



Name:
Enrolment No:

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2021

Course: Introduction to Geology
Programme: B.Tech APE-UP
Time: 03 hrs.

Semester: III
Course Code: PEGS 2012
Max. Marks: 100

Instructions:

- 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)
- An internal option is given in questions 9 & 11.

SECTION A
(Short answer/ Type) (5Q x 4M = 20 Marks)

S.N.		Marks	CO
Q 1	Define the formation process of meander cut-offs "Oxbow Lake".	4	CO1
Q.2	Explain the rock weathering and erosion.	4	CO2
Q.3	Illustrate in brief about Interior and Exterior of the Earth.	4	CO2
Q.4	Define four characteristic properties to identify a Mineral with an example.	4	CO1
Q.5	Match the right answer for Group I with corresponding geomorphic features given in Group II. Group I: P- Dissolution, Q- Abrasion, R- Deposition, S- Onion skin weathering, Group II: 1- Mushroom rocks, 2- Exfoliation domes, 3- Sinkholes, 4- Moraines,	4	CO3

SECTION B
(Scan and upload) (4Q x 10M = 40 Marks)

Q.6	Explain in brief about the origin of the earth and compare the Big bang and Nebular hypothesis.	10	CO1
Q.7	Draw a labeled cross-section profile of a sand dune and define how these topographical features are developed in arid regions. Explain any four types of sand dunes.	5+5	CO4
Q.8	Explain the modern theory of plate tectonics and three different types of plate boundaries supported by annotated diagrams.	10	CO2
Q.9	Draw and explain five important types of primary sedimentary structures.	5*2= 10	CO3
OR			
	Explain the process of formation of Igneous rocks. Based on mode of occurrence explain five different forms of intrusive igneous rocks supported by a labeled diagram.		

SECTION-C			
(Scan and upload)		(2Q x 20M = 40 Marks)	
Q.10	a) Explain the role of stratigraphy and micropaleontology in petroleum exploration. b) Draw and explain in detail about any four important Principles of Stratigraphy. c) Draw and explain four important types of unconformities and their role in hydrocarbon trap formation.	4+8+8	CO4
Q.11	Draw and explain the classification of Folds based on the following: a) Draw and explain various components of a Fold. b) On the basis of axial plane classify and describe the different types of Folds in the rocks (Draw labeled sketches to support your answer). c) Explain tectonic and non-tectonic causes of folding.	(5+10+5)	CO5
OR			
	a) Illustrate Dip and strike. b) Classify and describe the different types of faults in rocks based on the apparent movement of the blocks. (Draw labeled sketches to support your answer). c) Explain five important evidences of recognition of faults in the field.	(5+10+5)	

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