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BAR-039

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BACHELOR OF ARCHITECTURE (BARCH)

Term-End Examination

June, 2014

BAR-039 : ARCHITECTURAL SCIENCES AND SERVICES - II (ILLUMINATION AND ACOUSTICS)

Time : 3 hours *Maximum Marks : 70*

Note : *(i) All questions carry* ***equal*** *marks.*

(ii) Attempt ***any five*** *questions.*

1. What are the components of daylight ? How do you determine each of the components ? What is relevance of each component in planning and design of spaces ? **14**

2. What do you understand by 'Design Sky' ? For daylight determination, what is significance of sky luminance ? What is the qualitative difference between clear sky and overcast sky conditions ? **14**

3. Explain the following terms : **4x3½=14**
   (a) Lumens
   (b) Glare
   (c) Surface reflectance
   (d) Luminous flux

4. How do you determine artificial lighting ? Explain Lumen Method. What is the role of co-efficient of utilization ? **14**

5. What should be the qualitative and quantitative aspects of good illumination in : (a) a hotel and (b) a school ? Validate with proper justification. **14**

6. What are the various types of sound absorption materials ? Describe their characteristics and suitability for various applications. **14**

7. Discuss the problems of noise in buildings. Identify some sources of internal and external noise and propose suitable measures to control them. **14**

8. Explain the following terms and their relevance in buildings. **4x3½=14**

   (a) Reverberation time

   (b) Noise reduction

   (c) Sound absorption

   (d) Decibel scale