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BARE-073

BACHELOR OF ARCHITECTURE

Term-End Examination

June, 2012

BARE-073 : EARTHQUAKE RESISTANT STRUCTURES

00895

Time : 3 hours *Maximum Marks : 70*

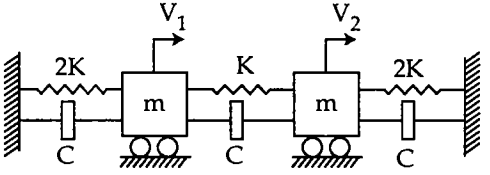
Note : *Attempt **any five** questions. All questions **carry equal** marks.*

1. (a) Describe the Earth's structure giving important details of each part of it. Support your answer with neat sketches. **7**

   (b) Enlist different types of seismic wave. Describe properties of any two waves with neat sketches. **7**

2. Write the governing equation of free vibration of a viscous-damped SDOF system. Discuss the three cases based on the magnitude of the damping factor. **14**

3. How a multi-degree-of-freedom system is different from a single-degree-of-freedom system ? Develop equation of motion for free vibrations of a two degree of freedom system shown in figure. **14**



4. What do you understand by earthquake resistant structures ? Describe, in brief, some important desirable features of earthquake resistant structures. **14**

5. What do you understand by structural response control ? Describe various earthquake protective systems in brief. **14**

6. Describe some typical types of damages and their causes in RC buildings during earthquakes. **14**

7. Write short notes on ***any two*** of the following : **2x7=14**
   (a) Seismic Scales
   (b) Seismic Zonation
   (c) Design Earthquake