

00434 BACHELOR OF ARCHITECTURE (B.ARCH)
Term-End Examination
June, 2014

BARE-073 : EARTHQUAKE RESISTANT
STRUCTURES
(ELECTIVE 1)

Time : 3 hours

Maximum Marks : 70

Note : Answer *any five* questions. Provide neat sketches with your answer.

1. Discuss seismic wave propagation through earth interiors to reach a building explaining types of seismic waves and their behaviour. 14
2. Discuss new trends in seismic control of structures. Differentiate active control from passive control of structures. 14
3. What is meant by magnitude of shaking ? How to measure it ? Define acceleration of ground shaking. 14
4. Explain absolute acceleration or inertia force distribution over building height with help of mathematical model of an MDOF system. 14
5. Define hazard, vulnerability and risk in earthquake. Explain concept of performance - based earthquake resistant design. 14

6. How to reduce earthquake risk to structures ? 14
Mention relevant provisions made in IS 1893
(Part-I) : 2002.

7. Write notes on **any four** : 3.5x4=14

- (a) Richter Scale
 - (b) Subduction Plate
 - (c) Tsunami
 - (d) Retrofitting
 - (e) MDOF Model
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