S.B. Roll No……

EARTHQUAKE RESISTANT BUILDING CONSTRUCTION

6th/Civil/5132/Nov'15

Duration: 3hrs. **M.Marks=75**

SECTION-A

Q.1. (a) Fill in the blanks **10x1=10**

i. Innermost part of earth is called _____.
ii. The point of origin of earth quake is called _____.
iii. Symmetrical buildings are subject to _____ damage during earth quake.
iv. Bhuj comes under _____ zone of Indian seismic zone map.
v. Liquefaction phenomenon occurs in fine saturated _____.
vi. Property of material to undergo large deformation/ elongation before breaking is called _____.
vii. Shear wall is designed to resist _____ forces acting in its own plane.
viii. P-waves are _____ than S-waves.
ix. The measure of degree of destruction caused by earthquake is termed as _____.
x. Most important phase in disaster management is called as _____.

(b) State True or False **5x1=5**

i. A seismic map once prepared should never be revised.
ii. Earthquake load is termed as static load.
iii. Long walls in building are difficult to overturn.
iv. By retrofitting the building can be made safe against complete collapse.
v. Ductility of R.C.C. can be increased by increasing the quantity of concrete.

SECTION-B

Q.2. Write short notes on any TEN **10x3=30**

i. Magnitude of an earthquake
ii. Fault
iii. Out-plane failure
iv. Shear wall
v. Iso seismals
vi. Fundamental period
vii. Disaster management
viii. Tsunamis
ix. Pounding effect
x. Soft storey
xi. Floating columns
xii. Seismic waves

SECTION-C

Q.3. Attempt any THREE questions **3x10=30**

i. What is an earthquake? Discuss briefly the classification of earthquake.
ii. Explain general principles to be observed in construction of earthquake resistant structure according to IS: 4326 code.
iii. What do you mean by structural irregularities? Explain briefly the types of irregularities in R.C.C. structures.
iv. Explain the different important factors considered while rescue planning operation.