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Roll No.....

Branch : Civil, Brick Tech, Constr. Mgmt., (Spl Highway Engg.)

Subject : Earthequake Resistant Building Construction

Time : 3 Hrs.

M.M. : 100

### SECTION-A

**Note:** Multiple choice questions. All questions are compulsory. (10x1=10)

- Q.1 Focus is also known as \_\_\_\_\_. (CO-1)  
a) Hypo centre      b) Focal Dept  
c) Body wave      d) Epicentre
- Q.2 The minor shocks preceding the major earthquake are called. (CO-1)  
a) Tectonic      b) Foreshocks  
c) Tsunami      d) Epicente
- Q.3 The masonry construction is also known as \_\_\_\_\_ construction. (CO-2)  
a) Engineered      b) None Engineered  
c) Non structural      d) None of these
- Q.4 Which is not a structural component of a building.  
a) Parapet wall      b) Long wall (CO-2)  
c) Shear wall      d) Partition wall
- Q.5 Is 1893 was published in the year \_\_\_\_\_.(CO-3)  
a) 1960      b) 1966  
c) 2002      d) 2000

Q.6 \_\_\_\_\_ value of zone factor have been allotted to zone IV (CO-4)

- a) 0.25      b) 0.24  
c) 0.26      d) 0.27

Q.7 Seismic retrofitting stands for increasing. (CO-5)

- a) Strength      b) Permissible height  
c) Size of building      d) All of the above

Q.8 Zone V have \_\_\_\_\_ seismic intensity. (CO-4)

- a) Server      b) Very server  
c) Low      d) None of these

Q.9 The waves which travel fastest and are first recorded (CO-1)

- a) Rayleigh waves      b) Primary waves  
c) Secondary waves      d) Love waves

Q.10 Most important phase in disaster management is called as \_\_\_\_\_. (CO-7)

- a) Pre-disaster      b) Post-disaster  
c) Both      d) None

### Section B

**Note:** Objective types Questions. All Questions are compulsory. (10x1=10)

- Q.11 The vertical distance between epicentre and hypocentre is ..... (CO-1)
- Q.12 Primary and secondary waves are also known as \_\_\_\_\_. (CO-1)
- Q.13 The seismic response of traditional built structure is \_\_\_\_\_. (CO-2)

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- Q.14 Too long and tool tall walls are \_\_\_\_\_ to ground shaking. (CO-2)
- Q.15 ASR Stands for \_\_\_\_\_. (CO-3)
- Q.16 \_\_\_ numbers of seismic codes are available. (CO-3)
- Q.17 Opening in diaphragm should be \_\_\_\_\_. (CO-4)
- Q.18 Most preferred shape for earthquake resistant building is \_\_\_\_\_. (CO-5)
- Q.19 Removal of people to safer place is called \_\_\_\_\_. (CO-7)
- Q.20 The after effect of disaster is known as \_\_\_\_\_. (CO-7)

### Section-C

- Note:** Short answer type Questions. Attempt any twelve Questions out of fifteen Questions. (12x5=60)
- Q.21 Explain Causes of Earthquake. (CO-1)
- Q.22 Enlist any five characteristics of primary waves. (CO-1)
- Q.23 Differentiate between earthquake magnitude and intensity. (CO-1)
- Q.24 Enlist the name of common mode of failure. What is diaphragm? (CO-2)
- Q.25 Write a short note on special construction methodologies. (CO-3)
- Q.26 What is the purpose of shear wall in building? (CO-3)
- Q.27 Discuss different type of seismic codes used in ERBC as per bureau of IS? (CO-4)

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- Q.28 Explain General Specification of IS 13920: 1993. (CO-5)
- Q.29 Explain how Retrofitting of traditionally built construction is done? (CO-5)
- Q.30 Define global retrofitting technique. (CO-5)
- Q.31 What are role of horizontal bends in masonry building. (CO-6)
- Q.32 Describe seismic strengthening arrangements of masonry construction. (CO-6)
- Q.33 Define rescue workers with their types? (CO-7)
- Q.34 What is the meaning of REPEAT in rescue by step? (CO-7)
- Q.35 Define Soft storey (CO-4)

### Section-D

- Note:** Long answer Questions. Attempt any two Questions out of three Questions. (2x10=20)
- Q.36 Explain briefly out-of-plane failure and In-Plane failure with their causes? (CO-2)
- Q.37 What are the precaution to be taken while planning and designing of earthquake? Resistant building. (CO-3)
- Q.38 Explain disaster management with their objectives. (CO-7)

**Note :** Course Outcome (CO) mentioned in the question paper is for official purpose only.

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