

Name:

Enrolment No:



## UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2021

Programme Name: GSE

Course Name : Economic Geology

Course Code : PEGS 4012

Nos. of page(s) : 02

Semester : VII

Time : 03 hrs

Max. Marks : 100

**Instructions:** An internal option is given in questions 5, 9 & 11.

Section A (Short answer type from Q1 to Q5 : 4 marks each)

Section B (Short notes type from Q6 to Q9: 10 marks each)-

Section C (Q10 and Q11, Long answer type: 20 Marks each)

### SECTION A [Attempt All Questions] =20 Marks

S. No.		Marks	CO
Q 1	Define: Primary Ore and Black Smoker Deposits.	4	CO1
Q 2	Define the tonnage and grade of Ore.	2+2	CO2
Q 3	Illustrate Ore formation in Contact metamorphism and SKARN Deposition process.	2+2	CO2
Q 4	Give the list of iron and copper ore minerals.	2+2	
Q 5	Define any four physical properties for identification of minerals.	4	CO2
	OR Define the coal types.	2+2	

### SECTION B [Attempt All Questions]=40 Marks

Q 6	a- Explain the residual mineral segregation with example. b- Discuss the geological distribution of copper ore deposits in India.	5 5	CO3
Q 7	<b>Write a short note on:</b> i- Bauxite ore formation ii- Secondary mineral deposits iii- Veins type of ore deposition iv- SEDEX- Deposits v- Economic Significance of Kimberlite	2X5	CO3
Q 8	Discuss in brief, the geological process of origin and occurrences of gold economical extraction from ore.	10	CO3
Q 9	Explain the Orthomagmatic and Hydrothermal ore forming process.	5+5	CO4
	OR Explain, Filter Pressing, Crystal settling and Crystal flotation process for separation of crystals from molten magma.	10	

### SECTION-C [ Question 10 is compulsory] =40 Marks

Q 10	a- Why Carbonatite do not carry Diamonds, however Diamonds deposits in Kimberlite. Justify the answer with geological concepts.	5+5	CO4
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	b- How ore and gangue minerals could precipitate from hydrothermal solutions?	<b>5+5</b>	
Q 11	Discuss the geological formation mechanism for all coal types' deposition. Explain, Ultimate and Proximate analysis methods to analyze the coals.  OR a- Discuss the geological and geochemical methods for mineral exploration. b- Explain the Gravity methods, which apply in mineral and ore exploration.	<b>10+10</b>  <b>10+10</b>	<b>CO4</b>