Name: **Enrolment No:**	

UPES

End Semester Examination, May 2025

Course: Metamorphic Petrology **Semester: II**

Program: M Sc Applied Geology **Time : 03 hrs.**

Course Code: PEAG 7007 **Max. Marks: 100**

Instructions: Answer all questions. There are internal choices in Q9 and Q11.

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	Describe in brief hydrothermal metamorphism.	**4**	**CO1**
Q 2	Distinguish between xenoblastic and idioblastic mineral grains.	**4**	**CO1**
Q 3	List four metamorphic rock types displaying foliated fabric.	**4**	**CO1**
Q 4	Enumerate four facies of contact metamorphism with increasing temperature.	**4**	**CO1**
Q 5	List four facies of regional metamorphism with increasing pressure.	**4**	**CO1**
SECTION B (4Qx10M= 40 Marks)			
Q 6	With suitable figure distinguish between schist and gneiss.	**10**	**CO2**
Q 7	Draw suitable diagrams to illustrate mineral assemblages associated with contact metamorphism.	**10**	**CO2**
Q 8	Describe Khondalite along with its associated mineral assemblages.	**10**	**CO3**
Q 9	Draw metamorphic facies diagram illustrating pressure and temperature range of different facies. **OR** Distinguish between zeolite and prehnite pumpellyite facies metamorphism.	**10**	**CO3**
SECTION-C **(2Qx20M=40 Marks)**			
Q 10	Draw ACF diagram of hornblende-hornfels facies. Define four reactions transitional to and within the hornblende hornfels facies.	**20**	**CO4**
Q 11	Write in detail the igneous and sedimentary mineral assemblages stable in granulite facies. Write five mineral reactions relevant to granulite facies. **OR**	**20**	**CO5**

	Review and describe in detail the igneous and sedimentary mineral assemblages stable in blueschist facies. Write five mineral reactions relevant for Blueschist facies.		