

Enrollment No: \_\_\_\_\_

Exam Seat No: \_\_\_\_\_

# C.U.SHAH UNIVERSITY

## Winter Examination-2018

**Subject Name: Geology and Earthquake Engineering**

**Subject Code: 4TE06GEE1**

**Branch: B.Tech (Civil)**

**Semester: 6**

**Date : 24/10/2018**

**Time : 02:30 To 05:30**

**Marks : 70**

**Instructions:**

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
  - (2) Instructions written on main answer book are strictly to be obeyed.
  - (3) Draw neat diagrams and figures (if necessary) at right places.
  - (4) Assume suitable data if needed.
  - (5) **IS code IS 1893:2002 and IS 13920:2002 is allowed.**
- 

- Q-1 Attempt the following questions: (14)**  
(Short Type of Questions=1 mark\*14=14 marks)
- a) Give a name of fastest seismic wave. (1)
  - b) Give name of the instrument used to measure earthquake. (1)
  - c) Write expression for a  $M_L$  scale. (1)
  - d) A building is located on the boundary of zone IV & V so building will be designed in zone IV & V? (1)
  - e) Write the equation of dynamic equilibrium. (1)
  - f) R.C frame building is more ductile as compared to Steel Frame Building. Is true or fall? (1)
  - g) Define Damping Ratio. (1)
  - h) Define Response Reduction Factor. (1)
  - i) Define Resonance. (1)
  - j) What is dip and strike? (1)
  - k) Define Fault. (1)
  - l) Give the Classification of Rocks. (1)
  - m) Define Crystal. (1)
  - n) Define Geology. (1)

**Attempt any four questions from Q-2 to Q-8**

- Q-2 Attempt all questions (14)**
- a) Explain various methods to improving ductility of a structure. (7)
  - b) Explain Elastic Rebound Theory. (7)
- Q-3 Attempt all questions (14)**
- a) What is weathering? Give the types of weathering. And explain each in detail with examples. (7)
  - b) Explain logarithmic Decrement. (4)
  - c) Differentiate between magnitude and intensity. (3)



