Name: **Enrolment No:**	

UPES

End Semester Examination, May 2025

Course: Disaster Management **Semester: VIth**

Program: B.Tech Civil Engineering **Time: 03 hrs.**

Course Code: HSFS3031 **Max. Marks: 100**

Instructions: <u>All questions are compulsory to attempt.</u>

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	State the various components of risk with critical points.	**04**	**CO1**
Q 2	State the equation for determination of total vulnerability along with explanation for each parameter involved.	**04**	**CO2**
Q 3	What do you understand by the term "total risk"? What is the total duration of risk exposure over a month for a person who spends five minutes twice daily crossing a bridge that is at risk of structural failure?	**02+02**	**CO1**
Q 4	Discuss the risk-vulnerability curve with salient features.	**04**	**CO1**
Q 5	Enumerate the various elements essential for vulnerability estimation in the field.	**04**	**CO2**

SECTION B
(4Qx10M= 40 Marks)

Q 6	Explain the disaster response phase of disaster management along with its relevance, critical points and suitable examples. OR Explain the disaster mitigation phase of disaster management along with its relevance, critical points and suitable examples.	**10**	**CO1**
Q 7	Evaluate the Disaster Management Act, 2005, focusing on its fundamental goals and elaborating on its major provisions and structural highlights within the national disaster governance framework.	**10**	**CO4**
Q 8	Explain the environmental consequences triggered by different categories of disasters, providing relevant examples. Further, elaborate on how civil engineers can contribute to minimizing these impacts through environmentally responsible planning and design strategies.	**07+03**	**CO3**
Q 9	Examine the risk expenditure cycle with a neat sketch, highlighting its principal attributes.	**10**	**CO2**

SECTION-C (2Qx20M=40 Marks)			
Q 10	Explain the core dimensions of vulnerability, and their associated components and measures essential for vulnerability assessment. Illustrate your explanation with a schematic diagram highlighting key elements of vulnerability assessment.	**20**	**CO2**
Q 11	Evaluate the National Disaster Management Policy of India with respect to its vision, guiding principles, and strategic objectives. Discuss how this policy framework aligns with the roles and responsibilities of civil engineers in disaster risk reduction, infrastructure resilience, and sustainable development. OR Evaluate the institutional framework of the National Disaster Management Structure in India, outlining the roles, responsibilities, and key functions at each administrative level.	**20**	**CO4**