

Name:
Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, MAY 2023

Programme Name: M.Sc. (Petr. Geosci.)
Course Name : Unconventional Resources
Course Code : PEGS 7032
Nos. of page(s) : 02

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

Instructions: All questions are compulsory

SECTION A

S. No.		Marks	CO
Q 1	Differentiate conventional and unconventional reservoir with suitable example.	4	CO1
Q 2	Describe the kerogen types and their role in the hydrocarbon generation.	4	CO1
Q 3	Briefly describe two major drilling technique used in unconventional reservoir.	4	CO2
Q 4	Describe the reservoir stimulation issues associated with unconventional hydrocarbon production.	4	CO2
Q 5	Explain in brief about gas hydrate with neat sketch.	4	CO1

SECTION B

Q 6	Explain the common issues of drilling, evaluation, and stimulation during hydrocarbon production from unconventional reservoir. OR Explain the structure and composition of gas hydrate	10	CO1
Q 7	Illustrate hydraulic fracturing mechanism used in tight reservoir.	10	CO2
Q 8	Correlate methane content and adsorption capacity of coal for formation evaluation	10	CO3
Q 9	Differentiate the direct and indirect method for detection of gas content in the coal.	10	CO3

SECTION C

Q 10	Describe the following in detail: (a) Workflow for Shale Reservoir (b) Recovery factor	20	CO3
Q 11	Classify oil shale based on the depositional history and mineral content with suitable justification and example. OR	20	CO4

	Illustrate the extraction method of shale oil and gas as well as coal bed methane from the unconventional reservoir		
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