

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, January 2021

Program: M.Sc. (Petroleum Geosciences)

Course: Igneous & Metamorphic Processes

Course Code: PEGS-7005

Semester: I

Time: 3 hrs

Max. Marks:100

Number of pages 1

SECTION-A (6 x 5=30)

Attempt all questions

Sl. No.	Answer in one or two lines	Marks	CO
Q1	Describe the distribution of silicate tetrahedra for a single chain silicate mineral with example.	5	CO1
Q2	What is unit cell and coordination number of a crystal?	5	CO1
Q3	What is the difference between concordant and discordant igneous body?	5	CO2
Q4	What is Bowens Reaction Series and what is its importance in igneous rock crystallization process?	5	CO2
Q5	What is the difference between Equigranular and Inequigranular igneous texture?	5	CO2
Q6	Propose an igneous rock classification scheme with reference to color of the rock.	5	CO3

SECTION-B (5 x 10=50)

Attempt all questions.

	Answer in few lines		
Q7	Describe the following igneous structures a. Pillow lava b. Columnar joints	10	CO2
Q8	What is CIPW norm and what is its importance in igneous rock classification?	10	CO3
Q9	What are the parameters that control viscosity of the magma? Illustrate your answer with example.	10	CO5
Q10	What is crystal fractionation and what is its importance in magma differentiation?	10	CO5
Q11	What is solid solution? Describe crystallization pattern of a binary igneous system with solid solution.	10	CO4

SECTION-C (20 x 1=20)

Attempt all

Q12	a. Write a comprehensive essay on which tectonic setting we can expect igneous activity. Illustrate your essay with sketches. b. Describe different layers of oceanic crust.	20	CO5
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