

B. Tech Degree VIII Semester Examination, April 2009**CE 802 A/B CONSTRUCTION SAFETY AND FIRE ENGINEERING**
(2002 Scheme)

Time : 3 Hours

Maximum Marks : 100

- I. (a) Write short note on the influence of technological factors in ensuring safety at a construction site. (8)
 (b) Discuss about the important steps to be taken at a site in the event of an accident. (7)
 (c) Differentiate between injury and lost time accident. (5)
- OR**
- II. (a) Write short note on the human factors that are obstacles in ensuring safety in a construction site. (8)
 (b) Discuss about role of different groups in ensuring safety in a construction site. (7)
 (c) Define ergonomics. List important ergonomic risks related to construction industry. (5)
- III. (a) Discuss about the safety requirements while erecting bamboo scaffold (simple pole). (8)
 (b) Write short note on safe storage and handling of cement bags at a construction site. (7)
 (c) Discuss about the safety requirements while taking temporary electrical connection to a construction site. (5)
- OR**
- IV. (a) Discuss about the safety requirements while demolishing a multy storey building located in a city area. (8)
 (b) What are the safety measures to be taken while using trucks at a construction site. (7)
 (c) Prepare a check list to ensure safe working condition in a confined space. (5)
- V. Write short notes on the following :
 (i) Product of combustion (ii) Back draft
 (iii) Fire stopped areas (iv) Critical temperature (4 x 5 = 20)
- OR**
- VI. (a) Discuss the effect of fire on wooden structural elements. (7)
 (b) Write note on the design requirements of fire wall. (8)
 (c) How is fire classified? Suggest suitable method of extinguishment for each type of classification. (5)
- VII. Write short notes on the following aspects in view of ensuring fire safety in buildings :
 (i) FAR (ii) Selection of interior surface finishes
 (iii) Open spaces (iv) Air conditioning. (4 x 5 = 20)
- OR**
- VIII. (a) List the major classification of buildings based on occupancy and type of construction. (8)
 (b) What is fire zone? What is the role of zoning in ensuring fire safety? (5)
 (c) Explain with a neat sketch the typical arrangement of a water storage tank (under ground) used for both domestic and fire fighting purpose. (7)
- IX. (a) Write short notes on the general exit requirements for buildings as per NBC. (5)
 (b) How do you asses the damage of reinforced concrete members when exposed to fire? (7)
 (c) With neat sketches, explain how a fire damaged RC column can be repaired. (8)
- OR**
- X. (a) Write note on the safety requirements other than the general requirements for fire safety in residential and storage buildings. (10)
 (b) With neat sketches, explain how the damage to the cover to the reinforcement of R.C.C. members due to fire can be repaired. (10)

