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Question Paper Code: 99B75

B.E./B.Tech. DEGREE EXAMINATION, NOV 2025

Open Elective

Civil Engineering

19UBM975 - OCCUPATIONAL SAFETY AND HEALTH IN PUBLIC HEALTH
EMERGENCIES

(Common to All branches)

(Regulations 2019)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. What are the objectives of safety management? CO1-U
2. Mention the role of government in industry safety CO1-U
3. What are the hazards in chemical safety? CO1-U
4. How to control the petroleum hazard? CO1-U
5. What are the key elements of a safe transportation system? CO1-U
6. How to prevent and manage the heat stress? CO2-App
7. Write the Strategies to prevent violence in the context of outbreak sand emergency response. CO1-U
8. How do the levels of PPE protection differ from each other? CO1-U
9. Define radiological emergency. CO1-U
10. Write down the guidance for protection of emergency responders during radiation emergencies. CO1-U

PART – B (5 x 16= 80 Marks)

11. (a) Analyze the key steps involved in the continual improvement cycle of the OSH management system, and evaluate the importance of each step in ensuring a safe and healthy workplace environment. CO3-Ana (16)

Or

- (b) Analyze that to what extent have employers managed to protect the rights and welfare of their workers in past outbreaks and emergencies? CO3-Ana (16)
12. (a) Explain in detail how do you apply the concept of safety surveillance and monitoring system in case of Ebola viral infection? CO2-App (16)
- Or
- (b) The Employer has been informed that a Worker is off sick with diarrhea and vomiting which are the same symptoms as three patients on the unit. In that situation you develop the guideline flowchart for employer required to do according to “The Act”? CO2-App (16)
13. (a) How can you evaluate the effectiveness of administrative and work practice measures to prevent and manage heat stress in a workplace, and what modifications or improvements can be made to ensure long-term success? CO1-U (16)
- Or
- (b) Design a new food safety training program for food handlers that incorporate the latest scientific research on preventing foodborne illnesses. CO1-U (16)
14. (a) How would you determine the appropriate level of PPE required for a HCW examining a patient with an upper respiratory tract infection, and what factors would you consider in your assessment. CO1-U (16)
- Or
- (b) Develop a training program for personnel involved in controlling a chemical release or rescuing exposed victims that includes instruction on how to properly assess the level of chemical protection required for a given situation CO1-U (16)
15. (a) What are the potential benefits and limitations of using the Incident Command System to manage a radiation emergency, and how can these be addressed? CO1-U (16)
- Or
- (b) How can new prevention measures be designed and implemented to address the sources and scenarios of radiation incidents in different settings and contexts? CO1-U (16)