


Name:			
Enrolment No:			
UPES End Semester Examination, December 2024			
Course: M Sc Applied Geology Program: Igneous Petrology and Geochemistry Course Code: PEAG 7003		Semester: I Time : 03 hrs. Max. Marks: 100	
Instructions: Attempt all questions. There is internal choice in Q 8 and Q 10.			
SECTION A (5Qx4M=20Marks)			
S. No.		Marks	CO
Q1	Enumerate four subsystems of Earth supersystem.	4	CO1
Q2	Define ecliptic plane of earth.	4	CO1
Q3	Define Karman line.	4	CO1
Q4	Enumerate four minerals found in lunar rocks	4	CO1
Q5	Differentiate between asteroid and meteorite.	4	CO1
SECTION B (4Qx10M= 40 Marks)			
Q6	Discuss the role of earth's atmosphere in enabling the development of life on earth?	10	CO2
Q7	Draw H-R diagram and discuss the relationship between luminosity and surface temperature of stars.	10	CO2
Q8	Discuss the role of experimental petrology in understanding the genesis of igneous rocks. OR With suitable diagram, describe five textures obtained in igneous rocks.	10	CO3
Q9	Discuss the function and working principle of XRF.	10	CO3
SECTION-C (2Qx20M=40 Marks)			
Q10	Discuss in detail how rare earth element spider plots help understand the petrogenesis of igneous rocks. OR Describe fractionation and discuss in detail different mechanisms of fractionation in igneous rocks.	20	CO4
Q11	With suitable diagrams, describe different structures found in an igneous province.	20	CO5