

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End-Semester Examination, December 2022

Programme Name: B. Tech (APE UP)

Course Name : Unconventional Hydrocarbon Exploitation

Course Code : PEGS 3015P

Nos. of page(s) : 2

Semester: 5

Time : 3 hrs

Max. Marks : 100

Instructions: (i) This is a closed book exam.

SECTION A

S. No.	Statement (s)	Marks	CO
Q 1	Illustrate the permeability of various conventional and unconventional hydrocarbon resources through the schematic diagram showing the resource pyramid or triangle.	4	CO1
Q 2	How does the various post-depositional events effect the tight nature of tight gas and oil ?	4	CO2
Q 3	What are the various unconventional sources of natural gas? Give its composition	4	CO3
Q 4	What do you understand by main stage CBM gas formation? (maximum five lines)	4	CO4
Q 5	Why is tar sand categories as unconventional hydrocarbon? Give reasons (<i>maximum of six lines</i>)	4	CO5

SECTION B

Q 6	How does the kerogens of type I, II, III, and IV differ from one another? Use a table (compulsory) to state your answer.	10	CO1
Q 7	How does the primary oil/gas migration differs from that of secondary oil/gas migration. Use a table (compulsory) to state your answer.	10	CO2
Q 8	With the help of a proper labelled diagram, explain the processes involved in in-situ retorting process using externally generated hot gas.	10	CO3
Q 9	Describe the in-situ production techniques for tar sand.	10	CO5

SECTION-C

Q 10	Provide your answer in detailed about the factors that affect the distribution as well as producibility of a coal bed methane gas of biogenic origin.	20	CO4
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	OR		
	Provide your answer in detailed about the factors that affect the distribution as well as producibility of a coal bed methane gas of thermogenic origin.		
Q 11	Describe in details about the characteristics (or attributes) of a basin centered gas system type of a tight gas reservoir.	20	CO3