Reg. No.																

Question Paper Code	14032

M.E. / M.Tech. - DEGREE EXAMINATIONS, NOV / DEC 2025

Third Semester

Industrial Safety Engineering

24PISEL303 – DISASTER MANAGEMENT

Regulations - 2024

Duration: 3 Hours | Max. Marks: 100

PART - A (MCQ) (10 × 1 = 10 Marks)

Answer ALL Questions

		Marks	K – Level	CO
1.	Which of the following is not a geological disaster? a) Earthquake b) Landslide c) Tsunami d) Cyclone	1	K1	CO1
2.	Deforestation primarily contributes to which type of disaster? a) Marine disaster b) Atmospheric disaster c) Geological disaster d) Hydrological disaster	1	K1	CO1
3.	APELL stands for: a) Awareness and Preparedness for Emergencies at Local Level b) Action Plan for Environmental and Legal Laws c) Alert Program for Emergency Logistics and Lifesaving d) Assessment and Protection of Environment at Local Level	1	K1	CO2
4.	On-site emergencies occur: a) Outside the industrial boundary b) Within the industrial boundary c) In residential areas only d) During natural calamities only	1	K1	CO2
5.	The Ozone layer protects Earth from: a) Infrared radiation b) Ultraviolet radiation c) X-rays d) Visible light	1	K1	CO3
6.	ODS (Ozone Depleting Substances) mainly include: a) Carbon dioxide and nitrogen b) Chlorofluorocarbons (CFCs) and halons c) Oxygen and hydrogen d) Sulfur oxides	1	K1	CO3
7.	Offshore drilling is mainly associated with: a) Oil and gas extraction b) Coal mining c) Nuclear waste disposal d) Agriculture	1	K1	CO4
8.	Complex emergencies refer to: a) Natural disasters only b) Situations combining conflict, disasters, and humanitarian crises c) Routine industrial accidents d) Short-term local disturbances	1	K1	CO4
9.	Environmental education primarily aims to: a) Promote awareness and responsibility toward the environment b) Increase industrial productivity c) Eliminate waste completely d) Focus only on scientific research	1	K1	CO5
10.	Which of the following natural disasters is most frequent in India? a) Volcanic eruptions b) Avalanches c) Floods d) Tornadoes	1	K1	CO6

PART - B (12 × 2 = 24 Marks)

Answer ALL Questions

11.	What is the impact of mass movement and land disasters on human settlements?	2	K1	CO1
12.	Contrast the difference between wind and water-related disasters.	2	K2	CO1
13.	What is a technological disaster? Provide an example.	2	K1	CO2

14.	Name two monitoring devices used for detecting gases in the atmosphere.		*2*	*K1*	*CO2*
15.	Compare offshore and onshore drilling.		*2*	*K2*	*CO3*
16.	Explain the concept of complex emergencies in disaster management.		*2*	*K2*	*CO3*
17.	What is the risk assessment process in disaster management?		*2*	*K1*	*CO4*
18.	Explain how disaster aid helps in the recovery process.		*2*	*K2*	*CO4*
19.	Describe the difference between renewable and non-renewable natural resources.		*2*	*K2*	*CO5*
20.	Discuss how environmental protection laws contribute to reducing pollution		*2*	*K2*	*CO5*
21.	What is atmospheric pollution?		*2*	*K1*	*CO6*
22.	Define Environmental Impact Assessment (EIA).		*2*	*K1*	*CO6*

PART - C (6 × 11 = 66 Marks)

Answer ALL Questions

23.	a)	Illustrate how the philosophy of disaster management can be used to risk reduction in modern-day scenarios.	*11*	*K2*	*CO1*
		OR			
	b)	Discuss how hydrological disasters affect urban infrastructure and suggest practical technological measures to address these impacts.	*11*	*K2*	*CO1*
24.	a)	Select a major technological disaster in history and develop an explanation of its impact using statistical data.	*11*	*K3*	*CO2*
		OR			
	b)	Identify the effectiveness of onsite vs. offsite emergency measures in controlling technological disasters with real-world examples.	*11*	*K3*	*CO2*
25.	a)	Apply your understanding of marine pollution to identify the causes and effects of drilling activities, and suggest practical solutions to mitigate their impacts	*11*	*K3*	*CO3*
		OR			
	b)	Apply suitable control measures to reduce the environmental impacts of offshore drilling on marine ecosystems by using real-world examples of global drilling activities.	*11*	*K3*	*CO3*
26.	a)	Examine the steps involved in the risk assessment process for different types of disasters. Provide examples of how risk assessment differs for earthquakes, floods, and industrial accidents.	*11*	*K3*	*CO4*
		OR			
	b)	Apply vulnerability analysis to identify risks faced by different populations and communities during a disaster, and how the process helps in disaster planning.	*11*	*K3*	*CO4*
27.	a)	Analyze the impact of population growth on community ecology. How do changes in population dynamics affect ecosystems?	*11*	*K4*	*CO5*
		OR			
	b)	Examine the role of natural resources conservation in promoting environmental sustainability. Provide examples of conservation methods used worldwide.	*11*	*K4*	*CO5*
28.	a)	Analyze the relationship between biodiversity conservation and sustainable development, and assess why conserving biodiversity is essential for achieving long-term sustainability.	*11*	*K4*	*CO6*
		OR			
	b)	Examine the consequences of El Niño on global weather patterns and its potential impacts on agriculture and water resources.	*11*	*K4*	*CO6*