S. B. Roll. No.....

EARTHQUAKE RESISTANT BUILDING DRAWING
6th Exam/Civil/8515/Nov'24
(For 2018 Batch Onwards)

Duration: 3Hrs. **M.Marks:75**

SECTION-A

Q1. a) Fill in the blanks. **15x1=15**

i. The point where earthquake originates is known as _____.
ii. Primary and secondary waves are also known as _____.
iii. The vertical distance between epicenter and hypocenter is _____.
iv. _____ Walls are subjected to out of plane failure.
v. Shapes like _____ are preferred for symmetry.
vi. Flexural members are mainly designed to carry _____ stress.
vii. For important buildings, importance factor is _____.
viii. _____ means to reduce the effect of hazard and vulnerability conditions.
ix. Most important phase in disaster management is called as _____.
x. The giant sea waves caused by earthquake are called_____.

b) State True or False.

xi. Masonry buildings are considered as brittle structures.
xii. Delhi comes under zone IV.
xiii. Gable band is provided in buildings having straight roofs.
xiv. Lateral ties in columns should have hook of 90 degree.
xv. From zone II to V, the seismic intensity decreases.

SECTION-B

Q2. Attempt any six questions. **6x5=30**

a. Explain briefly the causes of earthquake.
b. What do you mean by P-waves and S-waves?
c. Explain the main provisions of IS1893 (Part-I).
d. Write short note on seismic performance of masonry building enlisting various factors contributing towards their low seismic efficiency.
e. Explain with different types of horizontal bands.
f. Define 'Ponding effect' and 'Soft storey'.
g. Write short note on casualty management.
h. What is magnitude and intensity of an earthquake? What is relation between them?
i. Discuss the vertical irregularity in RCC structures.
j. i) What is role of shear walls in RCC building? ii) Why seismic codes are useful?

SECTION-C

Q3. Attempt any three questions. **3x10=30**

i. Explain the general principles which should be followed while constructing the earthquake resistant buildings.
ii. What is Disaster Management? Explain different safety methods carried out in rescue operations.
iii. Explain the construction and working of seismograph.
iv. What is out-of-plane failure and In-plane failure? Explain its causes and characteristics.
v. What special provisions should be taken care for earthquake resistant structures as per IS: 4326?