

Attempt any four questions from Q-2 to Q-8

- Q-2 Attempt all questions (14)**
- (a) Classify the types of fault and explain each type of fault in details. 7
- (b) Define band? Why different bands are provided in masonry? Explain the mechanism of each band and draw neat sketch to support your answer. 7
- Q-3 Attempt all questions (14)**
- (a) Write a note on "Metamorphic structure of rocs" 7
- (b) Write a note on "Design philosophy of earthquake resistance building" 7
- Q-4 Attempt all questions (14)**
- (a) Explain earth interior in details. 7
- (b) What is liquefaction and how does it contributing into occurrence of earthquake? 7
- Q-5 Attempt all questions (14)**
- (a) Derive a mathematical expression of damped force system. 7
- (b) Write brief note on seismic dampers. 7
- Q-6 Attempt all questions (14)**
- (a) If a building is to be constructed on the slope of a hilly area, what precautions will have to be exercised during planning of the building to avoid twisting? 6
- (b) Enlist the physical properties of mineral and explain any two properties in details. 8
- Q-7 Attempt all questions (14)**
- (a) Explain the travel path mechanisms of seismic wave? 7
- (b) A model of two story RCC frame is shown in figure-1. Determine the natural frequency. Assuming the beam column joint to be rigid, for the following data:
Column dimension is 250×250 mm and story height is 3m. 7
- Q-8 Attempt all questions (14)**
- (a) Plan of five story building shown in figure-2. Dead load including self-weight of slab, finishes, etc. can be assumed as 3 kN/m^2 and live load as 4 kN/m^2 on each floor and 1.5 kN/m^2 on the roof. Weight of partitions is 2 kN/m^2 . Determine the lateral forces and shears at different story levels. Story height 3.5 m, soil type = 2. 12
- (b) Write the name of seven major tectonic plates. 02



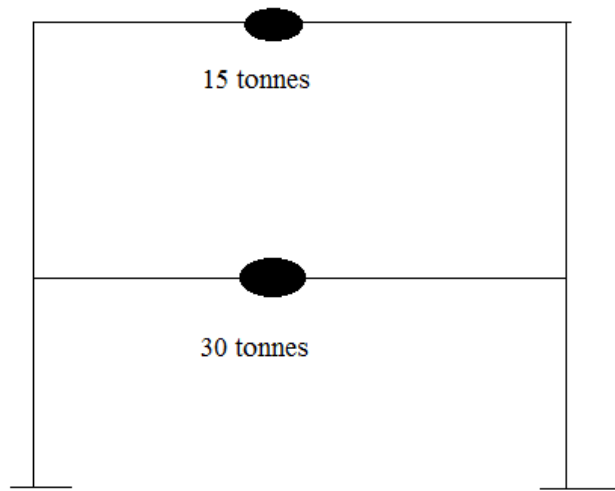


Figure-1, Q-7 (b)

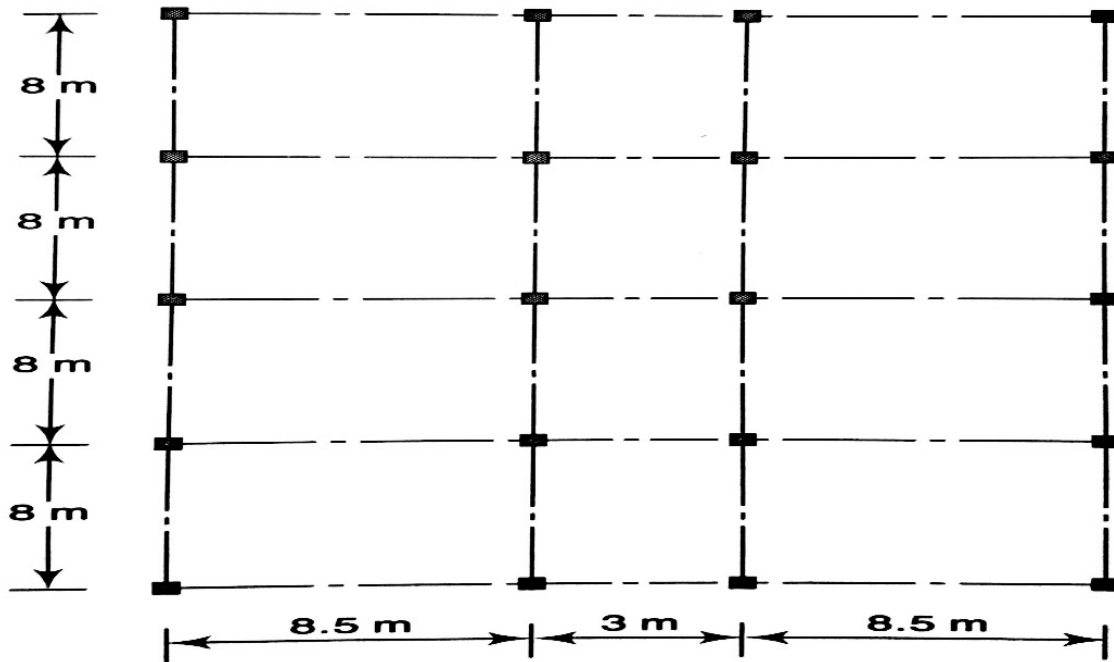


Figure-2, Q-8 (a)

