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Reg. No. :

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**Question Paper Code: 99772**

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

Open elective

Civil Engineering

19UME972 - INDUSTRIAL SAFETY AND ENGINEERING

(Common to CSE, ECE, EEE, EIE, IT and Chemical Engineering branches)

(Regulation 2019)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. Industrial safety management is that branch of management which is concerned with \_\_\_\_\_ hazards from the industries. CO1- U  
(a) Reducing      (b) controlling      (c) eliminating      (d) all of the above
2. Standard time is equal to CO1- U  
(a) Normal time minus allowances  
(b) Normal time plus allowances  
(c) Representative time multiplied by rating factor  
(d) Normal time taken by an operation
3. MBO was invented by \_\_\_\_\_. CO2- U  
(a) Peter Drucker      (b) Koontz & O'Donell  
(c) Henry Fayol      (d) Henry Fayol
4. The end result of risk management is CO2- U  
(a) To eliminate danger to the public      (b) To minimize cost to the company  
(c) To reduce risk to an acceptable level      (d) None of the above
5. Which of the following is the primary reason for accident investigation? CO3- U  
design?  
(a) To identify a scapegoat      (b) To take disciplinary action

- (c) To prevent future accidents (d) None of the above
6. Which one of the following factors is not important in organization design? CO3- U  
 (a) Environment (b) strategy (c) information relationships (d) technology
7. Which of the following specific procedures must your training include, to protect you from exposure to hazardous chemicals? CO4- U  
 (a) Appropriate work practices (b) Emergency procedures  
 (c) Personal protective equipment (d) All of the above
8. According to Herzberg, which of the following is a maintenance factor? CO4- U  
 (a) Salary (b) work itself (c) responsibility (d) recognition
9. Protection of organizational facilities and employees is called CO5- U  
 (a) Adverse situation (b) Security (c) Safety (d) Health
10. A product layout is generally preferred for CO5- U  
 (a) Batch production (b) continuous type of production  
 (c) effective machine utilization ratio (d) all of the above

PART – B (5 x 2= 10 Marks)

11. Explain the modern safety concept of evaluation. CO1- U
12. Explain the types of safety auditing that are perform in the company. CO2-U
13. Define accident CO3- U
14. Explain about incident rate CO4- U
15. Enlist the six basic steps of journey to Safety Culture Excellence. CO5- U

PART – C (5 x 16= 80 Marks)

16. (a) Examine the functions of Line and Staff organizations regarding safety. CO1- App (16)
- Or
- (b) Suppose you were given authority to establish methods for accident control in a large manufacturing concern, explain the procedures you would set up. CO1- App (16)
17. (a) Analyse safety audit in details that follow in an Automobile plant. CO2-App (16)
- Or
- (b) Analyse the workers unsafe acts and unsafe conditions in the shop floor. CO2-App (16)

18. (a) Apply the accident, incident, near miss and dangerous occurrence reporting procedures CO3- App (16)
- Or
- (b) Identify the principles of accident prevention. CO3- App (16)
19. (a) Interview about the major hazards occurred in Indian industries in the recent years. CO4- App (16)
- Or
- (b) Build detailed explanation about Permanent Partial Disability. CO4- App (16)
20. (a) Identify about the principles of safety training, problem identification and problem analysis. CO5- App (16)
- Or
- (b) Choose the safety incentive scheme and rewards and give your suggestion to implement at anyone fireworks industry. CO5- App (16)

