


Name: Enrolment No:			
UPES End Semester Examination, May 2024			
Course: Global Disaster Scenario Program: B.Tech in Fire and Safety Engineering Course Code: HSFS4014P		Semester: Eighth Time : 03 hrs Max. Marks: 100	
Instructions: Use pencil and scale to draw neat and clean figures wherever required.			
SECTION A (5Qx4M=20Marks)			
S. No.	List of questions	Marks	CO
Q 1	Select the correct option in the following questions: a. Tsunami can occur only during: i. Evening iii. Any time of the day or night ii. Afternoon iv. Morning b. The Richter scale expresses an earthquake: i. Magnitude iii. Duration ii. Location iv. Depth c. Which is the only active volcano in India? i. Volcano Popa iii. Volcano Etna ii. Volcano of Barren Island iv. None of the above d. The cycle of disaster consists of the following components: i. Mitigation, Preparedness, Response, Recovery ii. Preparedness, vulnerability assessment, risk assessment, recovery iii. Mitigation, Risk assessment, Response and Recovery iv. None of the above	4	CO1
Q 2	Among the various types of disasters discussed in this course, which disaster do you believe has the greatest impact on you as an individual, and why?	4	CO1
Q 3	Recall the following terms based on your understanding: a. Biosafety levels b. NDMA	2 x 2 = 4	CO1
Q 4	Differentiate between the following: a. Flash flood and urban flood b. Pandemics and epidemics	2 x 2 = 4	CO2

Q 5	Draw the wildfire triangle and explain its components.	4	CO2
SECTION B (4Qx10M= 40 Marks)			
Q 6	Draw the storm hydrograph and define its characteristic components. Explain the different factors influencing the storm hydrograph.	10	CO2
Q 7	What do you understand by disaster-resilient infrastructure? Discuss its salient features.	10	CO3
Q 8	The COVID-19 pandemic has evolved into a global crisis. To what extent is it accurate to characterize frequent viral outbreaks like this as man-made disasters? Assess and summarize your thoughts with adequate justifications.	10	CO3
Q 9	<p>The Himalayas can be entering a phase of irreversible decline because of losses to its ecology. Analyze the situation in the light of frequent disasters in the region.</p> <p style="text-align: center;">OR</p> <p>India has traditionally followed a reactive approach of disaster management. Do you think there is a need to shift our focus from the way we perceive disaster management at present? Construct and support your answer with suitable examples.</p>	10	CO3
SECTION-C (2Qx20M=40 Marks)			
Q 10	<p>How important is vulnerability and risk assessment for pre-disaster management? As an administrator, what are key areas that you would focus on in a Disaster Management System? Analyze them in detail with suitable real-world examples explaining vulnerability and risk characterization of disasters in the context of global scenario.</p> <p style="text-align: center;">OR</p> <p>Analyze the formation of cyclones in the northern and southern hemisphere. What do you understand by tropical cyclones? Elaborate how tropical cyclones differ from temperate cyclones. If your house lies on the windward side of the cyclonic storm, what are the structural mitigation measures that you will implement to safeguard your house? Answer with respect to individual components of your house: roof, doors, windows, walls, and foundation. Draw neat and clean sketches to support your answer.</p>	20	CO4

Q 11	Imagine that you are a city planner tasked with mitigating the effects of flooding in a coastal town. Assess and describe the key challenges you anticipate facing in this scenario, including potential economic, environmental, and social impacts. Propose a comprehensive plan outlining preventive measure, emergency response strategies, and long-term resilience initiatives to address these challenges effectively. Additionally, discuss the importance of community engagement and collaboration with relevant stakeholders in implementing your proposed flood management plan.	20	CO4
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