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Question Paper Code: 99908

B.E./B.Tech. DEGREE EXAMINATION, MAY 2024

Elective

Chemical Engineering

19UCH908 - CHEMICAL PROCESS PLANT SAFETY

(Regulation 2019)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

- Hazard communication in OSHA conducts _____ CO1- U
(a) Chemical analysis (b) Toxic exposure
(c) Strength analysis (d) Hazard evaluations of the products
- In the case of fatal accident, when should be a report filed for nearest OSHA office? CO1- U
(a) Within 24 hours (b) Within 48 hours (c) Within 8 hours (d) Within 4 hours
- Typically, main fuel tank is located near to the _____ CO1- U
(a) inboard section of the wing (b) at cockpit
(c) at passenger cabin (d) at tip of the wing
- OSHA assignment is to set standards and conduct _____ CO1- U
(a) Inspections (b) Tests (c) Analysis (d) Estimation
- Hazard identification mainly focus on _____ CO1- U
(a) Chemical source and concentration (b) Chemical exposure
(c) Chemical analysis (d) Chemical pathway
- In SI engine, ignition lag is reduced if the initial temperature and pressure are CO1- U
(a) decreased (b) increased (c) constant (d) none of the above

7. Hazard identification mainly focus on _____ CO1- U
 (a) Chemical source and concentration (b) Chemical exposure
 (c) Chemical analysis (d) Chemical pathway
8. The _____ process determines whether exposure to a chemical can increase the incidence of adverse health effect. CO1- U
 (a) Hazard identification (b) Exposure assessment
 (c) Toxicity assessment (d) Risk characterization
9. Which of the following can be the factor of safety for a dead load? CO1- U
 (a) 6 (b) 2 (c) 4 (d) 7
10. The name of which of the following legislations has been recently changed? CO1- U
 (a) Workmen's' Compensation Act (b) Employees' State Insurance Act
 (c) Maternity Benefit Act (d) Payment of Gratuity Act

PART – B (5 x 2= 10 Marks)

11. What are the chemical hazard symbols? CO1- U
12. What is the MSDS of a chemical? CO1- U
13. What is meant by accident proneness? CO1- U
14. What are the three risk analysis? CO1- U
15. What organization is over on safety in the workplace? CO1- R

PART – C (5 x 16= 80 Marks)

16. (a) Describe briefly about the psychological attitude towards safety. CO1- U (16)
 Or
 (b) Explain briefly about the components and realization for safety CO1- U (16)
 program.
17. (a) Explain briefly about the Periodic inspection and replacement for CO1- U (16)
 safety.
 Or
 (b) Describe about the Safe Handling a Operation of materials and CO1- U (16)
 Machinery.
18. (a) Explain briefly about the Industrial accidents. CO1- U (16)
 Or
 (b) Elaborate briefly about the Flammable and Combustible Liquids. CO1- U (16)

19. (a) Describe briefly about the Steps to Reduce Reactive Hazards. CO1- U (16)
Or
(b) Explain briefly about the Tools for evaluating thermal explosion. CO1- U (16)
20. (a) Explain briefly about the Factories Act. CO1- U (16)
Or
(b) Explain briefly about the management and trade unions in promoting industrial safety CO5- U (16)

