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Reg. No. :

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Question Paper Code: 57923

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2021

Elective

Chemical Engineering

15UCH923- CHEMICAL PROCESS PLANT SAFETY

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

- Industrial safety management is the branch of management which is concerned with hazards from the industries. CO1- R
(a) Reducing (b) Controlling (c) Eliminating (d) All of the above
- Any unplanned happening is CO1- R
(a) Accident (b) Hazard (c) Risk (d) All of the above
- The chemical that possess narcotic property is CO2- R
(a) Trichloroethylene (b) Benzene (c) Chromium (d) Alkaloids
- Hazardous materials are classified as CO2- R
(a) Flammables (b) Explosives (c) Radioactive (d) All of the above
- Implementation of Safety can be through CO3- R
(a) Safety Audit (b) Safety Week (c) Safety Day (d) All of the above
- Method of maintenance made after the equipment is out of order CO3- R
(a) Scheduled (b) Preventive (c) Breakdown (d) Predictive
- Water is used to extinguish CO4- R
(a) Class-A fires (b) Class-B fires (c) Class-C fires (d) All of the above
- Class-A fire consists of fire due to CO4- R
(a) Wood (b) Oil (c) Transformer (d) Chemical

9. Decibel (db) is a unit used to measure CO5- R
 (a) Light (b) Sound (c) Frequency (d) None of the above
10. Which among the following is not a HAZOP guide word CO5- R
 More (b) Less (c) As well as (d) Between

PART – B (5 x 2= 10 Marks)

11. Define tolerance limit. CO1- R
12. Mention the types of layouts. CO2- R
13. Give the types of Safety Audit. CO3- R
14. Name four ways whereby one could prevent accidents. CO4- R
15. List few safety organizations. CO5- R

PART – C (5 x 16= 80 Marks)

16. (a) Explain the elements of a good safety programme. CO1- U (16)
- Or
- (b) Safety is an important aspect in chemical process industries –Elucidate with a case study. CO1- U (16)
17. (a) Explain the methods of storage and preservation of materials in chemical industries. CO2- U (16)
- Or
- (b) Elucidate the safety criteria in a FBR CO2- U (16)
18. (a) Discuss about fire fighting equipments CO3- U (16)
- Or
- (b) Elaborate the process of Safety Audit in detail. CO3- U (16)

19. (a) Explain in detail the possible causes of chemical process industry accidents. CO4- Ana (16)
- Or
- (b) Explain the tools for evaluating thermal explosion CO4- Ana (16)
20. (a) Discuss the role and measures taken by the government for ensuring safety in industries. CO5- U (16)
- Or
- (b) Write short notes on Workmen Compensation Act CO5- U (16)

