

Name:	
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
Supplementary Examination, December 2023

Course Name: Geological & Geophysical Methods of Exploration	Semester: V
Programme Name: B. Tech APE-U	Time: 03 hrs
Course Code: PEGS3016	Max. Marks: 100

SECTION A (30 M)

- 1. Each question will carry 5 Marks**
- 2. Instruction: Attempt all questions**

S.No.	Questions	Marks	CO
Q 1	List out the favorable geological condition for hydrocarbon formation	05	CO1
Q 2	List out the well logging devices for reservoir property measurements	05	CO2
Q 3	What is gravity anomaly?	05	CO2
Q 4	What is role of magnetic method in hydrocarbon exploration?	05	CO3
Q 5	Explain how the geological factors control the reservoir quality.	05	CO3
Q6	List the significance of Geochemical methods for petroleum exploration	05	CO1

SECTION B (50 M)

- 1. Each question will carry 10 Marks**
- 2. Instruction: Write short note**

Q 7	Explain the different types of survey being conducted in seismic method	10	CO4
Q 8	Explain the concept of NMO correction	10	CO4
Q 9	Describe in detail the procedure of geological mapping in a region	10	CO3
Q 10	Illustrate secondary migration and accumulation of hydrocarbons in a system	10	CO1
Q 11	Describe the general scheme of petroleum formation. OR Evaluate the steps for seismic data processing	10	CO3

Section C (20 Marks)

- 1. Each question will carry 20 Marks**
- 2. Instruction: Write long answer**

Q 12	Give an overview of Geophysical methods in Petroleum Engineering. Evaluate the various applications of geophysical methods in Hydrocarbon exploration	20 (10+10)	CO5
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OR

Explain:

- a) Post burial changes in porosity.
- b) For clay-free sands, the reduction in porosity with increasing sorting coefficient is greater for coarse sand than for fine sand.

20
(10+10
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