

Hall Ticket No.

Question Paper Code:ACE551



# **INSTITUTE OF AERONAUTICAL ENGINEERING**

**(Autonomous)**

**Dundigal, Hyderabad - 500 043**

## **MODEL QUESTION PAPER - II**

B. Tech VI Semester End Examinations (Regular), **March /April** – 2020

**Regulations: IARE-R16**

### **DISASTER MANAGEMENT**

**(EEE/CSE/ME/ECE/IT)**

**Time: 3 hours**

**Max. Marks: 70**

Answer ONE Question from each Unit All Questions Carry Equal Marks  
All parts of the question must be answered in one place only

#### **UNIT – I**

1. (a) Describe biological hazards and Describe human Ecology? What are the field of applications in geographical Researchers? [7M]
- (b) Discuss about chemical and physical hazards. List out the environmental disaster and give example for each. [7M]
2. (a) Explore physical hazards with an example, Express about Ecosystem Approach and perception approach. [7M]
- (b) Describe flash flood. Expicit the various management guidelines for temporary shelter provision during disasters. [7M]

#### **UNIT – II**

3. (a) Expicit a brief note on floods as a serious environmental hazard and Elucidate the floods and explore various harmful effects of floods. [7M]
- (b) Expicit a short note on effects of cyclones and Describe cyber terrorism and Summarize forms and impacts. [7M]
4. (a) Derive the relations between bending moments and curvature in pure bending of plates. [7 M]
- (b) Distinguish the difference between natural disaster and man-made disaster? and Describe short notes on:  
i) cold waves                      ii) Heat waves                      iii) Soil Erosion [7 M]

### UNIT – III

5. (a) Explore plate tectonic movements? Describe how human beings were adjusted to disasters. [7M]  
(b) Highlight various mitigation measures to be taken at the time of earthquakes? [7M]
6. (a) Explore how to prevent natural disasters and explicit different types of atmospheric hazards. [7M]  
(b) Describe atmospheric hazards and various geological hazards [7M]

### UNIT – IV

- 7 (a) Describe the effect of cyclones and illustrate various causes of lightning and hailstorms? [7M]  
(b) Describe urbanization. Give the reasons for large scale migration to urban areas and the consequences of rapid urbanization. [7M]
- 8 (a) Explicit a note on floods and discuss its types and causes and discuss the flood-prone regions in India. [7M]  
(b) Explore the causes of cold waves what are its effects? Describe a short note on population explosion and its control. [7M]

### UNIT – V

- 9 (a) Discuss the important steps in relief distribution. Examine the problem areas during recovery phase of disaster management, [7M]  
(b) i) Summarize natural disasters and its mitigation strategies. [7M]  
ii) Describe the importance of people as the first responders in disaster management..
- 10 (a) Describe cyclone and how do engineered structures help us to withstand like floods, earthquakes, and cyclones? [7M]  
(b) Describe how the community of a village play the most important role in time of disaster as ‘first responder’ [7M]



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## **COURSE OBJECTIVES:**

**The course should enable the students to:**

I	Identify the major disaster types and develop an understanding of modern disaster management.
II	Recognize and develop awareness of the chronological phases of natural disaster response and refugee relief operations.
III	Understand the key concepts of disaster management related to development and the relationship of different disaster management activities.
IV	Categorize the organizations that are involved in natural disaster assistance and relief system.

## **COURSE OUTCOMES (COs):**

CO 1	Environmental hazards and disasters: meaning of environmental hazards, environmental disasters and environmental stress; concept of environmental hazards.
CO 2	Types of environmental hazards and disasters: Natural hazards and disasters.
CO 3	Endogenous hazards, volcanic eruption, earthquakes, landslides, volcanic hazards/ disasters, causes and distribution of volcanoes, Earthquake hazards, hazardous effects of, earthquakes, earthquake hazards in India, human adjustment, perception and mitigation of earthquake
CO 4	Endogenous hazards, volcanic eruption, earthquakes, landslides, volcanic hazards/ disasters, causes and distribution of volcanoes, Earthquake hazards, hazardous effects of, earthquakes, earthquake hazards in India, human adjustment, perception and mitigation of earthquake
CO 5	Emerging approaches in disaster management i.e pre, disaster stage (preparedness), emergency stage and post disaster stage, rehabilitation.

## **COURSE LEARNING OUTCOMES (CLOs):**

ACE551.01	Integrate knowledge and to analyze, evaluate and manage the different public health aspects of disaster events at a local and global levels, even when limited information is available.
ACE551.02	Analyze and evaluate the environmental, social, cultural, economic, legal and organizational Aspects influencing vulnerabilities and capacities to face disasters. and to know about different types of environmental hazards
ACE551.03	Obtain knowledge on different types of natural and man- made disasters. Work theoretically and practically in the processes of disaster management (disaster risk reduction, response, and recovery)

ACE551.04	Describe endogenous and exogenous hazards their harmful effects to the environment. Case studies of India
ACE551.05	Analyze, and communicate information on risks, relief needs and order to formulate strategies for mitigation.
ACE551.06	Understand the Mitigation and control measures of exogenous hazards.
ACE551.07	Understand different approaches of different phases.
ACE551.08	Capacity to analyze and evaluate research work on the field of emergencies and disaster.
ACE551.09	Demonstrating insight into the potential and limitations of science, its role in society and people's responsibility for how it is used. And emerging approaches of disasters.
ACE551.10	Analyze the future scenarios with the ability to clearly present and discuss their conclusions and the knowledge and arguments.
ACE551.11	Understand integrated approach for disaster preparedness, mitigation & awareness; Mitigation.
ACE551.12	Understand different types of institution for disaster mitigation and management
ACE551.13	Design and perform research on the different aspects of the emergencies and disaster.
ACE551.14	Relate their interconnections, particularly in the field of the Public Health aspects of the disasters.
ACE551.15	Understand different approaches to prevent disasters.
ACE551.16	Understanding the race process of dealing with work place hazards.
ACE551.17	Obtain knowledge on identification of natural calamities that tends to hazards and disasters.

#### MAPPING OF SEMESTER END EXAMINATION - COURSE OUTCOMES

SEE Question No.		Course Learning Outcomes	Course Outcomes	Bloom's Taxonomy Level	
1	a	ACE551.01	Understand the biological hazards, human ecology, and the field of applications in geographical Researchers	CO 1	Remember
	b	ACE551.04	Understand the environmental disaster, concept of chemical and physical hazards.	CO 1	Understand
2	a	ACE551.05	Understand the ecosystem approach and perception approach..	CO 1	Understand
	b	ACE551.06	Understand the various management guidelines for temporary shelter provision during disasters.	CO 1	Understand
3	a	ACE551.07	Explore various harmful effects of floods.	CO 2	Remember
	b	ACE551.09	Determination of effects of cyclones and describe cyber terrorism.	CO 2	Understand
4	a	ACE551.07	Understand the flow chart of planetary and extra planetary hazard.	CO 2	Understand

	b	ACE551.010	Understand basic difference between natural disaster and man-made disaster.	CO 2	Understand
5	a	ACE551.12	Analyze the plate tectonic movements .	CO 3	Understand
	b	ACE551.12	Understand various mitigation measures to be taken at the time of earthquakes	CO 3	Remember
6	a	ACE551.13	Analysis prevention of natural disasters and atmospheric hazards.	CO 3	Remember
	b	ACE551.13	Analysis atmospheric hazards and various geological hazards.	CO 3	Understand
7	a	ACE551.14	Analyze the effect of cyclones and causes of lightning and hailstorms.	CO 4	Remember
	b	ACE551.14	Understand the the reasons for large scale migration to urban areas.	CO 4	Understand
8	a	ACE551.14	Understand the causes for floods.	CO 4	Understand
	b	ACE551.14	Understand about the causes and effects of disaster management.	CO 4	Understand
9	a	ACE551.18	Analyze the important steps in relief distribution At the time of disaster management.	CO 5	Remember
	b	ACE551.17	Importance of people as the first responders in disaster management	CO 5	Understand
10	a	ACE551.17	Understand the concepts of cyclones.	CO 5	Remember
	b	ACE551.18	Understand the the community of a village play an important role in time of disaster.	CO 5	Understand

**Signature of Course Coordinator**

**HOD, ME**