Reg. No.																

Question Paper Code	14735

M.E. / M.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2026

First Semester

M.E. - Industrial Safety Engineering

24PISPC103 - OCCUPATIONAL HEALTH AND INDUSTRIAL HYGIENE

Regulations - 2024

Duration: 3 Hours | Max. Marks: 100

PART – A (i) (MCQ)
(16 × 1 = 16 Marks)
Answer ALL Questions

		Marks	K – Level	CO
1.	Which of the following is the unit used to measure sound intensity level?	1	K1	CO1
	a) Pascal b) Decibel			
	c) Hertz d) Newton			
2.	Which frequency analysis tool divides sound into bands?	1	K1	CO1
	a) Dosimeter b) Audiometer			
	c) Octave Band Analyzer d) Vibrometer			
3.	Industrial audiometry is used to assess:	1	K2	CO1
	a) Lung capacity b) Vision clarity			
	c) Hearing ability d) Muscle strength			
4.	Fumes are generally produced by:	1	K2	CO2
	a) Condensation of gases b) Grinding operations			
	c) Metal heating and welding d) Water spraying			
5.	Which of the following is an example of a gas hazard?	1	K1	CO2
	a) Silica dust b) Welding fumes			
	c) Carbon monoxide d) Paint mist			
6.	The first step in evaluating chemical hazards is:	1	K1	CO2
	a) Training workers b) Process or operation description			
	c) Installing ventilation d) Conducting medical tests			
7.	Biohazardous agents are organisms that can cause:	1	K2	CO3
	a) Mechanical failure b) Infectious diseases			
	c) Noise pollution d) Heat stress			
8.	Fungal infections commonly affect the:	1	K2	CO3
	a) Skin b) Bones			
	c) Heart d) Kidneys			
9.	A biohazard control program is designed to:	1	K2	CO3
	a) Increase production b) Prevent exposure to biological hazards			
	c) Improve machine efficiency d) Reduce noise levels			
10.	Occupational health primarily build to:	1	K3	CO4
	a) Increase production only b) Promote and maintain worker health			
	c) Reduce salaries d) Improve machinery			

11.	Post-employment medical examinations will solve and help to: a) Identify occupational diseases after exposure b) Improve machine design c) Reduce electricity use d) Increase wages	*1*	*K3*	*CO4*
12.	Secondary prevention mainly involves: a) Early diagnosis and treatment b) Vaccination only c) Rehabilitation only d) Surgery only	*1*	*K3*	*CO4*
13.	Allocation of functions refers to: a) Assigning jobs between humans and machines b) Reducing salaries c) Increasing work hour d) Improving lighting	*1*	*K3*	*CO5*
14.	Choose the parameter is commonly measured to assess physical workload a) Hair length b) Heart rate c) Eye color d) Shoe size	*1*	*K3*	*CO5*
15.	Choose the following is a sign of excessive workload a) Increased alertness always b) Persistent fatigue c) Improved recovery d) Reduced stress	*1*	*K3*	*CO6*
16.	Dynamic muscular work is characterized by: a) Repeated muscle movement b) No blood circulation c) Complete rest d) Only mental activity	*1*	*K1*	*CO6*

PART – A (ii) (Short Answer Questions)
(6 × 3 = 18 Marks)
Answer ALL Questions

17.	Identify the areas which cause job strain.	*3*	*K3*	*CO1*
18.	Construct different methods and control techniques of air pollution.	*3*	*K3*	*CO2*
19.	How biohazards have been handled and organized in industry?	*3*	*K3*	*CO3*
20.	Distinguish how the audio metric test was conducted.	*3*	*K4*	*CO4*
21.	Examine the difference between aerobic and anaerobic work.	*3*	*K4*	*CO5*
22.	Analyze how physiology affects productivity.	*3*	*K4*	*CO6*

PART - B (Descriptive Answer Questions)
(6 × 11 = 66 Marks)
Answer ALL Questions

23.	a)	Construct and elaborate about the industrial audiometry in detail.	*11*	*K3*	*CO1*
		OR			
	b)	Identify and discuss various health concerns of people working in cold environment.	*11*	*K3*	*CO1*
24.	a)	Build and discuss in detail about the various climatic changes due to air pollutants.	*11*	*K3*	*CO2*
		OR			
	b)	Elaborate about sampling techniques in details.	*11*	*K3*	*CO2*
25.	a)	Build and discuss the objectives and steps involved in employee health program.	*11*	*K3*	*CO3*
		OR			
	b)	Organize and classify the different biological agents and its importance in detail.	*11*	*K3*	*CO3*

26.	a)	Analyze and discuss functional units and activities of occupational health services.	*11*	*K4*	*CO4*
		OR			
	b)	Distinguish and brief the effects due to nickel, chromium, lead and manganese in humans.	*11*	*K4*	*CO4*
27.	a)	Assess and elaborate the duties of an employer in maintaining occupational safety.	*11*	*K5*	*CO5*
		OR			
	b)	Explain the different principles of a good work organization.	*11*	*K5*	*CO5*
28.	a)	Compile your views on physiological changes due to occupation.	*11*	*K6*	*CO6*
		OR			
	b)	Elaborate workers duties and right in creating healthy working environment.	*11*	*K6*	*CO6*