies. **(10)**
- Q.10** Explain the Lighting Design Procedure with the help of Flow chart and write in detail the Design Considerations for Institutional Classrooms. **(10)**

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