

**DISASTER RESPONSE SERVICES AND TECHNOLOGIES
(HMTS 4011)**

Time Allotted : 3 hrs

Full Marks : 70

Figures out of the right margin indicate full marks.

*Candidates are required to answer Group A and
any 5 (five) from Group B to E, taking at least one from each group.*

Candidates are required to give answer in their own words as far as practicable.

**Group - A
(Multiple Choice Type Questions)**

1. Choose the correct alternative for the following: **10 × 1 = 10**
- (i) What is a flash flood?
(a) A sophisticated flood (b) Power lines fallen in flood waters
(c) A deep flood (d) A flood that happens fast with little warning.
- (ii) The Indian Tsunami Early Warning Centre (ITEWC) established at Indian National Centre for Ocean Information Sciences is located in
(a) Chennai (b) Goa (c) Kochi (d) Hyderabad.
- (iii) Cyclones occurring in North Atlantic Ocean are called
(a) Typhoon (b) Hurricanes (c) Tornado (d) None of the above.
- (iv) Which of the following organizations is the apex authority of disaster management in India?
(a) NDA (b) NDMA (c) CDMA (d) INDR.
- (v) Asian Disaster Preparedness Centre is at
(a) Bangkok (b) Kerala (c) Surat (d) None.
- (vi) Disaster Management includes
(a) Mitigation (b) Reconstruction
(c) Rehabilitation (d) All of the above.
- (vii) In India National Institute of Disaster Management is located at
(a) Manipur (b) Punjab (c) Hyderabad (d) New Delhi.
- (viii) Which of the following best defines a disaster?
(a) Any event that results in multiple deaths
(b) Devastation that cannot be relieved without assistance
(c) Devastation that covers a broad geographical area
(d) When the event results in multiple injuries and deaths as well as property damage.

- (ix) Effective hazard management largely rely on
(a) Govt. agencies (b) Emergency responses
(c) Pre-disaster planning (d) Volcanoes.
- (x) Which of the following typically leads to increased risk for a population?
(a) Urbanization (b) Coastal Migration
(c) Both (a) and (b) (d) Neither (a) nor (b).

Group- B

2. (a) Which day is celebrated as "International Day for Disaster Reduction"? Describe the kinds of events organized on that day? [(CO2)(Remember/LOCQ)]
(b) Differentiate between the terms: Hurricane, Cyclone and Typhoon. [(CO1)(Analyze/IOCQ)]
(c) What is tornado? How is it different from hurricanes? [(CO1)(Understand/LOCQ)]
3 + 6 + 3 = 12
3. (a) Justify the reason why the disaster management steps are referred as a cycle? [(CO1) (Understand/LOCQ)]
(b) State the objectives of UNO in brief? In which phase of disaster management multipurpose cyclone shelters are built? [(CO1) (Remember/LOCQ)]
(c) Write a brief note on medical preparedness and hospital disaster preparedness [(CO2)(Apply/IOCQ)]
3 + 3 + 6 = 12

Group - C

4. (a) What is Sendai framework? Explain the priority action areas specified in Sendai framework? [(CO3)(Remember/LOCQ)]
(b) Explain different kinds of vulnerability with example. [(CO3)(Analyze/IOCQ)]
(2 + 6) + 4 = 12
5. (a) Write short notes on the following:
(i) IDRN (ii) NIDM (iii) NDRF
(iv) Golden hour in the context of disaster management. [(CO3)(Understand/LOCQ)]
(b) Critically examine the statement "Disaster mitigation and disaster preparedness go hand in hand". [(CO3)(Analyze/IOCQ)]
8 + 4 = 12

Group - D

6. (a) Examine the issues related to the distribution of goods in the impact zone. [(CO4) (Analyze/IOCQ)]
(b) Distinguish between fire SAR and mountain SAR. [(CO4) (Analyze/IOCQ)]
5 + 7 = 12

7. (a) Justify resettlement of families as a recovery activity. [(CO5)(Evaluate/HOCQ)]
 (b) Evaluate the role Architecture for Humanity and Relief International in disaster recovery. [(CO5)(Evaluate/HOCQ)]
4 + (4 + 4) = 12

Group - E

8. (a) Evaluate the utility of smartphones working in DTN mode be used for setting up a post disaster communication network. [(CO6)(Design/HOCQ)]
 (b) Assemble some existing smartphone based DTN applications for disaster management. [(CO6)(Create/HOCQ)]
6 + 6 = 12
9. (a) Appraise the Federal Emergency Management Agency (FEMA) as an emergency awareness and preparation application. [(CO6)(Evaluate/HOCQ)]
 (b) Argue the utility of UN-ASIGN Crowd helps in crowdsourcing situational data in a post disaster scenario. [(CO6)(Evaluate/HOCQ)]
 (c) Write the shortcomings of the current disaster management applications. [(CO6)(Create/HOCQ)]
5 + 5 + 2 = 12

Cognition Level	LOCQ	IOCQ	HOCQ
Percentage distribution	32.30	30.20	37.50

Course Outcome (CO):

- CO1: Recall the basic concepts and terminologies of disaster and disaster management.
 CO2: Understand disaster risk assessment, risk reduction and community preparedness plans.
 CO3: Interpret and characterize hazards, vulnerabilities and strategies for disaster mitigation.
 CO4: Examine techniques for post disaster situation awareness, damage and need assessment.
 CO5: Evaluate post disaster remedial measures and long-term recovery planning.
 CO6: Design emergency communication infrastructures, technologies and services.

*LOCQ: Lower Order Cognitive Question; IOCQ: Intermediate Order Cognitive Question; HOCQ: Higher Order Cognitive Question

