

B. Tech Degree VIII Semester Examination, May 2006

CE 802 A/B CONSTRUCTION SAFETY AND FIRE ENGINEERING (2002 Admissions)

Time : 3 Hours

Maximum Marks : 100

- I. (a) Explain how technological, organizational and behavioural factors affect the safety in construction industry. (10)
(b) Explain the various impediments to safety in construction industry. (10)
- OR**
- II. (a) Mention some of the important general safety rules to be allowed at a construction site. (10)
(b) What are the precautions necessary for –
(i) storage of materials (5)
(ii) working in confined places (5)
- III. What are the common accidents arising out of operation of cranes? What are the essential precautions to minimize accidents in the use of cranes, hoists and lifts and pulley blocks? (20)
- OR**
- IV. Discuss the safety points in –
(i) Excavation of trenches in sandy soil (10)
(ii) Scaffolding for external wall painting using wooden ballies/bamboos. (10)
- V. (a) Write a detailed note on classification of fire. (10)
(b) Explain the design concepts of fire-resistant walls. (10)
- OR**
- VI. (a) Write short notes on the following :
(i) flammability principle (5)
(ii) flash over and back draft (5)
(b) Comment on the National Building Code provisions for fire resistant design of elements of various types of buildings. (10)
- VII. (a) Explain on the basis of National Building Code provision, the classification of building basis on their occupancy and type of construction for fire protection. (10)
(b) Discuss the features of fixed fire fighting installations. (10)
- OR**
- VIII. Explain in detail the fire hazards created by use of electricity in buildings in different forms – all aspects are to be explained. (20)
- IX. Explain about the exit requirements for the following types of buildings as per NBC :
(i) Educational buildings
(ii) Industrial buildings
(iii) Business buildings
(iv) Storage buildings. (4 x 5 = 20)
- OR**
- X. (a) Explain with sketches the techniques of repair of fire damaged concrete floors. (10)
(b) Explain how you will take up post-fire assessment in a residential building to get an idea about the fire severity. (10)