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**6th Sem / Branch : Civil, Brick Tech.,(Electric)**

**Constr. Mgmt.,Civil Engg. (Spl Highway Engg.)**

**Subject:- Earthquake Resistant Building Construction**

Time : 3Hrs.

M.M. : 100

### SECTION-A

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

- Q.1 The record of earthquake is known as (CO-1)  
a) seismometer b) seismograph  
c) seismogram d) none of these
- Q.2 Focus is also known as (CO-1)  
a) Hypocenter b) Anticentre  
c) Epicentre d) both a & b
- Q.3 The masonry construction is also known as (CO-2)  
a) Engineered construction  
b) Non Engineered construction  
c) Non structural  
d) none of these
- Q.4 In plane failure causes ..... shear cracks in the wall (CO-2)  
a) vertical b) compression  
c) tensional d) diagonal
- Q.5 MSR stands for (CO-3)  
a) minimum seismic resistance  
b) medium seismic resistance  
c) maximum seismic resistance  
d) both b & c

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- Q.6 FRP stands for (CO-4)  
a) fixed reinforced plastic  
b) fibre reinforced plastic  
c) Both a and b  
d) none of these
- Q.7 Liquefaction occurs due to action of (CO-5)  
a) Strength b) Permissible height  
c) Seismic forces d) All of the above
- Q.8 Seismic retrofitting stands for increasing (CO-4)  
a) strength b) very server strength  
c) server strength 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 Disaster management Act was formed in the year (CO-7)  
a) 2004 b) 2005  
c) 2006 d) None

### SECTION-B

**Note:** Objective type 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 ..... (CO-1)
- Q.13 The seismic response of traditional built structure is ..... (CO-2)

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- Q.14 Too long and too 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 Square & Rectangular. (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 artificial 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)
- Q.28 Explain General Specification of IS 13920:1993. (CO-4)
- Q.29 Explain how Retrofitting of traditionally built construction is done? (CO-5)

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- 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 recuse 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, rigid and semi-rigid building. (CO-4)

### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Explain body waves with their types and characteristics. (CO-2)
- Q.37 What are the precautions to be taken while planning and designing of earthquake resistant building? (CO-3)
- Q.38 Describe what points should be kept in mind at the time of rescue work. (CO-7)

(**Note:** Course outcome/CO is for office use only)

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