

JK Lakshmipat University Jaipur
INSTITUTE OF ENGINEERING AND TECHNOLOGY

End Term Examination, May 2022
B. Tech Semester VI (OE) 2021-2022

Roll No.....

CE1206 Disaster Management

Time: 2 Hrs.

Max. Marks: 35

Instructions to students:

1. Do not write anything other than your roll number on question paper.
 2. Mention all the assumptions for your answers clearly.
 3. Marks are indicated against each question.
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Q. 1. Vulnerability is an essential element for defining disaster impacts and its threat to people. How and in what ways can vulnerability to disasters be characterized? Discuss different types of vulnerability with reference to disasters.

5.0
(LO2,3)

Q.2 Disaster preparedness is the first step in any disaster management process. Prepare a Disaster preparedness plan in case of earthquake.

5.0
(LO1,2)

Q.3 Illustrate the importance of risk assessment for pre-disaster management. As an administrator, what are key areas that you would focus on in a Flood risk assessment?

5.0
(LO2,3)

Q. 4 Flood is one of the commonly occurring natural disaster around the globe. However, dams are constructed to minimize the peak discharge. The average inflow and outflow from a reservoir are recorded as given below. The initial water volume in the reservoir is $5 \times 10^6 \text{ m}^3$. What will be the final water volume in the reservoir after each day? The initial water level in the dam is 100 m. Above 100m it follows the relation as "water level = $88.753 \times (\text{water volume in the reservoir})^{0.0834}$. Find the maximum water level of the reservoir. (Note that it should be 100 m + water level comes from the above relation).

7.0
(LO1)

	15 July	16 July	17 July	18 July
Average Inflow (m^3/s)	15,000	25,000	35,000	9,000
Average Outflow (m^3/s)	8,000	14,000	20,000	15,000

Q. 5 What are the major reason behind (i) Earthquake (ii) Forest fire (iii) Land slide. (Give at least 3 reasons).

3.0
(LO1)

Q. 6: On 2nd May 2018 electricity supply that was disrupted after high-speed dust storm tore in Bharatpur, Alwar and Dholpur district of Rajasthan state. At least 36 people lost their lives and over 100 were injured as winds over 100 kmph wreaked havoc. More than 7,000 poles have been uprooted in Alwar and another 6,000 in Bharatpur. In addition, about 1,500-2,000 transformers had been damaged. Alwar, and Dholpur districts leaving behind a trail of destruction, uprooting hundreds of trees and electricity poles trees fell and power cables snapped, plunging many localities and hundreds of villages into darkness.

Develop a strategy for restoring the supply in the affected areas in the minimum time. Explain the applicable principles of disaster management to mitigate such effects on electrical infrastructure in future.

07 Marks
(LO: 4, 5)

Q. 7: Develop an effective strategy for sending the alert message to the population under some disaster situation. How are the warnings transmitted to officials and to the population?

03 Marks
(LO: 2)

all the best!