Name:

Enrolment No:



UPES

End Semester Examination, December 2023

Course: Exploration Geology Semester: V

Program: B.Sc. Geology (Hon)

Course Code: PEGS3039

Time : 03 hrs.

Max. Marks: 100

Instructions: Answer all questions. However, there is internal choice in Q9 and Q11

SECTION A (5Qx4M=20Marks) S. No. Marks \mathbf{CO} Q 1 List out the various stages of sampling during mineral exploration 4 CO₁ Describe the classification methods of ore forming process Q 2 4 CO₂ Q 3 Explain the setting of Cut-off grade with actual grade from given figure. Cut-off grade Waste Ore correctly Estimated grade misclassified as ore **CO3** 4 Cut-off grade Ore misclassified Waste as waste correctly classified Actual grade Explain the term dry drilling and wet drilling with example Q 4 4 CO₂ Q 5 List out the steps for ore reserve prospecting and exploration 4 **CO1 SECTION B** (4Qx10M= 40 Marks) Q 6 Explain the logging of drillhole for samples in subsurface investigation 10 CO₄ of ore reserve Describe the geophysical methods for ore deposit prospecting O 7 10 CO₂

Q 8	Demonstrate the role of remote sensing with emphasis of hyperspectral remote sensing in mineral prospecting	10	СОЗ
Q 9	How ore sampling data can be analyzed using mean, median and standard deviation?		
	OR	10	CO2
	How are correlation coefficient and regression analysis used in evaluation of mineral prospects?		
SECTION-C			
(2Qx20M=40 Marks)			
Q 10	Evaluate the Rotary drilling methods, its advantage, and limitations	20	CO4
Q 11	Develop a conventional methods of ore reserve estimations. OR	20	CO5
	Develop a geostatistical methods of ore reserve estimations.		