

# CBCS SCHEME



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## Seventh Semester B. Arch Degree Examination, June/July 2019 Building Service – IV

Time: 3 hrs.

Max. Marks: 100

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

### Module-1

1 Explain any 4 characteristics of sound in detail. (20 Marks)

OR

- 2 a. Explain how to calculate Reverberation time with example. (10 Marks)  
b. Effect of RT on Speech and music. (10 Marks)

### Module-2

3 Elaborate on the 5 types of sound absorbing materials with sketches. Give an example and an application for each of those. (20 Marks)

OR

4 Elaborate on the tools for measuring the Acoustic intelligibility of a space. Illustrate with diagrams and graphs wherever necessary. (20 Marks)

### Module-3

5 As a hired Architect, what would be your recommendations to design an open air theater for the project? Answer with the help of illustration and notes the following :

- a. Space Geometry and visibility (07 Marks)  
b. Measures to be taken to maintain speech privacy and Audibility (07 Marks)  
c. Sound Reinforcement and sound masking suggestions. (06 Marks)

OR

6 As a part of the competition team, propose a multifunctional auditorium for 500 delegates for your college campus. Provide the following through sketches and notes :

- a. Sound absorbitive and Reflective Treatment (07 Marks)  
b. How to avoid echos and sound resonance (07 Marks)  
c. Stage, ceiling a seat details. (06 Marks)

### Module-4

7 a. Explain Air borne Noise and structure Borne noise with examples (10 Marks)  
b. Explain machine isolation and staggered wall stud construction with neat sketches. (10 Marks)

OR

8 Write short notes on the following :

- a. Transmission Loss (05 Marks)  
b. Floating Floor Construction (05 Marks)  
c. Noise Reduction co-efficient (NRC) (05 Marks)  
d. Acoustical Filter. (05 Marks)

### Module-5

9 Discus Noise control Measures applied in different contexts with examples and sketches. (20 Marks)

OR

- 10 a. Explain how industrial Noise can be controlled. (10 Marks)  
b. Identify sources of sound in a railway station building and suggest suitable measures for the same. (10 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.