Name: **Enrolment No:**	

UPES

End Semester Examination, May 2025

Course: EIA, LCA & Risk Assessment
Semester: VI
Program: B.Tech. Sustainability Engineering **Time : 03 hrs.**
Course Code: SUEN3009 **Max. Marks: 100**

Instructions: Please attempt all questions from Section "A" and Section "B" and attempt any two questions from Section C

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q	Statement of question (Please attempt all questions)		
Q.1	What is the role of public participation in EIA?	**5**	**CO1**
Q.2	Define scoping in the context of Environmental Impact Assessment.	**5**	**CO1**
Q.3	What is Inherently Safer Design Concept?	**5**	**CO3**
Q.4	Describe LOPA and how is it used to achieve desired level of safety?	5	CO2

SECTION B
(4Qx10M= 40 Marks)

Q	Statement of question (Please attempt all questions)		
Q.5	Describe the key stages of the Environmental Impact Assessment (EIA) process when planning a highway project. Highlight how each step contributes to identifying, predicting, and mitigating potential environmental impacts.	**10**	**CO5**
Q.6	Discuss the process and significance of Life Cycle Assessment in evaluating the environmental footprint of a product or service.	**10**	**CO4**
Q.7	Explain in detail the "Description of Environment" phase of the EIA process for a hydropower project. How is the study area defined, and what are the major environmental components that need to be assessed?	**10**	**CO4**
Q.8	Explain the difference between Individual and Societal Risk. Give Example.	**10**	**CO3**

SECTION-C
(2Qx20M=40 Marks)

Q	Statement of question (Please attempt any two questions, please note question no. 11 is compulsorily however the internal choice is given among Q.9 and Q.10))		**CO5**
Q.9	Evaluate the effectiveness of an Environmental Management Plan (EMP) proposed for a thermal power plant in the context of securing environmental clearance during the EIA process. How does the EMP address key environmental concerns and ensure compliance? or	**20**	**CO5**
Q.10	Evaluate the adequacy of the Terms of Reference (ToR) issued for a hydropower project in ensuring comprehensive environmental assessment and compliance with MoEFCC guidelines.	**20**	**CO5**
Q.11	Discuss how various components of Process Safety Management (PSM) are interrelated. In what ways do they work together to enhance industrial safety and regulatory compliance?	**20**	**CO4**