SRM INSTITUTE OF SCIENCE AND TECHNOLOGY
COLLEGE OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF CIVIL ENGINEERING
EVEN QUESTION PAPER

Continuous Learning Assessment	**: CLA-3**	**Date**	**: 17.11.2022**
Course Code & Course Name	**: 18CEO307T (Disaster Mitigation and Management)**	**Duration**	**: 90 minutes**
Year / Semester	**: 3rd Year/ 5th Semester**	**Maximum Marks**	**: 50**
Academic year	**: 2022-2023 (Odd Semester)**	**Mode of Exam**	**: Offline**

Course Articulation Matrix

Course Learning Outcomes (CLO):		Engineering Knowledge	Problem Analysis	Design & Development	Analysis, Design, Research	Modern Tool Usage	Society & Culture	Environment & Sustainability	Ethics	Individual & Team Work	Communication	Project Mgt. & Finance	Life Long Learning	PSO - 1	PSO - 2	PSO - 3
CLO-1 :	*Understand basic concepts of disaster and hazards of India.*	*3*	*3*			*2*								*3*	*3*	
CLO-2 :	*Acquire Knowledge on the various natural disasters.*	*3*	*3*			*3*								*3*	*3*	
CLO-3 :	*Acquire Knowledge the various manmade disasters.*	*3*	*3*			*3*								*3*	*3*	
CLO-4 :	*Understand the disaster management principles.*	*3*	*3*			*2*								*3*	*3*	
CLO-5 :	*Appreciate the modern techniques used in disaster mitigation and management.*	*3*	*3*			*3*								*3*	*3*	

Qn. No.	Question	Marks	BL	CO	PO	PI
PART A: Answer all the questions (10 × 1 = 10 Marks)						
1	Prevention, mitigation and preparedness come under ____ phase **a) Pre-disaster** b) Post-disaster c) Recovery d) Response	1	L1	CO4	1	1.3.1
2	Structural and non-structural measures of floods comes under what category? a) Preparedness **b) Mitigation** c) Response d) Recovery	1	L1	CO4	1	1.3.1

3	Which among the following Indian government agency is responsible for tsunami watch advisory? a) IMD **b) INCOIS** c) CWC d) TNSDMA	1	L1	CO4	1	1.3.1
4	In what way remote sensing of disaster helps in mitigation a) Deployment of resources **b) Prediction** c) Contingency d) Modelling	1	L1	CO5	5	5.2.2
5	The vulnerable groups such as the artisans, elderly, orphans, single women and young children would need special support to survive the impact of disasters is coming under a) **Social Rehabilitation** b) Physical Rehabilitation c) Economical Rehabilitation d) Relocation	1	L1	CO4	1	1.3.1
6	Which among the following is example for better prediction? a) Water model charts b) Air model charts c) Weather logarithmic charts **d) Weather model charts**	1	L1	CO5	1	1.3.1
7	Which among the following agency in India is responsible for preparation of the National Flood Atlas? a) Ministry of Home Affairs **b) Central Water Commission** c) Central Public Works Department d) National Institute of Ocean Technology	1	L1	CO5	1	1.3.1
8	The first Seismological observatory was set up by IMD in a) Chennai **b) Calcutta** c) Shimla d) Jammu	1	L1	CO5	1	1.3.1
9	The plan prepared for facilitating the prompt return to the normalcy and continuity of operation after a disaster is _____ a) Rescue plan b) Relief plan **c) Recovery plan** d) Emergency plan	1	L1	CO5	1	1.3.1
10	Developing and practicing an emergency plan occurs during which phase of disaster management? a) Mitigation **b) Preparedness** c) Recovery d) Response	1	L1	CO4	1	1.3.1
PART B: Answer any four questions (4 × 10 = 40 Marks)						
11	Write in detail about early warning system for flood and tsunami. - Early warning system facilities available for flood **(5 marks)** - Automated sensors are placed in or beside rivers and reservoirs throughout a designated area. - Data is then collected and sent immediately to a base station or personal computer. - In this way, appropriate forecasts are sent to authorities or communities of those potentially affected by the developing flood, as soon as possible. - Early warning system facilities available for tsunami **(5 marks)** - DART BUOYS (Deep Ocean Assessment and reporting of Tsunamis) - Report to tsunami warning Centre, when tsunami occur - Information is processed to produce a new and more refined estimate of tsunami source - Result is an accurate forecast of tsunami	10	L1, L2	CO4	1, 5	1.3.1, 5.2.2
12	Explain briefly about post disaster stages for landslide and earthquake.	10	L1, L2	CO4	1	1.3.1

	- Post disaster stage for landslide (detailed explanation on response, recovery, and rehabilitation facilities) – **5 marks** - Post disaster stage for earthquake (Detailed explanation on response, recovery, and rehabilitation facilities) – **5 marks**					
13	Write in detail about the components and phases of pre disaster stage. - Detailed explanation on prevention, preparedness and mitigation – **10 marks**	10	L1, L2	CO4	1	1.3.1
14	Write in detail about role of GIS in Disaster Management for various disasters. **– 10 marks** - GIS in prediction of various disasters - Warning and early prediction using GIS for cyclone and flood - Response and rescue operations using GIS for earthquake and landslide - Application of GIS in disaster management	10	L1, L2	CO5	2, 5	2.2.2, 5.2.2
15	Explain in detail about hazard specific mitigation plan for cyclone and chemical disasters. - Structural and non structural mitigation plan for cyclone – **5 marks** - Structural and non structural mitigation plan for chemical disasters – **5 marks**	10	L1, L2	CO5	1, 2	1.3.1, 2.2.2
16	Write in detail about seismological observatories and hydrological observatories. - Seismological observatories and applications **– 5 marks** - Hydrological observatories and applications – **5 marks**	10	L1, L2	CO5	1	1.3.1

* BL – Bloom's Taxonomy Levels (1- Remembering, 2- Understanding, 3 – Applying, 4 – Analysing, 5 – Evaluating, 6 - Creating)
* CO- Course Outcomes, PO- Program Outcomes, PI- Performance Indicator.