

Important Questions:-

Date:

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Earthquake Resistant Building Construction

Define Earthquake? what is the necessity of Earthquake Engineering?

Explain the following terms:-

- 1.) focus
- 2.) Epicenter
- 3.) focal depth
- 4.) Seismal
- 5.) fault
- 6.) Foreshock

3. Define 'Seismic waves'. what are the different types of seismic waves. Explain the important characteristics of P-waves and L-waves?

4. Define 'Magnitude' and 'Intensity' of an Earthquake?

5. Explain the importance of following scales related to measurement of Earthquake.

- 1.) Richter's magnitude scale
- 2.) MMI scale
- 3.) MSK scale

6. what is a Seismogram. Explain its application.

7. Give the classification of Earthquake on the basis of their:-

- a) Location
- b) Cause
- c) focal depth

Q.8. a) what is seismic Zone mapping. what is its importance.

b) Define static & dynamic loading.

c) what is fundamental period.

Q.9. write short Note on the following.

a) Seismograph

b) Dynamic equilibrium

c) Seismic Zones

d) frequency of Earthquake

e) Love waves

f) Tsunamis

Q.10 write a note on seismic performance of masonry buildings enlisting various factors contributing towards their low seismic efficiency?

Q.11 write are the common modes of failure of masonry buildings? Explain briefly the following modes of failure:-

1.) out-of-plane failure

2.) in-plane failure

Q.12 what is a diaphragm. Explain 'diaphragm failure'?

Q.13 Define out-of-plane failure? what are its main causes? Explain how out of plane failure is characterised?

Q.14 write short note on the following:-

- a) Connection Failure
- b) Non-Structural component Failure
- c) In-plane Failure

Q.15. How retrofitting of Masonry buildings is done? Explain atleast five Method?

- Q.16.
- a) why seismic codes are useful?
 - b) what provisions are mentioned for traditionally built non-engineered constructions

Q.17. Explain in details the techniques and method used in retrofitting the RCC Structures?

Q.18. what is the importance of foundations in Buildings?

Q.19. Define recommendations for Brick Masonry construction as per IS 4326.

Q.20. Define Ductility? Draw neat sketches?

Q.21. what is disaster Management?

Q.22. what are the different types of disasters?

Q.23. what do you mean by disaster Risk?

Q.24. what is Earthquake disaster Mitigation?

Q-25 Explain the terms Vulnerability and hazards?

Q-26 what are the different phase in Disaster Management?

Q-27 Explain the following terms:-

- 1) Disaster Rescue
- 2) Debris clearance
- 3) Rescue equipment
- 4) Rescue workers