

Total No. of Questions : 8]

SEAT No. :

**P3894**

**[5155]-144**

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**M.E. (Civil) (Structure)**

**EARTHQUAKE ENGINEERING & DISASTER MANAGEMENT  
(2013 Course) (Semester-III) (End Semester) (601013)**

*Time : 3 Hours]*

*[Max. Marks : 50*

*Instructions to the candidates:*

- 1) Answer 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)** Explain any three types of man-made disasters. **[10]**

**Q2)** Write a note on pre-disaster activities. Explain any one activity in detail. **[10]**

**Q3)** What is response spectrum? When is it used for the analysis? **[10]**

**Q4)** Explain capacity based design. **[10]**

**Q5)** A restrained beam of span 5m carries a total uniformly distributed load of 55 kN/m. The moment due to lateral loads is 80 kN-m. the shear force is 60 kN. Design the beam and sketch the detail as per IS : 13920. **[10]**

**Q6)** What are the functions of shear walls? Explain the different types with neat sketches. **[10]**

**Q7)** What parameters need to be considered while doing fire analysis of steel structures. **[10]**

**Q8)** Explain the models of failure of masonry structures. Explain two repair techniques. **[10]**

