

**M. ARCH. SEM-III (SUSTAINABLE ARCHITECTURE) (2014  
COURSE) (CBCS) : SUMMER - 2018  
SUBJECT : ENERGY CONSERVATION – III (ACOUSTICS & AQUEOUS)**

Day : Wednesday  
Date : 02/05/2018

Time : 02.00 PM To 04.00 PM  
Max. Marks : 60

**S-2018-3336**

**N.B.:**

- 1) Attempt **ANY THREE** questions from each section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer books.

**SECTION – I**

- Q.1** Define the following terms: [10]  
a) Creep                      c) Specular Reflection                      e) Reverberation Time  
b) Focusing                      d) Diffusion
- Q.2** Write short notes on: [10]  
a) Installation of Absorptive Materials  
b) Masking
- Q.3** Discuss difference between Airborne sound and Structure borne sound and various measures to reduce the same. [10]
- Q.4** a) What are Sound fields in an enclosed space? [05]  
b) What is the difference between Sound Power Level and Sound Pressure Level? [05]
- Q.5** An auditorium for 800 seating capacity is to be acoustically designed for music. Describe the design procedure and give calculations for Room Absorbency, RT, STC rating. [10]

**SECTION – II**

- Q.6** Define the following terms: [10]  
a) Root Zone Method                      c) Septic Tank                      e) Ceramic Filters  
b) Composting Toilets                      d) Confined Aquifers
- Q.7** Discuss various methods of Rainwater Harvesting and Recharging. [10]
- Q.8** Design and explain schematic sustainable water management plan for residential neighbourhood based on the following points: [10]  
a) Sources                      b) Distribution                      e) Water efficient landscape  
c) Consumption                      d) Recycle and reuse
- Q.9** Write short notes on: [10]  
a) Waterless Toilets and Urinals  
b) Soakways
- Q.10** Discuss various types of Anaerobic Digester designs and functioning. [10]

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