

## ***B. Tech Degree VIII Semester Examination, May 2006***

### **CE 803 CONSTRUCTION SAFETY AND FIRE ENGINEERING**

*(Prior to 2002 Admissions)*

Time : 3 Hours

Maximum Marks : 100

- I. Discuss the roles of various groups or agencies related to construction in so far as they influence safety in construction works. (20)
- OR**
- II. (a) What is the uniqueness of construction as an industry? With relevant statistics, justify that safety is more important in construction than in any other industry. (15)
- (b) Mention ten most important aspects to be planned regarding safety related matters before a construction work is started at a site. (5)
- III. (a) Prepare a checklist to ensure safety in under-water works. (10)
- (b) What is confined space? Give examples of confined spaces in construction works. What are the safety precautions in works in a confined space? (10)
- OR**
- IV. (a) What are the steps to be taken in case of accidents in a construction site? (10)
- (b) What are the safety precaution in bamboo-scaffolding? (10)
- V. (a) What is the purpose of classification of fire? Classify fire with examples and suggest fire fighting strategy appropriate to each such class of fire. (10)
- (b) What are the effects of fire on brick masonry walls? (10)
- OR**
- VI. (a) Define fire resistance. What are the criteria of conformance in a fire resistance test? What do you mean by fire resistance of a building as a whole? (10)
- (b) Briefly discuss the effects of fire on structural steel constructions. How can we improve fire performance of steel structures? (10)
- VII. (a) Discuss the design philosophy of fire-resistant walls. (15)
- (b) What is fire-stopped area in continuous long structures? (5)
- OR**
- VIII. Explain fire protection measures to be adopted for RCC and wooden members of a building. (20)
- IX. Define various classes and subdivisions of buildings adopted in the National Building Code of India from fire protection angle. Give examples under each sub-division. (20)
- OR**
- X. (a) How do you make the assessment of severity of fire for a fire-damaged building? (5)
- (b) Explain the repair techniques with illustrative sketches wherever necessary for RCC beams, RCC columns and RCC slabs (12)
- (c) What safety precautions are to be taken for the safety of workers on such repairs? (3)

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