Name: **Enrolment No:**	

UPES

End Semester Examination, May 2025

Course: Advanced Geomorphology **Semester: II**

Program: MSc-H-Applied Geology **Time : 03 hrs.**

Course Code: PEGS7043 **Max. Marks: 100**

Instructions: All questions are compulsory. Internal choice is available in questions 8 and 11.

SECTION A (5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	Define geomorphic mapping. Mention any two tools used in it.	**4**	**CO1**
Q 2	Distinguish between endogenic and exogenic processes with examples.	**4**	**CO2**
Q 3	Define stream order. Highlight its importance in morphometric analysis	**4**	**CO1**
Q 4	List the major fluvial landforms and briefly describe any two.	**4**	**CO1**
Q 5	Describe geomorphic hazard. Give two examples from the Himalayan region.	**4**	**CO1**
SECTION B (4Qx10M= 40 Marks)			
Q 6	Explain the process of sediment transport in rivers. Describe how sediment load is measured.	**10**	**CO2**
Q 7	Discuss the concept of plate tectonics and its role in the formation of large mountain belts.	**10**	**CO1**
Q 8	Explain the principles of Stream Power Incision Modeling (SPIM). Analyze the factors influencing stream power and their role in basin evolution. **OR** Describe Gradient Length Analysis (GLA) and its application in drainage basin studies.	**10**	**CO3**
Q 9	Discuss the advantages and limitations of using remote sensing and GIS in monitoring geohazards in mountainous terrains.	**10**	**CO3**
SECTION-C (2Qx20M=40 Marks)			
Q 10	Critically evaluate the various Earth surface processes and their significance in shaping landforms. Illustrate with examples from the Himalayas.	**20**	**CO4**
Q 11	Discuss the use of geospatial and RADAR-based techniques in monitoring geomorphic hazards. Highlight their advantages with reference to Himalayan case studies. **OR** Prepare a geomorphic hazard zonation plan for a hypothetical Himalayan watershed using geomorphic parameters.	**20**	**CO4**