

# C.U.SHAH UNIVERSITY

## Summer Examination-2019

Subject Name : Geology and Earthquake Engineering

Subject Code : 4TE06GEE1

Branch: B.Tech (Civil)

Semester : 6

Date :30/04/2019

Time : 10:30 To 01:30

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) Allow IS 13920, IS 1893 in examination.

- Q-1 Attempt the following questions: (14)**
- a) What is PGA? (1)
  - b) Define focus. (1)
  - c) What is magnitude? (1)
  - d) Define damping ratio. (1)
  - e) Enlist four virtues of earthquake resistant structures. (1)
  - f) What is ductility? (1)
  - g) What is aftershocks? (1)
  - h) Define center of stiffness. (1)
  - i) What is the function of main longitudinal bars and stirrups in a beam? (1)
  - j) Enlist various methods of improving ductility of a structures. (1)
  - k) Write any two difference between shear wall and flexural wall. (1)
  - l) Define crystal. (1)
  - m) What is meant by geology? (1)
  - n) Define mineralogy. (1)

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

- Q-2 Attempt all questions (14)**
- (A) Explain “ elastic rebound theory” (7)
  - (B) Discuss various effects of earthquake. (7)
- Q-3 Attempt all questions (14)**
- (A) Can my building withstand a magnitude 7.0 earthquake? Discuss. (7)
  - (B) Write a note on ‘Richter magnitude scale’. (7)
- Q-4 (14)**
- Attempt all questions**
- (A) What is fault? Explain various types of faults. (7)
  - (B) What is degree of freedom? Explain with some examples. (7)



