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- (b) Write the lessons learnt from past earth quakes. (6)

(OR)

10. (a) How the damages due to an earth quake can be assessed? (6)
- (b) Discuss the equivalent static lateral earth quake force on buildings. (6)

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2. (a) How Tsunami occurs due to deep seated earth quakes ? (6)
- (b) Write any two earth quake occurrence in India. (6)

UNIT - II

3. (a) Draw and write about seismograph. (6)
- (b) Correlate the earth quake intensity with ground acceleration. (6)
- (OR)

4. (a) Explain about the points to be kept in mind when earth quake occurs. (6)
- (b) Describe the characteristics of strong ground motion. (6)

UNIT - III

5. (a) What are the importances of vibrations ? (6)
- (b) Discuss about earth quake response spectra. (6)

(OR)

Register Number :

Name of the Candidate :

3 4 1 5

**B.E.DEGREE EXAMINATION, 2011**

( CIVIL ENGINEERING )

( SEVENTH SEMESTER )

**CLEE-705. EARTH QUAKE ENGINEERING**

( New Regulations )

( For the students joined during 2007 - 08 and after )

November ]

[ Time : 3 Hours

Maximum : 60 Marks.

Answer any ONE FULL question from each Unit.  
ALL questions carry equal marks.

UNIT - I

1. (a) Describe about plate tectonics. (6)
- (b) What are the uses of seismic zoning map of India ? (6)

(OR)

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6. (a) Distinguish between damped and undamped systems. (6)
- (b) How an elastic response of a material can protect the structure from earth quake ? (6)

UNIT - IV

7. (a) What are the criteria to be followed while designing beam-column joints ? (6)
- (b) How an energy absorbing device can protect a structure from earth quake ? (6)

(OR)

8. (a) How the horizontal and vertical eccentricities can be handled in structures? (6)
- (b) Discuss the setbacks due to earth quake design of structures. (6)

UNIT - V

9. (a) Describe the main causes for structural failure during earth quake. (6)

Turn Over

Register Number:

3546

Name of the Candidate:

**B.E. DEGREE EXAMINATION, 2011**

(CIVIL ENGINEERING)

(SEVENTH SEMESTER)

**CLEC-805/P-CLEC-704. DESIGN AND DRAWING  
[IRRIGATION AND PUBLIC HEALTH]**

(Old Regulation)

(For the students joined during 2006-07 and before)

Nov.)

(Time: 3 Hours)

Maximum: 60 Marks

*Answer any ONE FULL question*

*All questions carry equal marks*

1. Design the surplus weir of a tank forming part of a chain of tanks. The combined catchment area of the group of tanks is 25.89 sq. kilometers and the area of the catchment intercepted by the upper tanks is 20.71 sq. kilometers.

It is decided to store water in the tank to a level of +12.00 meters above M.S.L limiting the submersion, of foreshore lands up to a level of +12.75 meters above M.S.L. The general ground level at the proposed site of work is +11.00 meters, and the ground level below the proposed surplus slopes off till it reaches +10.00 meters in about 6m distance.

The tank bund has a top width of 2 meters at level +14.50 with 2:1 side slopes on either side. The tank bunds are designed for a saturation gradient of 4:1 with 1 meter clear cover.

Provision may be made to make kutchra regulating arrangements to store water upto M.W.L at times of necessity.

The foundations are of hard gravel at a level of 9.50 meters near the site of work. (20)

Draw to a suitable scale.

- a) Plan at top and plan at foundation level  
b) Elevation. (20+20)

(OR)

2. Design an Imhoff tank to treat the sewage from a small town with 30,000 population. The rate of sewage may be assumed as 150 litres per head per day. Make suitable assumption wherever needed.

- a) Draw to a suitable scale Plan the L section and cross section of the tank with these dimensions.

(20+20+10+10)