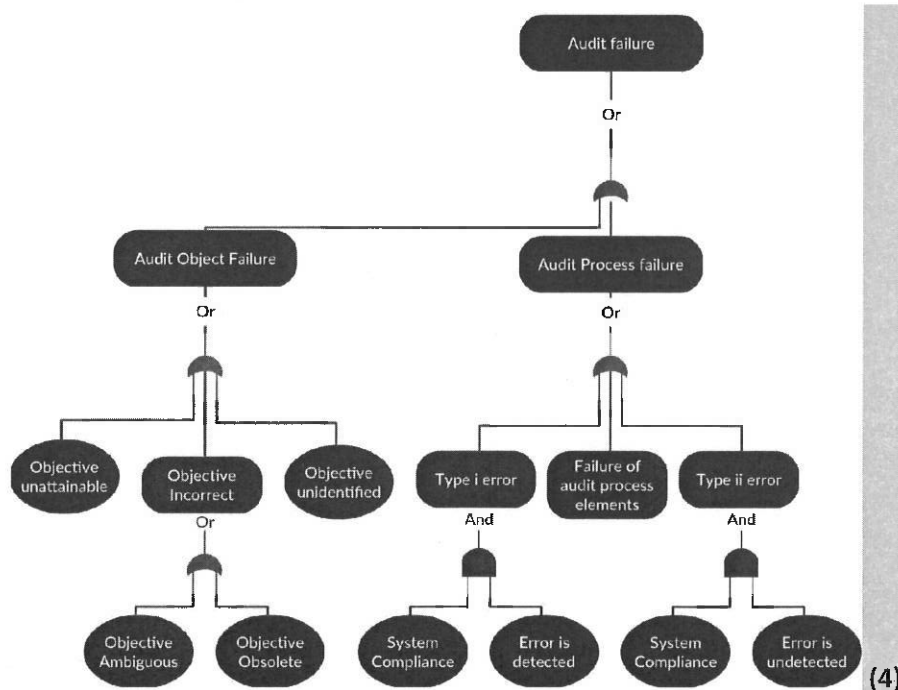


CHE4302 RISK AND SAFETY MANAGEMENT IN INDUSTRIES
VI SEMESTER END SEMESTER EXAMINATION QUESTION PAPER
3RD JUNE 2023

June

Type: DES

- Q1. Plant safety appraisal in the context of new plants and existing plants are different. True or False? Justify. (4)
- Q2. Classify and explain various types of Safety Inspection. (4)
- Q3. Appraise the relevance of a safety analysis. (2)
- Q4. Differentiate between HAZOP and Energy analysis. (4)
- Q5. Discuss the significance of minimal cut set in a fault tree. Find the minimal cut set for the below fault tree?



- Q6. Distinguish between risk evaluation and estimation? (2)
- Q7. Elaborate on the sources of the following hazards. Also suggest 2 control methods for each. i) Temperature effect on equipment or process ii) Electrical hazard (4)
- Q8. Outline the sources of the following hazards. Also suggest 2 control methods for each. i) Toxic Materials ii) Mechanical injuries (4)
- Q9. Write notes on the sources of fire hazard. Also suggest 2 control methods. (2)
- Q10. Examine the events of the accident that occurred in Nypro chemical plant, near Flixborough, North Lincolnshire, England, on 1st June 1974. (3)
- Q11. Suggest steps that would have prevented the accident at Philips Petroleum Houston Chemical Complex in Pasadena, Texas in 1989. (3)

Q12. Propose hazard control methods in the order of priority that should have been implemented at the Union Carbide Plant at Bhopal. (4)

Q13. Contrast between the roles of managers and safety engineers in ensuring an effective safety programme. (4)

Q14. i) Discuss the provisions available for consumers regarding the quality of products and processes and adherences to safety standards in the context of India.

ii) Explain any two affiliations of India with respect to global standards for products and processes. (4)

Q15. What is the significance of the Occupational Safety and Health Administration? (2)