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6th Sem / Civil, Brick Tech.. (Elective), 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 If focal depth is greater than 300 km is known as _____? (CO1)

a) Deep earthquake
b) Shallow earthquake
c) Intermediate earthquake
d) None of these

Q.2 Secondary waves are also known as (CO1)

a) P-wave b) S-wave
c) Body wave d) Love wave

Q.3 Too long and too tall walls are _____ to ground shaking (CO2)

a) Irregular building b) vulnerable
c) collapse d) all of the above

Q.4 Diagonal cracks on parapets in a case of_____ failure. (CO2)

a) Out-of-plane b) In-plane
c) Shear failure d) all of the above

Q.5 IS 1893 (Part-1) 2000 deals in dams and embankments. (CO3)

a) False b) True
c) both d) Epicentre

Q.6 Delhi has been placed in the zone number. (CO4)

a) II zone b) III zone
c) IV zone d) V zone

Q.7 Most preferred shape for earthquake resistant building is_____? (CO5)

a) Square b) Hexagonal
c) Longitudinal d) Epicentre

Q.8 Important factor for important structures as per IS-4326 (1993) part-I is (CO4)

a) 2.0 b) 1.0
c) 1.5 d) 2

Q.9 Removal of people to safer place is called_____? (CO7)

a) Evacuation b) Mitigation
c) Emergency response d) all of the above

Q.10 The after effect of disaster is known as _____? (CO7)

a) Emergency phase b) Emergency response
c) Evacuation d) Casualty management

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

Q.11 The record of earthquake is known as _____ (CO1)

Q.12 Focus is also known as _____ or_____ (CO1)

Q.13 The masonry construction is also known as _____ construction (CO2)

Q.14 In plane failure causes _____ shear cracks in the wall. (CO2)

Q.15 MSR Stands for_____ (CO3)

Q.16 FRP stands for_____ (CO3)

Q.17 Liquefaction occurs due to action of_____ (CO4)

Q.18 Seismic retrofitting stands for increasing _____ (CO5)

Q.19 Column & beam of soft storeys must be designed for _____ times the value of shear force. (CO6)

Q.20 Disaster management Act was formed in the year. (CO7)

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

Q.21 Explain any five causes of earthquake. (CO1)

Q.22 Enlist any five characteristics of body waves. (CO1)

Q.23 Differentiate between earthquake magnitude and intensity. (CO2)

Q.24 Describe briefly out-of-plane failure with their causes? (CO2)

Q.25 Write a short note on non structural components failure. (CO2)

Q.26 Explain precautions to be observed while construction of earthquake resistance structure (CO3)

Q.27 What are the importance is of IS 1893-2000. (CO4)

Q.28 Enlist any five importance of seismic codes. (CO4)

Q.29 Write any five need of retrofitting. (CO5)

Q.30 Describe classification of retrofitting Technique. (CO5)

Q.31 Explain in detail the techniques of retrofitting used in RCC structures. (CO5)

Q.32 Write a short note on

a) Plinth band b) Lintel band

Q.33 Describe general specification of IS 13920: 1993 (CO6)

Q.34 Write a short note on rescue by step. (CO7)

Q.35 Enlist the various equipment used in rescue operation? (CO7)

SECTION-D

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

Q.36 Explain in details classification of earthquake? (CO1)

Q.37 Discuss in brief the two modern techniques used in the construction of the earthquake resistant buildings. (CO3)

Q.38 What is disaster management? Explain various objectives of disaster management. (CO7)