F/E/TY

Reg. No: [redacted]

Final Assessment Test – April 2025

VIT Vellore Institute of Technology

Course: BCLE212L - Natural Disaster Mitigation and Management

Class NBR(s): 3195 / 3255 Slot: F1+TF1

Time: Three Hours Max. Marks: 100

- KEEPING MOBILE PHONE/ANY ELECTRONIC GADGETS, EVEN IN 'OFF' POSITION IS TREATED AS EXAM MALPRACTICE
- DON'T WRITE ANYTHING ON THE QUESTION PAPER

Answer ALL Questions

(10 X 10 = 100 Marks)

1. In the context of disaster risk reduction, explain the roles of hazard, disaster, vulnerability, exposure, and capacity. How can a society's vulnerability be measured and analyzed?

2. Describe the disaster management cycle (DMC). For each stage of DMC, detail the roles, and specific actions of government agencies, NGOs, and local communities.

3. Discuss the economic and environmental impacts of cyclones on India's coastal regions. How can emerging technologies, such as remote sensing, data analysis, and artificial intelligence, be effectively leveraged to improve disaster management in cyclone-prone areas.

4. Explore the complex interplay of natural and anthropogenic factors that lead to drought conditions. Detail the primary challenges faced during, and after a drought, with specific examples of impacts on agriculture, water resources, and public health.

5. Examine the historical lessons learned from past major earthquakes, such as the 1906 San Francisco earthquake or the 2010 Haiti earthquake, and discuss how these lessons have influenced current disaster preparedness and response strategies.

6. Describe the key pre-disaster measures to prevent and mitigate chemical and industrial disasters, emphasizing safety protocols and emergency response planning.

7. Compare the characteristics of man-made and natural disasters and detail the specific challenges in managing man-made disasters.

8. Explain the role of climate change in increasing the frequency and intensity of forest fires.

9.a) How are different remote sensing data types and resolutions practically used for flood and earthquake disaster monitoring and assessment?

OR

9.b) Examine how GIS and satellite technology facilitate data integration and enhance decision-making during different phases of disaster management.

10.a) Discuss the vital role of alternate livelihood training in facilitating economic recovery and community empowerment following flood disasters.

OR

10.b) Explain the role of Community-Based Disaster Management in building local capacity and promoting sustainable development in disaster-prone areas.

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