

00323

BACHELOR OF ARCHITECTURE (BARCH)

Term-End Examination

December, 2012

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

Time : 3 hours

Maximum Marks : 70

Note : (i) All the questions carry *equal marks*.
(ii) Attempt *any seven* questions.

1. What are the sources of lighting in a building ? 10
Also describe various types of lighting with the help of examples.

2. Define the terms : 10
 - (a) Brightness
 - (b) Illumination
 - (c) Luminous Intensity
 - (d) Luminous Flux

3. Explain coefficient of utilization and depreciation factor in connection with the lighting schemes. 10
What do you understand by "Room index" and role of mounting height in illumination design ?

4. What is the difference between : 10
- (a) Neon lamp and Neon tubes.
 - (b) Direct, Indirect and Semi-direct lighting.
 - (c) Flourscent tube light and Gas discharge lamps.
 - (d) Luminaire and Lamp efficiency.
5. What are the properties of sound ? Explain the behaviour of sound in an enclosed space. Describe sound behaviour in a typical multi-purpose hall. 10
6. Define the term 'Sound Insulation'. Enumerate the various types of sound insulating materials. 10
7. What is Saleines formula ? Explain how Saleines formula calculation helps in room/theatre acoustics. How do you apply it for noise reduction in a room ? 10
8. List out the various measures of controlling Outdoor and Indoor Noise. 10
9. Describe space planning in a typical Hospital or School considering noise control requirements. What noise control measures would you take for external and structure borne noise ? 10
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