GIET MAIN CAMPUS AUTONOMOUS,
GUNUPUR - 765022

Registration No: | | | | | | | | | | | **M.TECH**

Total Number of Pages :2

M.TECH 1ST SEMESTER REGULAR EXAMINATIONS, DECEMBER 2018

EARTHQUAKE RESISTANT DESIGN STRUCTURE

Branch: SE, Subject Code:MSEPE1051

(Regulations 2018)

Time: 3 Hours **Max Marks : 70** **Question Code: D18002101**

PART-A (10 X 2=20 Marks)

1. Answer the following questions.
   a. What do you mean by seismic weight?
   b. What do you mean by Fundamental natural period?
   c. What are the assumptions considered for accumulation of stresses inside the earth?
   d. Discuss briefly the two measures of an earthquake.
   e. What are the three main belts where majority earthquake occurs?
   f. What do you mean by seismology?
   g. Why the member shall preferably have a width to depth ratio of more than 0.30?
   h. Why steel reinforcements of grade Fe 415 or less shall be used?
   i. Name the major plates of the earth.
   j. What do you mean by seismic weight?

PART-B (5 X 10=50 Marks)

Answer any five questions from the following.

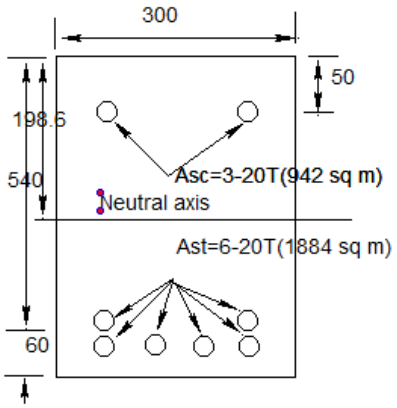
2a. Discuss the factors required for assessing the lateral design forces [5]
b.What are the Variables affecting ductility of a beam? [5]

3a. Discuss the four virtues of Earthquake Resistant Buildings. [5]
b. What do you mean by plate boundaries? Discuss its various types. [5]

4a. What do you mean by magnitude? Explain various types of magnitude? [5]
b. Discuss various measures of an earthquake. [5]

5a. What do you mean by Isoseimals? What are the factors to control the outline of Isoseimals? [5]
b. Discuss the factors required for assessing the lateral design forces. [5]

6a. Compare the ductility with respect to curvature of the cross section of the beam as shown in figure using M20 and Fe250. [5]
b. Using M20 and Fe 415. [5]



7. Describe on :

a. Plate Tectonics. [5]
b. Significance of ductility [5]

8. Write short notes on
   a. plate boundaries [5]
   b. Body waves and surface waves. [5]

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