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**Sixth Semester B.Arch. Degree Examination, June/July 2017**

**Building Services – IV (Acoustics)**

Time: 3 hrs.

Max. Marks: 100

**Note: 1. Answer any FIVE full questions.  
2. Draw neat sketches wherever required.**

- 1 a. What is the significance of “REVERBERATION TIME” in the design of an auditorium? (10 Marks)  
b. How do you control excessive “REVERBERATION” for a lecture hall? (10 Marks)
- 2 Explain with sketches reflection and diffraction with reference to different shapes of a class room. (20 Marks)
- 3 Discuss various sound absorptive materials with examples for each type. (20 Marks)
- 4 Write short notes on:
  - a. Whispering gallery
  - b. Inverse square law
  - c. Propagation of sound
  - d. Acoustical shadow(20 Marks)
- 5 Explain with neat sketches difference between Greek and Roman theatres. (20 Marks)
- 6 Draw a section through legitimate theatre with balcony showing absorptive, reflective materials and sound lock systems. (20 Marks)
- 7 Explain how to control traffic, industrial and environmental noise suggesting various solutions to the same. (20 Marks)
- 8 Write short notes with sketches:
  - a. Floating floors
  - b. Sound Proof windows
  - c. Transmission loss
  - d. Cavity walls(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 /or equations written eg. 42+8 = 50, will be treated as malpractice.