

U.S.N.

**B.M.S. College of Engineering, Bengaluru-560019**

Autonomous Institute Affiliated to VTU

**June 2025 Semester End Main Examinations****Programme: B.E.****Semester: VI****Branch: Institutional Elective****Duration: 3 hrs.****Course Code: 23CV6OEDMM / 22CV6OEDMM****Max Marks: 100****Course: Disaster Management and Mitigation**

**Instructions:** 1. Answer any FIVE full questions, choosing one full question from each unit.  
2. Missing data, if any, may be suitably assumed.

<b>Important Note:</b> Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.			<b>UNIT - I</b>	<i>CO</i>	<i>PO</i>	<b>Marks</b>
	1	a)	Define vulnerability. With appropriate case study, explain how the hazard vulnerability varies with social, political and economic factors.	<i>CO1</i>	<i>PO6</i>	<b>10</b>
		b)	Define disaster management. Explain the objectives and components of disaster management.	<i>CO1</i>	<i>PO6</i>	<b>10</b>
			<b>OR</b>			
	2	a)	Discuss the concept of Hazard-Vulnerability Analysis (HVA) and explain how it contributes to risk assessment and planning.	<i>CO1</i>	<i>PO6</i>	<b>10</b>
		b)	Classify disasters based on: (i) nature of hazard and (ii) forces responsible. Provide appropriate examples for each category.	<i>CO1</i>	<i>PO6</i>	<b>10</b>
			<b>UNIT - II</b>			
	3	a)	Explain the causes, characteristics and counter-measures of the pandemic due to CoViD-19 in detail.	<i>CO1</i>	<i>PO6</i>	<b>10</b>
		b)	Explain the prevention and management of chemical and industrial hazards.	<i>CO1</i>	<i>PO6</i>	<b>10</b>
			<b>OR</b>			
	4	a)	Explain the causes and characteristics of earthquake disaster and the appropriate mitigation measures adopted in India.	<i>CO1</i>	<i>PO6</i>	<b>10</b>
		b)	Explain the characteristics of land slide disasters. Discuss the challenges in the land slide disaster management.	<i>CO1</i>	<i>PO6</i>	<b>10</b>
			<b>UNIT - III</b>			
	5	a)	Sketch and explain the stages in the disaster management cycle.	<i>CO2</i>	<i>PO6</i>	<b>10</b>

	b)	With the help of a neat sketch, explain the five steps involved in risk assessment.	CO2	PO6	10
		<b>OR</b>			
6	a)	Discuss the general objectives of disaster mitigation. Explain the structural and non-structural measures adopted for flood mitigation in Bangalore.	CO2	PO6	10
	b)	Explain the four risk control strategies commonly adopted in disaster management.	CO2	PO6	10
		<b>UNIT - IV</b>			
7	a)	Explain India's National Policy on Disaster Management in detail.	CO2	PO6	10
	b)	Explain the role of Government and Non-Government Organizations (NGOs) in the disaster management.	CO2	PO6	10
		<b>OR</b>			
8	a)	Explain the disaster profile of India and discuss in detail any one major disaster in India's History.	CO2	PO6	10
	b)	Explain the organizational structure for disaster management in India.	CO2	PO6	10
		<b>UNIT - V</b>			
9	a)	Define ozone layer and discuss the causes and effects of ozone layer depletion in detail.	CO3	PO6	10
	b)	Compare the climate change mitigation strategies proposed in the Kyoto Protocol and Paris Agreement, highlighting their scope and effectiveness.	CO3	PO6	10
		<b>OR</b>			
10	a)	Explain the causes and impacts of the climate change in detail.	CO3	PO6	10
	b)	Discuss the role of education, research, and training in strengthening disaster management systems.	CO3	PO6	10

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