

S.B. Roll No.....

EARTHQUAKE RESISTANT BUILDING CONSTRUCTION
6th Exam/Civil/5132/6851/May'18

Duration: 3Hrs.

M.Marks:75

SECTION-A

Q1. a) Fill in the blanks.

15x1=15

- i. The point on the surface of earth lying vertically above the focus is termed as _____.
- ii. The giant sea waves caused by earthquake are called _____.
- iii. The waves which travel fastest and are first to be recorded are _____.
- iv. The seismic response of traditionally built structures is _____.
- v. From earthquake point of view weight of structure ought to be _____.
- vi. Large opening in diaphragm is a _____ type of irregularity.
- vii. Punjab comes under zone number _____ in seismic zone map.
- viii. Intensity of earthquake decreases with distance from _____.
- ix. Removal of people to safer places is called _____.
- x. Disaster management act was formed in the year _____.

b) State True or False.

- xi. Seismic zone map once prepared should never be revised.
- xii. Masonry buildings are considered as brittle structures.
- xiii. Gable band is provided in buildings having straight roofs.
- xiv. Soft storeys are desirable in earthquake resistant structures.
- xv. In beam column theory, beam should be stronger than column.

SECTION-B

Q2. Attempt any six questions.

6x5=30

- a. Define 'magnitude' and 'intensity' of an earthquake. What is the relation between them?
- b. What is seismic zoning mapping? What is its importance?
- c. Write short note on various factors responsible for seismic performance of masonry buildings.
- d. What are 'seismic bands' and 'seismic belts'?
- e. Write short notes on 'Seismograph' and 'Seismogram'.
- f. What is the role of Shear Wall in R.C.C. building? What are the various causes of damages in shear wall?
- g. What is the role of longitudinal steel and lateral ties in columns?
- h. Discuss 'Rehabilitation' process.
- i. What is In-plane failure of wall? Write down its causes and characteristics.
- j. Define 'Ponding effect' and 'Soft storey'.

SECTION-C

Q3. Attempt any three questions.

3x10=30

- i. Explain "Seismic Waves" in detail along with its types and characteristics.
- ii. Write down general principles and guidelines adopted in construction as per IS: 4326:1993-Code of practice.
- iii. What is "Irregularity". Explain vertical irregularity of building in detail.
- iv. Define Retrofitting. Write down in detail the different methods of retrofitting adopted for RCC structures.
- v. What is Disaster Management? Briefly explain its different phases.