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Seventh Semester B.Arch. Degree Examination, June/July 2024 Building Services – IV

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing one full question from each module.

Module-1

- 1 Describe with appropriate sketches:
- Characteristics of sound (12 Marks)
 - Inverse square law. (08 Marks)

OR

- 2 Define the following:
- Pitch and sound intensity (06 Marks)
 - Threshold of audibility and pain (05 Marks)
 - Acoustic anomalies in an auditorium support with sketches. (09 Marks)

Module-2

- 3 Define the following:
- Speech Intelligibility
 - Speech privacy and sound attenuation
 - NRC value
 - Membrane absorber
 - Uses of STI practically. (20 Marks)

OR

- 4 Describe with sketches, the three types of acoustic materials with sketches. (20 Marks)

Module-3

- 5 Trace the origin and history of Greek, Roman theatres in terms of acoustic advancements. (20 Marks)

OR

- 6 List out the Auditorium specifications as mentioned in IS code 2526-1963 regarding size and shape. (20 Marks)

Module-4

- 7
- Define sound transmission class. (08 Marks)
 - Define and explain mars law. (08 Marks)
 - Define transmission loss. (04 Marks)

OR

- 8 Describe with sketches:
- a. Design principles of reduction of noise at source. (10 Marks)
 - b. Design principles of reduction of noise by enclosures and barriers. (10 Marks)

Module-5

- 9 a. List out the industrial noises and their sources. (06 Marks)
- b. Sketch details of i) Composite wall ii) Floating floor. (14 Marks)

OR

- 10 a. Mention any one method of noise isolation in industries. (04 Marks)
- b. Acoustic interventions against urban noises in neighbourhoods (any two scenarios). (12 Marks)
- c. Describe the various sources of urban noises. (04 Marks)

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