

Name
Enrolment No.



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2019

Programme: M Tech
Course Name: Methods in Petroleum Exploration
Course Code: PEGS7002
Nos of page(s): 01
Instructions: All questions are Compulsory.

Semester: I
Time : 03 hrs.
Max. Marks : 100

SECTION A

S.No.		Marks	CO
Q 1	What are the methods with their measured inputs used in Petroleum Exploration?	4	CO1
Q 2	How the sedimentary basins are classified based on plate tectonics. Describe the petroleum habitat of convergent basins.	4	CO2
Q 3	What is seismic survey? Why seismic method is widely used in petroleum exploration?	4	CO5
Q 4	Define Geochemical anomaly. How geochemical methods are used in petroleum exploration.	4	CO2
Q 5	Explain the differences in gravity and magnetic prospecting.	4	CO2

SECTION B

Q 6	Write short notes on any two: a) Requirements for exploring a basin for Oil & gas (4M) b) Seismograph and Seismogram c) Geophone and Hydrophone	4+4	CO3
Q 7	What are Gravity Corrections. Describe application of gravity method in petroleum exploration. Support answer with an example.	8	CO2
Q 8	What are different types of spread in seismic data acquisition. Which type of spread will be useful in shallow prospect identification.	8	CO3
Q 9	Describe seismic method of exploration. What are different types of seismic surveys and their uses in hydrocarbon exploration.	8	CO3
Q 10	What is the NMO correction in seismic reflection? Explain with a diagram. OR What is the importance of Stacking in seismic reflection and how it is achieved?	8	CO4

SECTION C

Q 11	How Seismic exploration is done in onshore? Describe with a flow chart. OR Discuss the Vertical Seismic Profiling (VSP) survey and its use in seismic interpretation.	20	CO5
Q 12	Describe Exploration's Task with a flow chart. How the qualitative and quantitative Seismic Interpretation of Seismic Data is done for firming up a drillable prospect.	20	CO5