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Roll No. ....

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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 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, 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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