

Date - 12.12.2025

(1/1)

SE sem-III (NEP) | 1571312 | Branch - IT | Nov-2025 | Q.P. code - 25601

1213461 /// S.E. (Information Technology) (SEM-III) (NEP)

Disaster Management and Mitigation

(2 Hours)

Total Marks: 60

N.B. (1) Question No. 1 is **compulsory**.

(2) Attempt any **three** questions out of the remaining five.

(3) Each question carries 15 marks and figures to right indicate full marks.

(4) Assume suitable data if required.

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| 1. | Solve any five. | 15 |
| (a) | Define structural and non-structural mitigation with examples. | 3 |
| (b) | What is early warning system? Mention three examples used in India. | 3 |
| (c) | Explain the role of public awareness in reducing disaster risk. | 3 |
| (d) | Mention any three challenges in search and rescue operations. | 3 |
| (e) | State three applications of GIS in disaster management. | 3 |
| (e) | Name any two agencies involved in disaster response and their functions. | 3 |
| 2. | (a) Discuss the importance of early warning systems and communication networks in disaster management. | 8 |
| (b) | Evaluate the role of government, community, and NGOs in a coordinated disaster response mechanism. | 7 |
| 3. | (a) Explain the disaster management cycle with suitable examples for each stage. | 8 |
| (b) | Explain the use of technology—drones, mobile apps, sensors, and AI—in modern disaster management. | 7 |
| 4. | (a) Explain India's major natural disasters and highlight their impact on life and economy. | 8 |
| (b) | Discuss community-based disaster preparedness and explain how it supports mitigation, response, and rehabilitation. | 7 |
| 5. | (a) Explain in detail the post-disaster management process with examples of relief, rehabilitation, and reconstruction. | 8 |
| (b) | Discuss the Do's and Don'ts for earthquake, tsunami, and cyclone preparedness. | 7 |
| 6. | (a) Describe the search and rescue procedure with a case study showing its effectiveness. | 8 |
| (b) | Explain the role of GIS and Remote Sensing in disaster management with applications in prediction, preparedness, and response. | 7 |
