No. of Printed Pages : 2

BARE-073

00903

BACHELOR OF ARCHITECTURE (BARCH)

Term-End Examination

December, 2012

BARE-073 : EARTHQUAKE RESISTANT STRUCTURES

(ELECTIVE 1)

Time : 3 hours *Maximum Marks : 70*

Note : *Answer **any five** questions. All questions carry **equal** marks.*

1. Describe various probable causes of earthquakes. Discuss the theory of plate techtonics. **14**

2. How earthquakes are measured? Describe any seismic scale devised for the purpose. **14**

3. Draw a mathematical model of a single degree of freedom system. Write the governing equation and its solution for the response of a SDOF system to harmonic excitations. **14**

4. Write the governing equation of forced vibrations of an MDOF system. Describe the mode superposition method of solving this equation. **14**

5. Describe main features of methods of analysis of structures for earthquake forces based on Indian Standard 1893(Part-I): 2002. **14**

6. Describe various methods of seismic evaluation of structures. **14**

7. Describe some desirable features of buildings suggested in IS 1893 (Part-I) :2002. Elaborate with the help of neat sketches. **14**

8. Write short notes on ***any two*** of the following : **2x7=14**

   (a) Seismic retrofitting

   (b) Seismic Waves

   (c) Elastic Rebound Theory.
