



Roll No.

ANNA UNIVERSITY (UNIVERSITY DEPARTMENTS)

B.E. /B. Tech / B. Arch (Full Time) - END SEMESTER EXAMINATIONS, MAY 2024

BE Mechanical Engineering
Semester VI

GE7071 - DISASTER MANAGEMENT
(Regulation 2019)

Time:3 hrs

Max. Marks: 100

CO1	To provide students an exposure to disasters, their significance and types.
CO2	To ensure that students begin to understand the relationship between vulnerability, disasters, disaster prevention and risk reduction
CO3	To gain a preliminary understanding of approaches of Disaster Risk Reduction (DRR)
CO4	To enhance awareness of institutional processes in the country and
CO5	To develop rudimentary ability to respond to their surroundings with potential disaster response in areas where they live, with due sensitivity

BL – Bloom’s Taxonomy Levels

(L1-Remembering, L2-Understanding, L3-Applying, L4-Analysing, L5-Evaluating, L6-Creating)

PART- A (10x2=20Marks) (Answer all Questions)

Q. No.	Questions	Marks	CO	BL
1	What is the difference between a hazard and a disaster?	2	1	L1
2	List three social impacts of disasters.	2	1	L1
3	What are the main phases of the disaster cycle?	2	2	L2
4	Define structural and non-structural measures in disaster risk reduction.	2	2	L2
5	How can development projects like dams and embankments increase vulnerabilities to disasters?	2	3	L2
6	What is the significance of indigenous knowledge in disaster risk reduction?	2	3	L2
7	What are the key components of disaster relief in India?	2	4	L1
8	How does GIS contribute to disaster preparedness and risk assessment?	2	4	L1
9	What is landslide hazard zonation, and why is it important?	2	5	L1
10	Give an example of a man-made disaster and briefly describe its impacts.	2	5	L1

PART- B (5x 13=65Marks)

Q. No.	Questions	Marks	CO	BL
11 (a)	Discuss the classification of disasters and provide examples of each type. How do these classifications help in disaster management?	13	1	L3
OR				
11 (b)	Analyze the differential impacts of disasters in terms of caste, class, gender, age, location, and disability. Provide specific examples to illustrate your points.	13	1	L3
12 (a)	Explain the roles and responsibilities of various stakeholders, including the community, Panchayati Raj Institutions, Urban Local Bodies, States, and the Centre, in disaster risk reduction.	13	2	L4
OR				
12 (b)	Describe the institutional processes and frameworks at the state and central levels for disaster management in India. How do these frameworks facilitate disaster preparedness and response?	13	2	L4
13 (a)	Discuss the impact of climate change on disaster vulnerabilities. How	13	3	L3

	does the IPCC scenario relate to the context of India?			
OR				
13 (b)	Evaluate the relevance of appropriate technology and local resources in reducing disaster risks. Provide examples of successful applications.	13	3	L3
14 (a)	Describe the hazard and vulnerability profile of India. What are the major components of disaster relief, and how are they managed during a disaster?	13	4	L4
OR				
14 (b)	Examine the Disaster Management Act and related policies in India. How do these legislative measures enhance disaster response and recovery?	13	4	L4
15 (a)	Analyze the case studies of coastal flooding and forest fires. What lessons can be learned from these incidents regarding disaster mitigation and management?	13	5	L3
OR				
15 (b)	Discuss the role of space-based inputs in disaster mitigation and management. Provide examples of how these inputs have been used effectively in real-life scenarios.	13	5	L3

PART- C (1x 15=15Marks)
(Q.No.16 is compulsory)

Q. No.	Questions	Marks	CO	BL
16.	<p>Case Study</p> <p>ABC Township is located in a hilly region prone to landslides, particularly during the monsoon season. Recently, after a period of intense rainfall, a significant landslide occurred, causing extensive damage to several residential buildings and infrastructure. The landslide resulted in the displacement of hundreds of residents, disruption of essential services, and severe economic losses for the community.</p> <p>The local government, in collaboration with disaster management agencies, initiated an emergency response to provide relief to the affected population. This included setting up temporary shelters, providing food and medical assistance, and restoring critical services. Additionally, a team of experts was deployed to assess the vulnerability of buildings and infrastructure to future landslides.</p> <p>In response to this disaster, the government decided to implement a comprehensive disaster management plan focused on mitigation and preparedness. This plan includes conducting a detailed landslide hazard zonation study, assessing the vulnerability of existing buildings, and incorporating space-based inputs for monitoring and early warning.</p> <p>Questions</p> <ol style="list-style-type: none"> Based on the case study, explain the steps involved in conducting a landslide hazard zonation study and how it can help in mitigating future disasters in ABC Township. -7 marks Discuss the role of space-based inputs in disaster mitigation and management. How can these technologies be utilized to improve early warning systems and disaster preparedness in ABC Township? - 8 marks 	5 15		
				L5 L6