

## Semester II

### Paper: Disaster Management (Open Elective) 16POLO1

Max. Marks : 100

Theory Paper : 80

Internal Assessment : 20

Time : 3 Hours

#### Course Outcomes:

The students will be able to:

- CO1. Understand foundations of hazards, disasters and associated natural and social phenomena
- CO2. Get familiarity with disaster management theory (cycle, phases)
- CO3. Know about the technological innovations in disaster risk reduction
- CO4. Know about the humanitarian assistance before and after disaster
- CO5. Ensure skills and ability to design, implement and evaluate research on disaster.

#### Note:

The question paper will be divided into five units carrying equal marks i.e. 16 marks. Students shall be asked to attempt one out of two questions from each unit. Unit five shall contain eight short answer type questions without any internal choice and it shall be covering the entire syllabus. As such, all questions in unit five shall be compulsory.

#### UNIT I

Disaster Management: Meaning, Concepts, Principles, Scope, Objectives and Approaches  
Elements of Disaster Management

#### UNIT II

Disaster Mitigation: Hazard Assessment, Vulnerability Assessment, Risk Assessment, Protective Measures and Public Information

Disaster Preparedness: Disaster Plan, Damage Inspection, repair and Recovery procedures, Communication and Control Centers, Disaster Forecasting, Warning and Prediction

### UNIT III

Disaster Relief: Rapid Damage Assessment, Search and Rescue operations, Evacuation and Shelter, Food and Medical Supply, Mass Media Coverage, Relief Aid, Maintaining Public Order

### UNIT IV

Reconstruction Planning: Meaning and Significance  
Economic and Social Rehabilitation

#### Essential Readings:

1. Beatley, Timothy (1998). *The Vision of Sustainable Communities, In Burby, Raymond (ed.), Cooperating with Nature: Confronting Natural Hazards with Land-Use Planning for Sustainable Communities*, Washington, D.C., Joseph Henry Press.
2. David Godschalk, Timothy Beatley, Philip Berke, David Brower, Edward J. Kaiser (1998).  
*Natural Hazard Mitigation: Recasting Disaster Policy And Planning*, Island Press.
3. FEMA (2000). Planning for a Sustainable Future: The Link between Hazard Mitigation and Livability. *Washington, D.C.*
4. *Godschalk, David R., Timothy Beatley, Philip Berke, David J. Brower, and Edward J. Kaiser*

**Paper : Natural and Men made Disaster Management  
(Open Elective)**

**17POLO2**

**Course Outcomes:**

**The students will be able to:**

- CO1. Develop awareness about natural as well as man-made disasters
- CO2. Understand how planning about disaster management can save lives and property
- CO3. Be awareness about good practices regarding environment so that man-made disasters could be prevented
- CO4. Understand how policy interventions could impact and instigate the effects of disasters
- CO5. Get knowledge about existing global framework and existing agreements

**Max. Marks: 80**

*Note: The question paper will be divided into five units carrying equal marks i.e. 16 marks. Students shall be asked to attempt one out of two questions from each unit. Unit five shall contain eight short answer type questions without any internal choice and it shall be covering the entire syllabus. As such, all questions in unit five shall be compulsory.*

**UNIT- I**

- i. Classification of Disasters; Conceptualizing the interface between environmental degradation and disasters
- ii. Natural Disasters I: Earthquakes & Tsunamis; Volcanic Eruptions; Landslides and Avalanches

**UNIT- II**

- iii. Natural Disasters II: Cyclones; Forest-fires; Droughts and Desertification; Floods

**UNIT- III**

- iv. Human Induced Disasters I: Nuclear Disasters; Chemical Disasters; Soil and Water Pollution

**UNIT- IV**

- v. Human Induced Disasters II: Global warming; Biological Disasters: Epidemics

**Essential Readings:**

1. Ahmed, Shaik Iftikhar (2008). *Disaster Management in the Wake of a Flood*, Twenty First Century Publications, Patiala.
2. Bryant Edwards (2005). *Natural Hazards*, Cambridge University Press, U.K.
3. Carter, W. Nick (1991). *Disaster Management*, Asian Development Bank, Manila.

4. Central Water Commission (1987). Flood Atlas of India, CWC, New Delhi.
5. Central Water Commission (1989). Manual of Flood Forecasting, New Delhi.
6. Government of India (1997). Vulnerability Atlas of India, New Delhi.  
Kapur, A. (2010). Vulnerable India: A Geographical Study of Disasters, Sage Publications, New Delhi.
7. Kapur, A. (2005). Disasters in India: Studies of Grim Reality, Rawat Publications, Jaipur.
8. Sahni, Pardeep et al. (eds.) (2002). Disaster Mitigation Experiences and Reflections, Prentice Hall of India, New Delhi.

**Further Readings:**

1. Bilham, R. (2009). The seismic future of cities. Bulletin of Earthquake Engineering, 7, pp. 839-887.
2. Bureau of Indian Standards (2002). Indian Standards: Criteria for Earthquake Resistant Design of Structures, Part I, Fifth Revision.
3. Government of India (1997). Vulnerability Atlas of India (New Delhi: Building Materials and Technology Promotion Council, Ministry of Housing & Urban Poverty Alleviation).