

**M. Tech. I Semester II**

**Subject Name:** Disaster Management

**Subject Code:** MTGN17201

**Type of course:** Audit Course- 2

**Prerequisite:** -

**Rationale:** The course covers the complete understanding of disasters and introduces the students to various types natural disasters, their phenomenon and also undertakes the study of major disasters at national and global level. . It also focuses on the approaches for mitigating and minimizing hazards along with related hazard assessment.

**Teaching and Examination Scheme:**

TEACHING SCHEME				Theory Marks			Practical Marks		Total
L	T	P	C	TEE	CA1	CA2	TEP	CA3	100
2	0	0	0	60	25	15	0	0	

**CA1:** Continuous Assessment (assignments/projects/open book tests/closed book tests **CA2:** Sincerity in attending classes/class tests/ timely submissions of assignments/self-learning attitude/solving advanced problems **TEE:** Term End Examination **TEP:** Term End Practical Exam (Performance and viva on practical skills learned in course) **CA3:** Regular submission of Lab work/Quality of work submitted/Active participation in lab sessions/viva on practical skills learned in course

**Content:**

Sr. No	Topics	Teaching Hrs.	Module Weight age
1.	<b>Introduction:</b> Terminology of disaster management: Disaster, hazard Vulnerability ,risk, disaster and development, classification of disasters on the basis of cause and speed of onset of disasters, introduction to disaster management cycle	5	17
2.	<b>Detailed study of disasters and their effects:</b> Natural disasters-Earthquake , volcanic eruptions, landslides, Avalanches, cyclones, floods, forest fire, droughts, famines ,Manmade disasters-meltdown of nuclear reactor, industrial accidents, oil slicks and spills, terrorist attacks, wars and conflicts, outbreaks of disease, epidemics and pandemics	8	27
3.	<b>Disaster profile of India:</b> Disaster prone areas in India, study of seismic zones, flood and drought prone areas, cyclonic and coastal disasters, tsunami prone areas, need for disaster management in India, Study of major disasters at national and global level.	4	13
4.	<b>Disaster preparedness and planning:</b> Role of Technology in disaster preparedness and use of GIS,GPS, remote sensing, governmental and community preparedness, early warning systems, capacity building , public awareness	4	13
5.	<b>Disaster Response, Recovery and Mitigation:</b>	4	13

**Audit Course-2**

	Activities during disaster-evacuation ,search and rescue operation, immediate relief operations, post disaster activities, Mitigation-Concept, strategies and emerging trends in mitigation, Structural and nonstructural mitigation,		
6.	<b>Institutional mechanism for Disaster Management in India:</b> Various Government Key bodies at national and state level, Disaster management act-2005, National Guidelines and Plans on Disaster Management, National Disaster management plan-2016, National disaster mitigation fund, Role of NIDM, role of government and nongovernment organizations.	5	17

**Suggested Specification table with Marks (Theory/Practical):**

% Distribution of Marks					
R Level	U Level	A Level	N Level	E Level	C Level
20	30	20	20	10	0

**Legends: R:** Remembrance, **U:** Understanding; **A:** Application, **N:** Analyze, **E:** Evaluate **C:** Create and above Levels (**Revised Bloom’s Taxonomy**)

**Note:** This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

**Reference Text Books:**

Sr. No	Title of book /article	Author(s)	Publisher and details like ISBN	Year of publication	Publication Edition
1	Disaster Management in India: Perspectives, Issues and Strategies	Nishith Rai A.K. Singh	New Royal Book Company	2007	1st edition
2	Disaster Mitigation Experiences And Reflections	Pardeep Sahni Alka Dhameja Uma Medury	Prentice Hall Of India, New Delhi. ISBN-978-81-203-1914-1	2011	4 <sup>th</sup> edition
3	Disaster Administration And Management : Text And	S. L. Goel	Deep & Deep Publications Pvt.ltd ISBN-10 : 8184500343 ISBN-13 : 978-	2007	1 <sup>st</sup> edition

	Case Studies		8184500349		
4	Natural Disasters	David E. Alexander	Kluwer Academic London ISBN-10 : 0412047411 ISBN-13: 978-0412047411	1999	1 <sup>st</sup> edition
5	Disaster Mitigation in Asia & Pacific		Asian Development Bank, Manila  ISBN 10: 9715610048  ISBN 13: 9789715610044	1991	
6	Disasters in India : studies of grim reality	AnuKapur [et al.]	Rawat Publishers, Jaipur ISBN:8170339324	2005	

**Course Outcome:**

Sr. No.	CO Statement After learning this subject, students will be able to	Marks % weightage
CO-1	Understand the basics of various kinds of disasters and their effects.	44%
CO-2	Understand the standards of humanitarian response and practical relevance in specific type of disasters.	13%
CO-3	Understand role of modern technology, remote sensing, GIS and GPS in risk reduction	13%
CO-4	Understand the Response, Recovery and Mitigation aspect of disaster	13%
CO-5	Understand the role of various stakeholders during disasters	17%

**List of Open Source/learning website:**

- <https://nptel.ac.in/courses/105/104/105104183/>
  - Detailed study of disasters and their effects