JAIPUR ENGINEERING COLLEGE AND RESEARCH CENTRE

DEPARTMENT OF CIVIL ENGINEERING

Name of Subject	**Disaster Management**
Subject Code	**8TT6-60.2**
Semester	**VIII**
Internal Assessment	**30 Marks**
External Assessment	**120 Marks**
Credits	**3**
Name of Faculty	**Mr. Pradeep Kumar Jain** **Assistant Professor**

JAIPUR ENGINEERING COLLEGE AND RESEARCH CENTRE

CIVIL ENGINEERING DEPARTMENT

VISION

To become a role model in the field of Civil Engineering for the sustainable development of the society.

MISSION

1) **To provide outcome base education.**

2) **To create a learning environment conducive for achieving academic excellence.**

3) **To prepare civil engineers for the society with high ethical values.**

8TT6-60.2 : DISASTER MANAGEMENT

Credit: 3 **Max. Marks: 150(IA:30, ETE:120)**
3L+0T+0P **End Term Exam: 3 Hours**

SN	Contents	Hours
1	Introduction: Objective, scope and outcome of the course.	1
2	Understanding Disasters and Hazards and related issues social and environmental. Risk and Vulnerability. Types of Disasters, their occurrence/ causes, impact and preventive measures:	12
3	Natural. Disasters- Hydro-meteorological Based Disasters like Flood, Flash Flood, Cloud Burst, Drought, Cyclone, Forest Fires; Geological Based Disasters like Earthquake, Tsunami, Landslides, Volcanic Eruptions.	12
4	Man made Disasters: Textile Processing Industrial Hazards, Major Power Break Downs, Traffic Accidents, Fire Hazards.	12
5	Management roll in mitigating Disaster in Indian Textile Industries. Roll of production people in Disaster Management.	3
	Total	40

PROGRAMME OUTCOMES (PO)

1. **Engineering knowledge**: Apply the knowledge of mathematics, science, engineering Fundamentals and an engineering specialization to the solution of complex engineering problems.
2. **Problem analysis**: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions**: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems**: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society**: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability**: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work**: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication**: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance**: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning**: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

JAIPUR ENGINEEIRNG COLLEGE AND RESEARCH CENTRE

DEPARTMENT OF CIVIL ENGINEEIRNG

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs):

PEO1: Contribute to the development of civil engineering projects being undertaken by Govt. and private or any other sector companies.

PEO2: Pursue higher education and contribute to teaching, research and development of civil engineering and related field.

PEO3: Successful career as an entrepreneur in civil engineering industry.

PROGRAM SPECIFIC OUTCOMES (PSOs):

PSO1: Enhancing the employability skills by making the students capable of qualifying National level competitive examinations.

PSO 2: Inculcating in students technical competencies to deal with practical aspects of civil engineering.

PSO 3: Cognizance of social awareness and environmental necessity along with ethical responsibility to have a successful career and become an entrepreneur.

Subject: Disaster Management **Code :** 8TT6-60.2

CO-1	To understand disasters, hazards and related issues.
CO-2	To understand various natural disasters.
CO-3	To understand various manmade disasters.
CO-4	To understand roll of management in mitigation of disasters.

Subject Code	COs	Program Outcomes (POs)											
		PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12
8TT6-60.2	CO-1	1	---	---	---	---	2	2	---	---	---	---	1
	CO-2	1	---	---	2	---	2	---	---	---	---	---	2
	CO-3	1	---	---	2	---	3	---	---	---	---	---	2
	CO-4	2	2	3	2	---	3	2	2	3	---	3	3

Subject Code	COs	Program Specific Outcomes (PSOs)		
		PSO-1	PSO-2	PSO-3
8TT6-60.2	CO-1	3	3	1
	CO-2	2	3	---
	CO-3	2	3	---
	CO-4	3	3	2

Jaipur Engineering College and Research Centre, Jaipur

Department of Civil Engineering

Lecture Plan						
Subject name: Disaster Management **Subject Code: 8TT6-60.2** **Year: 4th** **Semester: 8th**		**POs** **PO1; PO2; PO3;PO4;PO6;PO7; PO8;PO9;PO11; PO12**		**COs** CO1:- To understand disasters, hazards and related issues. CO2:- To understand various natural disasters. CO3:-To understand various manmade disasters. CO4:-To understand roll of management in mitigation of disasters.		
S. No.	**Lecture No.**	**Topic to be discussed**	**COs**	**Objective of Unit**	**Outcome of Lecture and CO** **Students are able to:-**	**From page to**
I	1	Introduction: Objective, scope and outcome of the course.	NA	To aware of outcome based education	To aware of outcome based education	NA
II	2	Understanding Disasters	CO1	Understanding basics of the disaster management	Understand Disasters	T2 (2-4, 45-47)
	3	Understanding Hazards	CO1		Understand Hazards	T3 (4-8)
	4	Social issues related to disasters and hazards	CO1		Understand Social issues related to disasters and hazards	T2 (118-121)
	5	Environmental issues related to disasters	CO1		Understand Environmental issues related to disasters	T2 (161-162)
	6	Environmental issues related to hazards	CO1		Understand Environmental issues related to hazards	T2 (163-163)
	7	Understanding risk	CO1		Understand risk	T2 (7-8, 15-16, 18-20)
	8	Understanding vulnerability	CO1		Understand vulnerability	T2 (32-32, 88-89)

	9	Types of disasters	CO1		Understand Types of disasters	T2 (12-13)
	10	Occurrence of disasters	CO1		Understand Occurrence of disasters	T2 (13-15)
	11	Causes of disasters	CO1		Understand Causes of disasters	T2 (77-79)
II	12	Impacts of disasters	CO1		Understand Impacts of disasters	T2 (72-75)
	13	Preventive measures of disasters	CO1		Apply Preventive measures of disasters	T2 (4-5, 64-65)
III	14	Understanding Hydro-meteorological based disasters	CO2	Understanding various natural disasters.	Understand Hydro-meteorological based disasters	T2 (131-134)
	15	Flood	CO2		Understand Flood	T1 (224-229)
	16	Flash Flood	CO2		Understand Flash Flood	T2 (358-358)
	17	Cloud Burst	CO2		Understand Cloud Burst	
	18	Drought	CO2		Understand Drought	T1 (231-235)
	19	Cyclone	CO2		Understand Cyclone	T1 (176-198)
	20	Forest Fires	CO2		Understand Forest Fires	T1 (158-175)
	21	Understanding geological based disasters	CO2		Understand g geological based disasters	T2 (173-178)
	22	Earthquake	CO2		Understand Earthquake	T1 (1-16)
	23	Tsunami	CO2		Understand Tsunami	T1 (78-97)
	24	Landslides	CO2		Understand Landslides	T1 (72-77)

	25	Volcanic eruptions	CO2		Understand Volcanic eruptions	T1 (283-296)
IV	26	Understanding manmade disasters	CO3	Understanding various manmade disasters.	Understand manmade disasters	T1 (297-299)
	27	Textile Processing Industrial Hazards…	CO3		Understand Textile Processing Industrial Hazards	To be covered by PPT
	28	…Textile Processing Industrial Hazards	CO3		Understand Textile Processing Industrial Hazards	To be covered by PPT
	29	Major Power Break Downs…	CO3		Understand Major Power Break Downs	To be covered by PPT
	30	…Major Power Break Downs…	CO3		Understand Major Power Break Downs	To be covered by PPT
	31	…Major Power Break Downs	CO3		Understand Major Power Break Downs	To be covered by PPT
	32	Traffic Accidents…	CO3		Understand Traffic Accidents	To be covered by PPT
	33	…Traffic Accidents…	CO3		Understand Traffic Accidents	To be covered by PPT
	34	…Traffic Accidents	CO3		Understand Traffic Accidents	To be covered by PPT
	35	Fire Hazards…	CO3		Understand Fire Hazards	To be covered by PPT
	36	…Fire Hazards…	CO3		Understand Fire Hazards	To be covered by PPT
	37	…Fire Hazards	CO3		Understand Fire Hazards	To be covered by PPT
V	38	Management roll in mitigating Disaster in Indian Textile Industries…	CO4	Understanding roll of management in mitigation of disasters.	Understand Management roll in mitigating Disaster in Indian Textile Industries	T1 (33-37, 140-157, 198-202, 192-205,343-347)

	39	…Management roll in mitigating Disaster in Indian Textile Industries	CO4		Understand Management roll in mitigating Disaster in Indian Textile Industries	T2 (32-33, 47-53)
	40	Roll of production people in Disaster Management	CO4		Understand Roll of production people in Disaster Management	T2 (68-71)
Reference books:		**T1:** An Introduction to Disaster Management by S Vaidyanathan CBS Publishers and Distributors Pvt. Ltd. (ISBN: 978-93-89565-98-0) **T2:** Disaster Management by Er. Arun Kumar S. K. Kataria & Sons (ISBN: 978-93-5014-616-3) **T3:** Disaster Management and Preparedness by Dr. Nidhi Gauba Dhawan and Ambrina Sardar Khan CBS Publishers and Distributors Pvt. Ltd. (ISBN: 978-81-239-2380-2)				

Content beyond syllabus

1. Disaster warning system

   Source: Disaster Management by Er. Arun Kumar

   (ISBN: 978-93-5014-616-3) Page no. 93 – 130.

2. Hurricane

   Source: An Introduction to Disaster Management by S Vaidyanathan

   (ISBN: 978-93-89565-98-0) Page no. 242 – 271.