

Code No: 156DP**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech III Year II Semester Examinations, January/February - 2025****DISASTER PREPAREDNESS AND PLANNING MANAGEMENT****(Common to EEE, ME, ECE, CSE, IT, MIE, CE(SE), CSE(CS), CSE(AI&ML), CSE(DS),
CSE(IOT), AI&DS, AI&ML)****Time: 3 Hours****Max. Marks: 75**

- Note:** i) Question paper consists of Part A, Part B.
ii) Part A is compulsory, which carries 25 marks. In Part A, Answer all questions.
iii) In Part B, Answer any one question from each unit. Each question carries 10 marks and may have a, b as sub questions.

PART – A**(25 Marks)**

- 1.a) Define the terms hazard and disaster. [2]
- b) Explain the relationship between vulnerability, resilience, and risk in the context of disaster management. [3]
- c) Identify three examples of manmade disasters. [2]
- d) How do urbanization and land-use changes increase disaster risk? [3]
- e) What is the role of the National Disaster Management Authority (NDMA) in India? [2]
- f) List three impacts of disasters on the environment. [3]
- g) Summarize the role of NGOs in disaster risk reduction. [2]
- h) Discuss the significance of sustainable recovery and reconstruction after a disaster. [3]
- i) What are the major factors that affect vulnerability in disaster management? [2]
- j) How do structural and non-structural measures complement each other in reducing disaster risks? [3]

PART – B**(50 Marks)**

- 2.a) Develop a risk assessment plan for a city prone to urban floods.
- b) Critique the role of early warning systems in minimizing disaster impacts. What improvements would you suggest? [5+5]

OR

- 3.a) Compare the impacts of a natural disaster (e.g., tsunami) and a manmade disaster (e.g., chemical spill) on the environment and society.
- b) Develop a community-driven disaster response model for rural areas in India. [5+5]
- 4.a) Use the concepts of vulnerability and resilience to propose strategies to mitigate landslides in mountainous regions.
- b) Debate the role of international organizations versus local institutions in disaster risk reduction. [5+5]

OR

- 5.a) Identify the primary factors leading to increased vulnerability in urban areas compared to rural regions.
- b) Create a disaster recovery roadmap focusing on sustainable development and environmental conservation. [5+5]

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- 6.a) Implement the principles of structural mitigation to secure a dam in a flood-prone area.
b) Evaluate the environmental impacts of urbanization in disaster-prone regions and recommend policy changes. [5+5]

OR

- 7.a) Analyze the long-term socio-economic impacts of large-scale disasters such as floods or earthquakes.
b) Construct an interdisciplinary model that integrates climate change adaptation and disaster management. [5+5]

- 8.a) How can urban planners integrate disaster risk reduction measures into city development projects?
b) Critically analyze India's response to a recent manmade disaster, such as a chemical spill or industrial accident. [5+5]

OR

9. Distinguish between structural and non-structural measures for disaster mitigation, and analyze which is more effective in specific contexts. [10]

- 10.a) Illustrate how climate change contributes to the increasing frequency of disasters with examples.
b) How sustainable are current reconstruction practices in post-disaster scenarios? Provide an example for critique. [5+5]

OR

- 11.a) What are the root causes of failures in disaster response efforts? Use examples to identify gaps and challenges.
b) Devise a participatory approach to assess and reduce vulnerability in disaster-prone areas. [5+5]

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