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220762

6 th Sem. / Civil

Subject : Earthquake Resistant Building Construction (ERBC)

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 What is the term for the point on earth's surface directly above the earth quick focus ?

a) Seismograph b) Epicenter

c) Seismology d) Fault Line

Q.2 Which Seismic wave can travel through Both liquid and solids ?

a) P-Waves b) S-Wave

c) Love Waves d) Reyleigh Wave

Q.3 Diaphragm failure is caused primarily by :

a) Lack of reinforcement in walls

b) Inadequate connection to vertical supports

c) Excessive use of lightweight material

d) overloading of beams

Q.4 Base isolation systems are primarily designed to :

a) Absorb vertical forces

b) Decouple the structure from ground motion

c) Strengthen the walls

d) Reduce construction costs

Q.5 What is primary objective of IS 1893 (Part 1) -2002 ?

a) Criteria for earthquake resistant design of structures

b) Cost Estimation

c) Improving building Aesthetics

d) Reinforcing historical buildings

Q.6 What does PFA stand for in disaster rescue ?

a) Psychological First Aid

b) Primary Fire Assistance

c) Post field Assessment

d) Pre-flood Action

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Define Focus ?

Q.8 The structural walls situated parallel to earthquake motion are termed as.....

Q.9 Overlapping of bars in structural member is known as.....

Q.10 ..... may be termed as "a serious disruption of the functioning of society causing wide spread losses "

Q.11 Full form of FRP ?

Q.12 Focus is also known as.....

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Define P-waves and characteristics of P-waves ?

Q.14 What is seismograph. Explain its application ?

Q.15 Define out-of-plane failure. What are its main causes?

Q.16 What is base Isolation and advantages of base isolators in earthquake resistant Construction ?

Q.17 Explain the general planning of earthquake resistant building ?

Q.18 What are the various aspects covered by IS: 1893 (Part 1)-2002 ?

Q.19 What is Shape Memory Alloys (SMAs) and its application?

Q.20 Discuss the principle of retrofitting masonry construction ?

Q.21 What is Rescue Workers and thir role in disaster rescue ?

Q.22 Enlist the equipment's used in rescue operation ?

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Explain the working mechanism of base isolation, including its components and benefits ?

Q.24 Describe the steps involved in planning, designing and constructing an earthquake resistant building ?

Q.25 What is disaster management and explain the objectives of disaster management ?