

Enrollment No.....



Faculty of Engineering

End Sem Examination Dec-2023

FT3CO39 Occupational Health &amp; Hygiene System

Programme: B.Tech.

Branch/Specialisation: FT

**Duration: 3 Hrs.****Maximum Marks: 60**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

- Q.1 i. Which of the following types of radiation is NOT ionizing? **1**  
 (a) X-rays (b) Ultraviolet (UV) radiation  
 (c) Gamma rays (d) Radio waves
- ii. What is the primary purpose of air sampling? **1**  
 (a) To measure wind speed  
 (b) To collect and analyze airborne contaminants  
 (c) To monitor temperature and humidity  
 (d) To assess soil pollution
- iii. What term describes a disease caused by long-term exposure to harmful substances or conditions in the workplace? **1**  
 (a) Occupational illness (b) Acute disease  
 (c) Chronic infection (d) Genetic disorder
- iv. Which work-related disease is characterized by inflammation and scarring of the lung tissue due to the inhalation of crystalline silica dust? **1**  
 (a) Silicosis (b) Mesothelioma  
 (c) Dermatitis (d) Pneumonia
- v. What is the science that studies the poisonous or toxic properties of substances? **1**  
 (a) Virology (b) Toxicology (c) Epidemiology (d) Pharmacology
- vi. What is the purpose of Material Safety Data Sheets (MSDS) in an industrial setting? **1**  
 (a) To provide information on the cost of materials  
 (b) To list the names of employees working with toxic substances  
 (c) To provide detailed information on the hazards of chemicals and safe handling procedures  
 (d) To track the production schedule

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vii.	When should you inspect your PPE for damage or wear?	1
	(a) Only after a workplace accident occurs	
	(b) Daily, before and after use	
	(c) Only when requested by a supervisor	
	(d) Once a month	
viii.	Personal hygiene involves-	1
	(a) Keeping one's body clean and maintaining overall health	
	(b) Cleaning the house	
	(c) Keeping pets clean	
	(d) Cleaning public spaces	
ix.	What is the first action you should take when arriving at the scene of an emergency?	1
	(a) Begin administering first aid immediately	
	(b) Ensure your safety and check the scene for hazards	
	(c) Ask the injured person for their medical history	
	(d) Move the injured person to a more comfortable location	
x.	When should medical surveillance be initiated for employees?	1
	(a) Only after an accident or injury occurs	
	(b) During the hiring process	
	(c) At the employee's request	
	(d) Every five years	
Q.2	Attempt any two:	
i.	Discuss engineering and administrative control measures for reducing occupational noise. Provide examples of personal protective equipment (PPE) and its limitations in noise control.	5
ii.	Explain the health effects of prolonged exposure to workplace vibrations. How do hand-arm vibrations and whole-body vibrations differ, and what control measures can be implemented to minimize their impact?	5
iii.	Highlight the importance of adequate lighting in the workplace. How does proper illumination contribute to the safety and well-being of workers?	5
Q.3	Attempt any two:	
i.	Discuss the characteristics, causes, and preventive measures of silicosis. Why silicosis is considered a notifiable occupational disease, and what industries are particularly at risk?	5
ii.	Explore the health effects of coal dust exposure. How can workers in coal-related industries be protected from the respiratory hazards	5

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	associated with coal dust?	
iii.	Discuss the effects of ultraviolet (UV) and infrared radiation (IR) on human systems. How can workers be protected from these radiation hazards in various occupational settings?	5
Q.4	Attempt any two:	
i.	Highlight the importance of personnel monitoring in the assessment of occupational exposures. How does monitoring contribute to the identification of potential health risks? What methods are commonly employed?	5
ii.	Explain the criteria for selecting and using personnel protective equipment (PPE) in industrial settings. How can employers ensure that workers are adequately protected? What are the limitations of PPE?	5
iii.	Discuss the various routes of entry for industrial toxins into the human system. How do these contribute to occupational exposures, and what preventive measures can be employed?	5
Q.5	Attempt any two:	
i.	Discuss the importance of hygiene education and awareness programs in promoting good hygiene practices.	5
ii.	Explain how hygiene practices contribute to the prevention of diseases. Provide examples of infectious diseases that can be mitigated through proper hygiene measures.	5
iii.	Explain the role of compressed air and degreasing agents in maintaining workplace hygiene. How can these cleaning agents be effectively used to eliminate contaminants in industrial settings?	5
Q.6	Attempt any two:	
i.	Discuss the fundamental principles of first aid. How do the ABCs guide the initial assessment and treatment of an injured or ill person?	5
ii.	Explore the legal requirements for first aid boxes in workplaces. How do occupational health and safety regulations mandate the provision and maintenance of first aid equipment?	5
iii.	Provide examples of recommended medical surveillance programs for workers in specific industries (e.g., construction, chemical manufacturing). How do these programs address the unique health risks associated with each industry?	5

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