

Hall Ticket No

Question Paper Code: ACE533



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad - 500 043

MODEL QUESTION PAPER - II

B. Tech V Semester End Examinations, November- 2019

Regulations: R16

DISASTER MANAGEMENT AND MITIGATION

(CIVIL ENGINEERING)

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) What is meant by Human Ecology? How it is related to disasters. [7M]
b) What is an Hazard? Explain different parameters that govern the level of harm caused by an Hazard event. [7M]
2. a) How is environmental Hazard linked to ecology? [7M]
b) What is environmental hazard? How to prevent a hazard from changing into a disaster? [7M]

UNIT - II

3. a) Explain the different types of man-induced disasters effecting the environment [7M]
b) Explain briefly about the extra planetary hazards and its management. [7M]
4. a) Explain in detail about the Tsunami. What are all the damages caused by Tsunami? [7M]
b) Draw a flow chart of planetary and extra planetary hazards and explain. [7M]

UNIT - III

5. a) What are the hazardous effects of volcanic eruptions? Explain [7M]
b) How the mitigation and perception of earthquake is done in India? Explain [7M]
6. a) Enumerate the Possible Risk Reduction measures in Flooding [7M]
b) What are the Pre-disaster measures are taken to prevent loss of life due to this Hazard? [7M]

UNIT – IV

7. a) What are the factors influencing the soil erosion and explain the different methods of conservation measures of soil erosion. [7M]
b) Differentiate the global sedimentation problems and regional sedimentation problems. [7M]
8. a) What are flash Floods? Name one recent flash flood that large population of a region in India. [7M]
b) Explain briefly the pattern of global population growth in recent years which is causing alarm. [7M]

UNIT – V

9. a) What is structural mitigation and non – structural mitigation? Enlist the different stages of disaster management? Write in detail about pre-disaster stage. [7M]
b) What are the provisions of immediate relief measures to disaster affected people? [7M]
10. a) Enlist the various institutions and national canterers involved in natural disaster reduction. [7M]
b) What are the post-disaster measures are taken for effective rehabilitation? [7M]



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COURSE OBJECTIVES:

The course should enable the students to:

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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):

COs	Course Outcome
CO 1	Understand to describe the basic types of Environmental hazards and disasters. Understand how to react effectively to natural, man-made, and technological threats.
CO 2	Understand how to react effectively to natural, man-made, and planetary hazards.
CO 3	Explore the history of the field and comprehend how past events are earthquake, landslides and volcanic hazards.
CO 4	Describe the basic concepts of the emergency management cycle mitigation, preparedness, response, and recovery
CO 5	Recognizes the stakeholders in disaster management system, their jurisdiction and responsibilities

COURSE LEARNING OUTCOMES (CLOs):

ACE533.1	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.
ACE533.2	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
ACE533.3	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)
ACE533.4	Describe endogenous and exogenous hazards their harmful effects to the environment. Case studies of India
ACE533.5	Analyze, and communicate information on risks, relief needs and order to formulate strategies for mitigation.
ACE533.6	Understand the Mitigation and control measures of exogenous hazards.
ACE533.7	Understand different approaches of different phases
ACE533.8	Capacity to analyze and evaluate research work on the field of emergencies and disaster.
ACE533.9	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.

ACE533.10	Analyze the future scenarios with the ability to clearly present and discuss their conclusions and the knowledge and arguments.
ACE533.11	Understand integrated approach for disaster preparedness, mitigation & awareness; Mitigation.
ACE533.12	Understand different types of institution for disaster mitigation and management
ACE533.13	Design and perform research on the different aspects of the emergencies and disaster.
ACE533.14	Relate their interconnections, particularly in the field of the Public Health aspects of the disasters.
ACE533.15	Understand different approaches to prevent disasters.
ACE533.16	Understanding the race process of dealing with work place hazards.
ACE533.17	Identification of natural calamities that tends to hazards and disasters.
ACE533.18	Understand the integrated approach for disaster preparedness, mitigation & awareness; mitigation
ACE533.19	Analyze the Meteorological observatory, seismological observatory, volcanology institution
ACE533.20	Understand the working of institution of urban & regional planners, engineering council, world meteorological organizations (WMO).
ACE533.21	Understand the world federation of engineering organizations (WFED).

MAPPING OF SEMESTER END EXAMINATION - COURSE OUTCOMES

SEE Question No.	Course Learning Outcomes		Course Outcomes	Blooms Taxonomy Level
1	a	ACE533.1 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.	CO 1	Understand
	b	ACE533.2 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	CO 1	Understand
2	a	ACE533.3 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)	CO 1	Understand
	b	ACE533.1 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.	CO 1	Remember
3	a	ACE533.9 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.	CO 2	Understand
	b	ACE533.5 Analyze, and communicate information on risks, relief needs and order to formulate strategies for mitigation.	CO 2	Understand
4	a	ACE533.7 Understand different approaches of different phases	CO 2	Understand
	b	ACE533.7 Understand different approaches of different phases	CO 2	Understand
5	a	ACE533.10 Analyze the future scenarios with the ability to clearly present and discuss their conclusions and the knowledge and arguments.	CO 3	Understand
	b	ACE533.11 Understand integrated approach for disaster preparedness, mitigation & awareness; Mitigation.	CO 3	Remember

6	a	ACE533.14	Relate their interconnections, particularly in the field of the Public Health aspects of the disasters.	CO 3	Remember
	b	ACE533.11	Understand integrated approach for disaster preparedness, mitigation & awareness; Mitigation.	CO 3	Understand
7	a	ACE533.18	Understand the integrated approach for disaster preparedness, mitigation & awareness; mitigation	CO 4	Understand
	b	ACE533.17	Identification of natural calamities that tends to hazards and disasters.	CO 4	Understand
8	a	ACE533.16	Understanding the race process of dealing with work place hazards.	CO 4	Remember
	b	ACE533.18	Understand the integrated approach for disaster preparedness, mitigation & awareness; mitigation	CO 4	Understand
9	a	ACE533.19	Analyze the Meteorological observatory, seismological observatory, volcanology institution	CO 5	Understand
	b	ACE533.20	Understand the working of institution of urban & regional planners, engineering council, world meteorological organizations (WMO).	CO 5	Understand
10	a	ACE533.20	Understand the working of institution of urban & regional planners, engineering council, world meteorological organizations (WMO).	CO 5	Understand
	b	ACE533.21	Understand the world federation of engineering organizations (WFED).	CO 5	Understand

Signature of Course Coordinator

HOD, CE