Name
Enrolment No.

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

Programme Name: B. Tech APE UP — Semester: V
Course Name: Unconventional Hydrocarbon Exploitation — Time : 03 hrs.
Course Code: CEEG 323 — Max. Marks : 100
Nos of page(s): 01
Instructions: All questions are Compulsory.

SECTION A

S.No.		Marks	CO
Q 1	Classification of unconventional hydrocarbons	4	CO1
Q 2	What is CBM? How CBM is different from conventional gas?	4	CO2
Q 3	How the Kerogen types are classified based on Rock Eval Pyrolysis data?	4	CO3
Q 4	Elements of a successful shale gas play	4	CO4
Q 5	What is Oil Shale? How it is different from shale oil	4	CO2
	SECTION B		
Q 6	Write short notes on any two: a) Coal rank and its relationship with CBM generation b) Permeability jail c) Volcanic/Basement hydrocarbon reservoirs-Indian example	8	CO3
Q 7	Describe characteristics of Tight gas reservoirs. What make them unconventional? What are the factors to be considered for hydrofracturing in Shale for shale gas?	8	CO2
Q 8	Write short notes on, a) Cleats in coal and b) Flow of gas through coal seams.	4+4	CO4
Q 9	What is Gas hydrate? What are the challenges in its exploitation?	8	CO5
Q 10	What are the critical issues related with Exploration, Evaluation, Drilling, Well Completion and Stimulation of Unconventional tight reservoirs? **OR** Illustrate the scenario of CBM resource & reserves, exploration & exploitation of Coal Bed Methane in India.	8	CO3 CO4
	SECTION C		
Q 11	a) Illustrate Drilling Technology of a CBM well b) What is heavy oil? Describe in detail the heavy oil occurrences and production in India.	20	CO4 CO5
Q 12	Critique on the current status of exploration and exploitation of Shale Gas in India. **OR** Describe in detail the Shale gas prospectivity of any two major sedimentary basins of India	20	CO3