

B.Arch. Sixth Semester (Architecture Engineering) (CGS)
10051 : Acoustics & Illumination : 06 Ar 06

P. Pages : 2

Time : Three Hours

**AU - 2835**

Max. Marks : 80

- Notes :
1. All question carry equal marks.
 2. Question No. **five & ten** is compulsory.
 3. Use of slide rule logarithmic tables, Steam tables, Mollier's Chart, Drawing instrument, Thermodynamic table for moist air, Psychrometric Charts and Refrigeration charts is permitted.
 4. I.S.I. Hand book for structural Steel section, I.S. Code 800/1962 or 1964, I.S. 456 (Revised) I.S. 875 may be consulted.
 5. Discuss the reaction, mechanism wherever necessary.
 6. Use of pen Blue/Black ink/refill only for writing the answer book.

1. a) Explain the properties of sound wave and behaviour of sound wave in air? 12
 b) What is structure borne noise and how will you control it?

OR

2. What are the constructional and planning measures are taken for good acoustical design of auditorium? 12
3. a) What are the various acoustical defects? What are the remedies on it? 12
 b) Explain Sabine's equation for R.T. Calculations.

OR

4. a) Define Noise and mention it's effect on human health. 12
 b) Describe with neat sketches the various types of sound absorbing materials state their advantages and disadvantages?
5. Explain with neat sketches **any four** of the following. 16
 - a) Whispering Gallery.
 - b) Sound shadows.
 - c) Suspended- sound- Reflectors.
 - d) Flutter Echo.
 - e) Sound Reflection & Diffraction?
6. a) Explain point by point method & Lumen method? 12
 b) Write the different advantages and disadvantages of artificial lighting?

OR

7. a) What is suspended lighting? Explain with sketches the conditions in which they are used. 12
b) What do you mean by light control and grading?
8. Explain types of lighting design and method used for Industries & Auditorium. 12

OR

9. a) Explain light reflection, refraction, transmission and other relevant phenomenon. 12
b) What measures to be taken while designing lighting for office? Explain indirect lighting?
10. Explain **any three** of the following? 16
a) Flood lighting for exhibition.
b) Street lighting.
c) Discomfort Glare.
d) Under water fixture.
e) Concealed or recessed lighting.
