

Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**

Seventh Semester B.Tech Degree (S, FE) Examination May 2023 (2019 Scheme)

**Course Code: CET445****Course Name: NATURAL DISASTERS AND MITIGATION****Max. Marks: 100****Duration: 3 Hours****PART A***Answer all questions, each carries 3 marks.***Marks**

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|----|---|-----|
| 1  | In relation to Disaster mitigation, define the terms risk and vulnerability.                  | (3) |
| 2  | With help of neat sketch, Illustrate the inter-relationship between various Earth Subsystems. | (3) |
| 3  | State any three classifications of floods.  | (3) |
| 4  | What are the different types of seismic waves.  | (3) |
| 5  | What is soil degradation?   | (3) |
| 6  | How is soil formed?   | (3) |
| 7  | Define disaster risk management.  | (3) |
| 8  | Using neat sketch, Illustrate the disaster management cycle.                                  | (3) |
| 9  | Enumerate the major steps involved in the pre-disaster measures for floods.                   | (3) |
| 10 | Enumerate major steps involved in a post-disaster phase?                                      | (3) |

**PART B***Answer any one full question from each module, each carries 14 marks.***Module I**

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|----|--|-----|
| 11 | a) Explain classifications of hazards.               | (9) |
|    | b) With a typical example, explain carbon footprint. | (5) |

**OR**

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|----|--|-----|
| 12 | a) Define the terms emergency, capacity, and resilience.   | (6) |
|    | b) Define hazard and disaster. With a typical example, explain how a hazard differs from a disaster. | (8) |

**Module II**

- |    |  |     |
|----|--|-----|
| 13 | a) State and explain any three impacts of earthquakes on the earth's subsystems.   | (7) |
|    | b) Explain plate tectonics theory for cause of earthquakes with suitable diagrams. | (7) |

**OR**

- 14 a) Using neat sketches, explain the mechanism of formation of Tsunamis. (7)  
b) State and explain any four major impacts of Tsunamis on the earth's subsystems. (7)

**Module III**

- 15 a) Explain any five major causes of soil degradation (7)  
b) Explain any three strategies for mitigating the impacts of soil degradation (7)

**OR**

- 16 a) How will you assess the vulnerability of an area to landslides? (7)  
b) How is it possible to mitigate landslides based on non-structural methods? (7)

**Module IV**

- 17 a) Using a case study, Explain the core elements of disaster risk management. (8)  
b) What are the purposes of disaster management. (6)

**OR**

- 18 a) Explain the significance of participation of community in disaster management. (7)  
b) Explain the major strategies involved in risk management plan for the attack of tidal waves on coastal area (7)

**Module V**

- 19 a) Define 'relief' in the context of disaster management. Identify the principles guiding relief. (7)  
b) How will you formulate disaster management plan for landslide. (7)

**OR**

- 20 a) Discuss the various factor to be considered in conducting environmental impact assessment of a construction of a new dam project, keeping in mind the probable hazards/disasters. (14)

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