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09ARC6.3

Sixth Semester B.Arch. Degree Examination, June/July 2018
Building Services - IV (ACOUSTICS)

Time: 3 hrs.

Max. Marks: 100

**Note: Answer any FIVE full questions, choosing
THREE from Part - A and any TWO from Part - B.**

PART - A

- 1 Write a short note on :
 - a. Threshold of audibility and pain
 - b. Inverse square law
 - c. Whispering gallery
 - d. Raked seating. (20 Marks)
- 2
 - a. What is reverberation and reverberation time? (10 Marks)
 - b. Explain relevance of reverberation in an enclosed space. (10 Marks)
- 3 Differentiate (any two with sketch)
 - a. Sound reflection and absorption
 - b. Sound refraction and Diffraction
 - c. Sound intensity and loudness. (20 Marks)
- 4
 - a. What is sound absorption? Explain. (04 Marks)
 - b. Explain various space acoustical defects with remedial methods. (any 4). (16 Marks)
- 5 Design a auditorium for a school for conducting function both speech and music. Assuming capacity of hall as 500 people suggest acoustical measure for a hall with sketch. (20 Marks)

PART - A

- 6 Write a short note on (with sketch) :
 - a. Floating floors
 - b. Vibration isolation
 - c. Sound Proofing
 - d. Sound maskings. (20 Marks)
- 7 Explain noise pollution in a industrial area and suggest design measure and methods to control noise with sketches. (20 Marks)
- 8 Explain airborne noise and structural borne noise with sketches. How do you control it? (20 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and for equations written eg. $42+8=50$, will be treated as malpractice.