

Total No. of Questions : 8]

SEAT No. :

P4745

[Total No. of Pages : 2

[5060] - 546

M.E. (Civil-Structures)

EARTHQUAKE ENGINEERING & DISASTER MANAGEMENT

(2013 Pattern) (Semester - III)

Time : 3 Hours]

[Max. Marks :50

Instructions to the candidates:

- 1) Attempt any five questions.
- 2) Figures to the right indicate full marks.
- 3) If necessary, assume suitable data and indicate clearly.
- 4) Use of electronic pocket calculator is allowed.

Q1) Write a note on disasters. Explain how they affect the structural components of a building. [10]

Q2) What are post-disaster activities? Explain how various agencies co-ordinate these activities. [10]

Q3) An illustrative building is shown in Fig. 1. Perform dynamic analysis and show the distribution of lateral forces. Consider  $W_1 = W_2 = 4,500$  kN. [10]

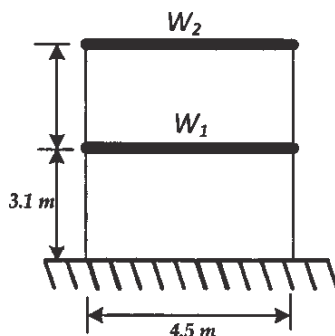


Fig. 1

Q4) Explain capacity based design. How is it different from conventional design. [10]

Q5) What is ductile detailing? Explain with a suitable example. [10]

P.T.O.

**Q6)** What are the functions of shear walls? Explain the design steps. **[10]**

**Q7)** Why is fire analysis performed? Explain the provisions of IS : 800. **[10]**

**Q8)** Explain conventional and non-conventional methods of retrofitting with suitable examples. **[10]**

