BPAG-171: Disaster Management
Assignment (TMA)

Course Code: BPAG-171
Assignment Code: BPAG-171/Asst/TMA/July 2026 – January 2027
Marks: 100

This assignment consists of Sections A, B, and C. Answer all the questions; marks are indicated on the right-hand side.

Assignment: A

1. Discuss the concepts of risk and vulnerability and their significance in disaster management. 20
2. Examine the institutional framework established under the National Disaster Management Act, 2005. 20

Assignment: B

3. Write a note on climatological disasters. 10
4. Illustrate the disaster management cycle and its major phases. 10
5. Briefly discuss the frameworks and methods of damage assessment. 10

Assignment: C

6. Write a note on earthquake and Tsunami. 6
7. Discuss heat waves and cold waves. 6
8. Briefly describe the importance of shelter during a disaster. 6
9. What do you mean by climate change? 6
10. Comment on the concept of Community Based Disaster Management. 6

1. Discuss the concepts of risk and vulnerability and their significance in disaster management. 20

Answer

Disaster management begins with an understanding of what may go wrong, who or what may be affected, and how serious the consequences might be. Two central concepts in this assessment are **risk** and **vulnerability**. A hazard is a potentially damaging event or process, such as an earthquake, flood, cyclone, epidemic or industrial accident. A hazard does not automatically become a disaster. Its consequences depend on the people, buildings, services and livelihoods exposed to it and on their ability to resist, respond and recover. Risk and vulnerability therefore connect knowledge of hazards with decisions about development, preparedness and public safety.

Meaning of risk

Risk is the possibility of harmful consequences arising from the interaction of a hazard with exposed and vulnerable people, assets and systems. It can involve deaths, injuries, disease, property damage, environmental loss, disruption of public services and interruption of livelihoods. Risk is commonly understood in terms of the likelihood of a hazardous event and the severity of its possible effects. A useful conceptual relationship is: disaster risk increases with hazard, exposure and vulnerability, and decreases as coping capacity and resilience improve. This is a guiding relationship, not a precise universal equation. Thus the same earthquake may produce little damage in a well-designed settlement but extensive loss where weak buildings, congested roads and poor emergency access are common.

Dimensions and types of disaster risk

Risk may be extensive, involving frequent small or moderate incidents such as recurring local floods, or intensive, involving comparatively rare events that can cause catastrophic losses. It may also be described by its principal consequences: human, physical, economic, social, environmental and institutional. Direct losses include collapsed houses or damaged crops, while indirect losses include interrupted schooling, declining tourism, unemployment and public revenue shortfalls. A community may face cascading risk: flooding can damage a substation, interrupt drinking-water supply, contaminate wells and increase disease exposure. Risk is also dynamic. Urban expansion into floodplains, deforestation, climate change and concentration of critical infrastructure can alter the consequences of hazards over time.