



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)
Dundigal, Hyderabad-500043

MECHANICAL ENGINEERING TUTORIAL QUESTION BANK

Course Name	:	DISASTER MANAGEMENT
Course Code	:	ACE551
Class	:	B. Tech V semester
Branch	:	CIVIL ENGINEERING
Year	:	2018-19
Course Coordinator	:	Mr. S. Varadarajan, Assistant Professor, Civil Engineering
Course Faculty	:	Mr. S. Varadarajan, Assistant Professor, Civil Engineering

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 LEARNING OUTCOMES:

Students, who complete the course, will have demonstrated the ability to do the following:

CACE551.01	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.
CACE551.02	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
CACE551.03	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)
CACE551.04	Describe endogenous and exogenous hazards their harmful effects to the environment. Case studies of India
CACE551.05	Analyze, and communicate information on risks, relief needs and order to formulate strategies for mitigation.
CACE551.06	Understand the Mitigation and control measures of exogenous hazards.
CACE551.07	Understand the Mitigation and control measures of endogenous hazards
CACE551.08	Understand different approaches of different phases
CACE551.09	Capacity to analyze and evaluate research work on the field of emergencies and disaster while
CACE551.10	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.

CACE551.11	Analyze the future scenarios with the ability to clearly present and discuss their conclusions and the knowledge and arguments behind them.
CACE551.12	Understand integrated approach for disaster preparedness, mitigation & awareness mitigation
CACE551.13	Understand different types of institution for disaster mitigation and management.
CACE551.14	Design and perform research on the different aspects of the emergencies and disaster
CACE551.15	Relate their interconnections, particularly in the field of the Public Health aspects of the disasters.
CACE551.16	Understand different approaches to prevent disasters.
CACE551.17	Understanding the race process of dealing with work place hazards.
CACE551.18	Identification of natural calamities that tends to hazards and disasters.

UNIT-I			
ENVIRONMENTAL HAZARDS AND DISASTERS			
Part - A (Short Answer Questions)			
S. NO.	QUESTIONS	BLOOMS TAXONOMY LEVEL	COURSE OUTCOMES
1	Write a note on environmental hazards.	Remember	CACE551.01
2	What is the difference between natural disaster and man-made disasters?	Understand	CACE551.01
3	Write two impact of disaster has on community.	Remember	CACE551.02
4	Write briefly about how hazards can become a disaster.	Remember	CACE551.02
5	What is a disaster? Explain about it	Understand	CACE551.02
6	Discuss the environmental stress in the atmosphere.	Understand	CACE551.01
7	Write the concept of Environmental Hazards.	Remember	CACE551.01
8	Define biological hazards.	Understand	CACE551.01
9	What is mean by flash flood?	Remember	CACE551.03
10	Discuss about chemical and physical hazards.	Understand	CACE551.03
11	Give some examples of stressors	Remember	CACE551.03
12	Define hazard . explain different types of Hazards	Remember	CACE551.02
13	Define disaster. Explain nature of Hazards	Understand	CACE551.02
14	Explain the concept of disaster.	Remember	CACE551.01
15	Define physical hazards with an example	Understand	CACE551.01
16	Write the various management guidelines for temporary shelter provision during disasters.	Remember	CACE551.02
17	Define environmental stress	Understand	CACE551.02
18	Write a note on the stressors of environment.	Remember	CACE551.02
19	What is meant by human ecology?	Remember	CACE551.02
20	Discuss the role and functions of a Disaster Manager.	Understand	CACE551.02
Part - B (Long Answer Questions)			
1	Describe the various management guidelines for temporary shelter provision during disasters.	Remember	CACE551.01
2	Define environmental stress. Write a note on the stressors of environment.	Remember	CACE551.01

3	Write an account on different approaches to disaster management and relation with human ecology.	Understand	CACE551.04
4	Write a note on chemical and biological hazards.	Remember	CACE551.03
5	Write an account on geomorphic (geological) hazards.	Understand	CACE551.03
6	Discuss Community-Based Disaster Risk Reduction Process.	Understand	CACE551.03
7	Write down the types of environmental hazards and Disasters?	Remember	CACE551.02
8	Define human Ecology? What are the field of applications in geographical Researchers?	Understand	CACE551.02
9	Discuss about Ecosystem Approach and perception approach	Understand	CACE551.02
10	Highlight key environmental concerns pertaining to disasters,	Remember	CACE551.02
11	Sustainable management of natural resources is essential to provide livelihood and environmental security'. Discuss.	Understand	CACE551.01
12	Write a note on key community-based disaster management strategies.	Understand	CACE551.02
13	Discuss the relationship between disaster and development depends on the development choices made by the individual, community and the nation'. Discuss.	Remember	CACE551.01
14	Define disaster and refer to major environmental concerns. Discuss recent trends in disaster management with special reference to India.	Remember	CACE551.02
15	Examine the types and characteristics of corporate social responsibility with respect to disaster management.	Understand	CACE551.02
16	Explain the concept of first responder with special reference to the role of the government in first response.	Remember	CACE551.01
17	Discuss the guiding principles of disaster mitigation and elaborate the problem areas in disaster mitigation.	Understand	CACE551.02
18	Discuss the relationship between disaster and development with the help of examples from developed and developing countries.	Understand	CACE551.02
19	Discuss various methods for rescuing affected persons in a disaster situation.	Remember	CACE551.01
20	Examine the changing complexion of disaster management in the contemporary context.	Understand	CACE551.02

UNIT - II

TYPES OF ENVIRONMENTAL HAZARDS AND DISASTERS

Part – A (Short Answer Questions)

1	What is a disaster? Classify it	Understand	CACE551.03
2	Write a note on social hazard. Explain it	Remember	CACE551.04
3	Write a short note on effects of cyclones.	Remember	CACE551.03
4	Describe civil disorder? Explain steps involved in it	Understand	CACE551.03
5	What are the types of man-Induced hazards discuss?	Understand	CACE551.03
6	Write down the various types of natural hazards.	Remember	CACE551.03
7	Discuss about the planetary and extra-planetary hazard.	Understand	CACE551.04
8	Write a note on meteorological hazards.	Remember	CACE551.04
9	What is earthquake hazard? What causes earthquake.	Understand	CACE551.04
10	What are the harmful effects of earthquakes	Remember	CACE551.03
11	Define extra planetary hazard	Understand	CACE551.04
12	What causes earthquakes and why?	Remember	CACE551.04
14	Write a note on planetary hazard.	Understand	CACE551.03
15	Write short notes on technological disasters	Remember	CACE551.02

16	What are floods? What are the causes and how it is prevented?	Understand	CACE551.01
17	What are the negative effects of oil drilling?	Remember	CACE551.02
18	What is the difference between natural disaster and man-made disaster?	Remember	CACE551.05
19	What does the Global Warming mean?	Understand	CACE551.05
20	What are the harmful effects of floods	Remember	CACE551.06
Part - B (Long Answer Questions)			
1	Write short notes on cold waves, Heat waves and Soil Erosion	Remember	CACE551.06
2	Write a brief note on floods as a serious environmental hazard.	Understand	CACE551.05
3	What are the consequences of the phenomenon of drought? Explain briefly.	Remember	CACE551.04
4	Explain sea level rise. What are its causes and effects?	Understand	CACE551.03
5	Write a note on global atmospheric changes.	Remember	CACE551.02
6	What is the difference between natural disaster and man-made disaster?	Understand	CACE551.03
7	Draw a flow chart of planetary and extra planetary hazard and explain.	Understand	CACE551.02
8	Write a brief note on the extra planetary hazards.	Remember	CACE551.05
9	What are floods? What are the harmful effects of floods.	Understand	CACE551.06
10	Write down the methods of controlling floods.	Remember	CACE551.06
11	Examine the role of corporate social responsibility as an emerging avenue in managing disasters.	Understand	CACE551.07
12	Define vulnerability and discuss the vulnerability profile of India,	Remember	CACE551.07
13	Analyse the important facets of disaster management in mountainous regions.	Remember	CACE551.07
14	Throw light on the development perspective to Disaster management.	Understand	CACE551.06
15	Discuss the role of disaster management authorities in disaster management.	Understand	CACE551.07
16	Write a brief note on psychological and social dimensions of disaster.	Remember	CACE551.07
17	Describe manmade (anthropogenic disaster) disaster and list out the natural disaster?	Understand	CACE551.08
18	What will be the consequences of drought when it affects an area very effectively?	Understand	CACE551.08
19	Describe terrorism and write down the typology of terrorism?	Understand	CACE551.08
20	Illustrate the 5 worst man-Made disasters in History.	Remember	CACE551.08
UNIT-III			
ENDOGENOUS HAZARDS			
Part - A (Short Answer Questions)			
1	What are the effects of the volcanoes on the environment?	Remember	CACE551.09
2.	What is seismic activity?	Understand	CACE551.09
3.	What are Geological hazards? Explain it	Understand	CACE551.09
4.	Define volcanic Ash. Write its importance	Remember	CACE551.08
5.	What is Endogenous Hazards?	Remember	CACE551.07
6.	Define landslides. Explain about it	Understand	CACE551.07
7	Write down the different types of atmospheric hazards.	Remember	CACE551.04
8	Define atmospheric hazards. Explain its behaviour	Understand	CACE551.04

9	How earthquake occurs? List out the cause	Understand	CACE551.03
10	What are plate tectonic movements?	Remember	CACE551.04
11	What is material that comes out from volcanic eruptions?	Remember	CACE551.03
12	Define magma. List its source	Understand	CACE551.04
13	How to prevent natural disasters?	Remember	CACE551.04
14	How human being is adjusted to the disasters?	Understand	CACE551.03
15	Define Lava. List its source	Understand	CACE551.03
16	Write a note on Bhopal on gas tragedy.	Remember	CACE551.04
17	Write a short note on pesticide pollution.	Understand	CACE551.06
18	What are the main causes of nuclear hazards?	Remember	CACE551.07
19	What are endogenous hazards?	Understand	CACE551.07
Part – B (Long Answer Questions)			
1	Write a short note on earthquakes. What are its causes?	Understand	CACE551.11
2	What are the mitigation measures to be taken at the time of earthquakes?	Remember	CACE551.11
3	Write a note on man-made landslides. State what are the mitigation measures at the time of land-slides?	Understand	CACE551.12
4	What are the environmental impacts of Volcanic Eruptions?	Remember	CACE551.12
5	What is epicentre and focus? Draw with a neat diagram? Based on depth how many types of earthquake are classified.	Remember	CACE551.11
6	What is an endogenous hazard? Explain with examples in detail.	Understand	CACE551.11
7	Illustrate the causes and distribution of volcanoes.	Remember	CACE551.11
8	Demonstrate the hazardous effects of volcanic eruptions	Understand	CACE551.12
9	What causes earthquakes? What are the harmful effects of earthquakes?	Understand	CACE551.12
10	Explain briefly about the effects of earthquakes on the environment.	Remember	CACE551.12
11	Write a brief note on the distribution of volcanoes in the world.	Understand	CACE551.11
12	Comment on the distribution of earthquakes across the globe.	Understand	CACE551.11
13	Explain how the magnitude of earthquake is determined.	Remember	CACE551.12
14	Identify the earthquake hazards in India and explain	Understand	CACE551.12
15	Define vulnerability and discuss the process of vulnerability analysis.	Understand	CACE551.10
UNIT-IV			
EXOGENOUS HAZARDS			
Part - A (Short Answer Questions)			
1	What are cyclones? Describe	Remember	CACE551.08
2	Write a note on the formation of cyclones.	Understand	CACE551.09
3	Write in short about the structure of cyclone.	Understand	CACE551.09
4	Write a short note on effect of cyclones.	Remember	CACE551.10
5	Write a short note on the global distribution of cyclones.	Remember	CACE551.10
6	Discuss the flood-prone regions in India.	Understand	CACE551.10

7	Discuss some of the measures to mitigate cyclones.	Remember	CACE551.10
8	What causes lightning and hailstorms? Explain.	Understand	CACE551.10
9	Define soil erosion.	Understand	CACE551.10
10	What are the flood control measures?	Remember	CACE551.09
11	What is sedimentation? What is its importance	Understand	CACE551.10
12	Define biological hazards. Write its causes	Understand	CACE551.10
13	Define population explosion as a hazard.	Remember	CACE551.09
14	Write the causes of heat waves.	Understand	CACE551.09
15	Define Nuclear Explosion	Understand	CACE551.09
16	What is epicentre? Explain in detail.	Remember	CACE551.11
17	Define Focus. Explain its importance.	Understand	CACE551.10
18	What are exogenous hazards?	Remember	CACE551.10
19	Write a note on man-made landslides.	Understand	CACE551.11
20	What causes earthquakes?	Understand	CACE551.11

Part B (Long Answer Questions)

1	Write an account on the genetic disorders caused by radiation pollution.	Understand	CACE551.09
2	Write a short note on population explosion and its control.	Understand	CACE551.08
3	Write a brief note on volcanoes. What are the hazards involved?	Remember	CACE551.09
4	Illustrate the floods hazards of India in the past years.	Understand	CACE551.08
5	Explain briefly the pattern of global population growth in recent years which is causing alarm to environmental experts.	Remember	CACE551.08
6	Write a brief note on floods as a serious environmental hazard.	Understand	CACE551.08
7	Discuss in brief the various floods control measures.	Understand	CACE551.08
8	Discuss some of the measures to mitigate floods.	Remember	CACE551.09
9	What are the consequences of drought? Explain briefly	Understand	CACE551.09
10	Write a note on the drought control measures adopted across the globe.	Remember	CACE551.07
11	Write a short note on pesticide pollution.	Understand	CACE551.07
12	What are the main causes of nuclear hazards?	Understand	CACE551.04
13	Write a brief note on nuclear accidents and the Chernobyl disaster.	Remember	CACE551.04
14	Write an account on the genetic disorders caused by radiation pollution.	Remember	CACE551.04
15	Write a note on capacity building for Earthquake Vulnerability Reduction.	Understand	CACE551.03

UNIT-V

EMERGING APPROACHES IN DISASTER MANAGEMENT

Part – A (Short Answer Questions)

1.	What are warning systems? Explain briefly	Understand	CACE551.11
2.	Write short notes on mitigation planning.	Remember	CACE551.12
3.	Define total management cycle.	Understand	CACE551.12
4.	What is mitigation? What are the steps taken in it	Understand	CACE551.12
5.	Write a note on disaster cycle.	Remember	CACE551.10

6.	What is risk mapping? What is its importance?	Understand	CACE551.10
7.	What is pre-disaster? How it could be predicted?	Remember	CACE551.14
8.	What is post disaster? How it could be predicted?	Remember	CACE551.14
9.	What is structural mitigation?	Understand	CACE551.14
10.	What is non-structural mitigation?	Remember	CACE551.14
11	Define first responder in terms of disasters.	Understand	CACE551.14
12	Who is the committee for disaster management	Remember	CACE551.15
13	What is warning system. Explain it clearly	Understand	CACE551.11
14	Draw disaster cycle and explain the phases involved in it	Remember	CACE551.10
15	How mitigation helps in prevention of disasters	Understand	CACE551.12
16	What is emergency stage?	Understand	CACE551.10
17	Mention the stages of Emerging approaches in Disaster Management.	Understand	CACE551.11
18	What is the aim of pre-disaster stage? How it could be managed	Remember	CACE551.11
19	What is the aim of post-disaster stage? How the rehabilitation is provided	Understand	CACE551.11
20	What is the aim of emergency stage? Explain in detail	Remember	CACE551.12
Part – B (Long Answer Questions)			
1	Why should every village have a disaster management committee? Write short notes.	Understand	CACE551.12
2	Can you suggest some guidelines for achieving sustainable development?	Remember	CACE551.12
3	Write are the provisions of immediate relief measure to disaster affected people?	Understand	CACE551.12
4	How do engineered structures help us to withstand like floods, earthquakes, and cyclones?	Remember	CACE551.13
5	Describe the structural mitigations and non- structural mitigations that should be restored to in case of floods.	Remember	CACE551.13
6	Elaborate on the various organizations which are involved in the research and mitigation of disasters.	Understand	CACE551.13
7	How does the community of a village play the most important role in times of disaster as ‘first responder’	Understand	CACE551.14
8	How can search rescue team assist a village in times of hazards?	Remember	CACE551.14
9	Enlist the various institutions and national canterers involved in natural disaster reduction.	Understand	CACE551.14
10	Elucidate different skills and techniques adopted by a disaster management.	Remember	CACE551.15
11	Bring to light major initiatives on Disaster Preparedness in India.	Understand	CACE551.14
12	Discuss the important steps in relief distribution. Examine the problem areas during recovery phase of disaster management,	Remember	CACE551.10
13	Discuss the relationship between disaster and development with the help of examples from developed and developing countries.	Understand	CACE551.10
14	Explain the different types of damage reports. Identify the different types of rehabilitation.	Remember	CACE551.10
15	Write in brief on the post-disaster stage.	Understand	CACE551.13
16	Write a note on disaster management.	Remember	CACE551.13
17	Explain the phases of disaster management	Remember	CACE551.13
18	Enlist the different stages of disaster management. Write in detail about pre-disaster stage.	Understand	CACE551.09

19	Explain natural disasters and its mitigation strategies.	Remember	CACE551.08
20	State the guidelines for mitigation of disasters.	Understand	CACE551.09

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