

3035

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- (b) Explain how the qualitative likelihood measurement index is used in risk assessment. (7)
7. Differentiate **any three** of the following : (5×3=15)
- (a) Natural vs Anthropogenic hazards.
- (b) Structural vs Non-structural mitigation.
- (c) Direct losses vs Indirect losses.
- (d) Meteorological drought vs Hydrological drought.
8. (a) Assess the effectiveness of the National Disaster Management Framework in managing disasters. (8)
- (b) Evaluate the impact of sand mining from river banks on flood hazards. (7)

(200)

[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 3035

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Unique Paper Code : 32187601

Name of the Paper : Natural Hazards and Disaster Management

Name of the Course : **B.Sc. Hons. Environmental Sciences - DSE**

Semester : VI

Duration : 3 Hours

Maximum Marks : 75

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Answer any **five** questions. **All** Questions carry equal marks.

1. (a) Fill in the blanks : (1×5=5)

- (i) A natural hazard is defined by its interaction with _____ factors such as vulnerability and exposure.

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- (ii) _____ drought refers to the deficit of moisture in soil affecting agriculture.
- (iii) Tsunamis are usually caused by _____ under the sea.
- (iv) Coastal erosion often results from _____ and rising sea levels.
- (v) The concept of risk in disaster management involves the likelihood of a hazard and its _____.
- (b) Define any **five** of the following terms :
- (i) Vulnerability
- (ii) Non-structural mitigation
- (iii) Glacial Lake Outburst Floods (GLOF)
- (iv) Intangible losses
- (v) Preparedness
- (vi) Cyclones (2×5=10)
2. (a) Discuss the concept of hazard and the reasons for vulnerability. (7)

- (b) Explain the role of construction along river banks in elevating flood hazards. (8)
3. (a) Evaluate the use of barrier systems in flood mitigation. (7)
- (b) Discuss the implications of rapid urban expansion on disaster management strategies. (8)
4. Write short notes on **any three** of the following : (5×3=15)
- (a) The causes and types of landslides.
- (b) Role and impact of mangrove destruction on natural hazards.
- (c) Importance of disaster preparedness and the role of media.
- (d) Application of space technology in disaster management.
5. Analyze the 2013 cyclone 'Phailin' case study in terms of disaster management efficiency, focusing on the role of government bodies and technology. (15)
- 6 (a) Discuss the impact of earthquakes in terms of seismic waves and measures to assess risk. (8)