USN ☐☐☐☐☐☐☐☐☐☐

09ARC6.3

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)**

* * * * *