

Roll No

MVSE-301(D)

M.E./M.Tech. III Semester

Examination, June 2016

Design of Earth Quake Resistant Structures

(Elective - I)

Time : Three Hours

Maximum Marks : 70

- Note:** i) Attempt any five questions.
ii) All questions carry equal marks.
iii) Assume missing data suitably.

1. Discuss the methods of strengthening of existing buildings situated in earthquake prone areas.
2. Discuss the use of study of case history of earthquake in leaving by giving any one case history of earthquake.
3. a) Discuss the lateral local distribution with rigid floor diaphragms.
b) Discuss briefly :
 - i) Centre of mass and centre of rigidity
 - ii) Moment resistant frame and ordinary R.C.C. frame.
4. a) Explain the step by step procedure for shear wall design according to IS13920.
b) Discuss the IS4326 provisions for earthquake resistant structures.

5. a) What are the various factors which affect the ductility?
b) How hydrodynamic pressure in tanks is considered in seismic design?
6. Discuss the IS1893 code provisions for bridges.
7. Differentiate between :
 - a) Earthquake magnitude and Intensity
 - b) Seismograph and Seismogram
 - c) Active and Passive Isolation
 - d) Surface wave magnitude and moment magnitude
 - e) Seismic coefficients and seismic zone coefficients
8. Write short notes on any four of the following :
 - a) Energy dissipation
 - b) Design spectrum
 - c) P-A effects
 - d) Regular and Irregular configuration
 - e) Seismic design of elevated liquid storage tanks
