Name: Enrolment No:	UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May, 2020

Programme Name: B. Tech (Geoscience Engineering) **Semester : VIII**
Course Name : Resource Economics and Risk Management in Exploration **Time : 03 h**
Course Code : PEEO 402 **Max. Marks : 100**
Nos. of page(s) : 2 (two)
Instructions: Internal Choice for Questions 9, 10 and 11

SECTION A

S. No.		Marks	CO
1.	Are Extra-heavy Oil and Bitumen Resources/ Reserves?	**5**	**CO4**
2.	Explain "permeability jail"?	**5**	**CO2**
3.	Differentiate Tight Gas – Tight Oil and – Coal Bed Methane based upon 2 Key Characteristics?	**5**	**CO3**
4	When will 'Economies of Scale' be achieved in Oil & Gas Industry?	**5**	**CO4**
5.	When CBM/ Gas Hydrate are considered as Continuous-type Deposit, what is Continuous-type deposit?	**5**	**CO1**
6.	List challenges for Forecasting a) Conventional and b) Unconventional Resources?	**5**	**CO1**
	SECTION B		
7.	List Methods for Estimating the Range of Uncertainty in Recoverable Quantities? Explain any three Methods?	**1+3+3 +3**	**CO2**
8.	Differentiate a) Approved for Development, b) Development on Hold, and c) Development Not Viable ?	**10**	**CO3**
9a.	How Trap Geometry is possible using seismic estimation of reserves and resources?	**10**	**CO2**
	(OR)		

9b.	Give detailed application of Surveillance, 3D seismic analysis application?	**10**	**CO2**
10a.	How the challenges in Performance Extrapolation and DCA at the Reservoir Level may be addressed?	**10**	**CO2**
	(OR)		
10b.	Is Statistical Aggregation of Well-Level Proved Estimates better of DCA? Explain?	**10**	**CO2**
11a.	Explain how traditional methods used in the estimation of gas reserves might overstate recoverable shale gas reserves?	**10**	**CO3**
	(OR)		
11b.	Justify with reasons on why economic viability of producing shale gas is questioned?	**10**	**CO3**
	SECTION-C		
Under a typical production-sharing agreement, the contractor is responsible for the field development and all exploration and development expenses. In return, the contractor recovers costs (investments and operating expenses) out of the gross production stream. The contractor normally receives payment in oil production and is exposed to both technical and market risks.			
12.	Differentiate Technical Risk and Market Risk in a) Conventional Hydrocarbons and b) Unconventional Hydrocarbon Exploration?	**20**	**CO2**