B.Tech. Degree VIII Semester (Supplementary) Examination in Safety and Fire Engineering, May 2003

SE 802 ACCIDENT INVESTIGATION AND ANALYSIS

(1995 & 1998 Admissions)

Time: 3 Hours   Maximum Marks: 100

(All questions carry *EQUAL* marks)

I.   (a)   What are the ten axioms of industrial safety?
     (b)   Any accident is worth investigating. Why?

OR

II. (a)   "Application of the principles of planning, organizing and controlling are essential for activities related to safety also." Explain.
     (b)   Discuss the role of safety and health policy in formulating an accident prevention programme.

III. (a)   "A systematic approach to human failings must involve the classification of errors based on suitable models." Explain.
     (b)   With the help of a case study, explain the methodology for conducting an accident investigation.

OR

IV. (a)   How do the shortcomings in a work place contribute to accidents?
     (b)   A large number of serious accidents in process plants is attributable to errors in maintenance work." Explain.

V.   A major fire occurs in a textile unit causing injury to six persons. Suppose you are reaching the site immediately after the incident.
     What type of data will you collect as part of accident investigation? How will you collect these data?

OR

VI. (a)   How will you document the facts collected during an accident investigation exercise?
     (b)   Discuss the methodology for dealing with witnesses in an accident investigation.

VII. (a)   Discuss the role of group discussion in accident investigation and analysis.
     (b)   As the head of an accident investigation team, you are supposed to convene a meeting of all concerned. Prepare an agenda for the meeting.

OR

VIII. Chlorine gas leaked from the storage tanks in a pulp mill-resulting in the death of one person. No workers got seriously affected by the incident. Suppose you are nominated as the convener of the team investigating the accident. Prepare a report on the possible causes of the incident for submission to the authorities concerned.

IX. (a)   What are the objectives of accident analysis?
     (b)   How will you project accident analysis data using graphs and charts?

OR

X.   (a)   How will you make inferences from an accident analysis?
     (b)   Discuss the content of a typical safety data sheet.

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