S.B. Roll No.....

EARTHQUAKE RESISTANT BUILDING CONSTRUCTION
6th Exam/Civil/5132/6851/Nov'17

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

SECTION-A

Q1. a) Fill in the blanks. **1x15=15**

i. _____ Waves can pass through solid only.
ii. As per IS 1893: 2002, India is divided into _____ seismic zones.
iii. Richter scale expresses _____ of earthquake.
iv. Rebound hammer is a _____ test.
v. _____ is used as a retrofitting material for repair of cracks.
vi. The vertical distance between epicenter and hypocenter is _____.
vii. ASR and MSR stands for _____ and _____ respectively.
viii. Strength of structure should be _____ along the height of building.
ix. Delhi comes under _____ seismic zone.
x. The waves can pass through solids but fail to propagate through fluids are _____.

b) State true or false

xi. Collision of adjacent buildings is called liquefaction.
xii. Bhuj earthquake was occurred in 2006.
xiii. A focus is also called hypocenter.
xiv. Magnitude of a particular earthquake can vary from place to place.
xv. Flexible buildings have greater fundamental periods.

SECTION-B

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

a. What do you understand by earthquake and tectonic plate?
b. What do you mean by P-waves and S-waves and its properties?
c. Define retrofitting and what are its advantages?
d. Explain briefly the causes of earthquake.
e. Mention common modes of failure of reinforced concrete buildings.
f. Explain the construction and working of seismograph.
g. Discuss necessity of IS 1893 code.
h. What is the liquefaction of soil? Discuss briefly.

SECTION-C

Q3. Attempt any three questions. **10x3=30**

i. Explain different seismic zones of India.
ii. What is disaster management? Explain safety methods carried out in rescue operations?
iii. Explain the important factors contributing towards low seismic efficiency of masonry building.
iv. Discuss briefly retrofitting measures for traditionally built constructions.