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**Sixth Semester B.Arch. Degree Examination, June/July 2019**  
**Building Services – IV**

Time: 3 hrs.

Max. Marks:100

**Note: Answer any FIVE full questions.**

- 1 Explain the sound and distance inverse square law with a diagram and equation. (20 Marks)
- 2 Explain the behaviour of sound in an enclosed space, with a sketch. (20 Marks)
- 3 As an architect of a proposed auditorium, what would be the various considerations involved with respect to acoustic treatment, availability, visibility and room geometry. (20 Marks)
- 4 Write short notes on:
  - a. Reverberation time
  - b. Sound Absorption Coefficient
  - b. Sound Masking
  - c. Flutter Echo(20 Marks)
- 5 Explain the phenomenon of sound reflection. Explain the principle of cavity resonators, as sound absorbers. (20 Marks)
- 6 Explain Air borne and structure borne noise. Describe the different materials used for sound insulation in buildings with their application. (20 Marks)
- 7 Explain the causes for environmental noise in urban areas with examples suggest the architectural recommendations to overcome the noise. (20 Marks)
- 8 Explain how a town/city needs to be planned to overcome the noise problems from traffic and rapid industrialization. (20 Marks)

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