Name: Enrolment No:	UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2018

Course: Fundamentals of Oil and Gas Business (CSOG2001) **Semester: 3rd**
Programme: OGI
Time: 03 hrs. **Max. Marks: 100**
Instructions:

SECTION A

S. No.		Marks	CO
Q 1	Explain source rock and state its classification?	4	CO1
Q2	What are the physical properties of reservoir rock?	4	CO1
Q3	What are primary and secondary migration?	4	CO1
Q4	What are the issues related to CBM?	4	CO2
Q5	Explain the concept of geo chemical method used in hydrocarbon exploration.	4	CO2, CO1
	SECTION B		
Q 6	Discuss various methods of crude oil transportation.	10	CO3
Q7	What are the medium term objectives for exploration and production as per the hydrocarbon policy 2025.	10	CO1
Q8	Explain briefly the factors controlling the occurrence of the hydrocarbons.	10	CO2
Q9	Explain the following types of traps: a. structural trap b. stratigraphic trap c. combination traps OR Explain the following geographical method: a. sub surface b. trial pit	10	CO2, CO1
	SECTION-C		
Q 10	Explain the following geophysical methods of oil exploration.	20	CO2

	a. Magnetic b. Gravity c. Seismic		
Q11	Explain the following methods of estimating the oil and gas reserves: (5 marks each) a. Volumetric, b. Decline analysis, c. Material balance calculations for oil reservoirs, d. Material balance calculations for gas reservoirs OR Discuss the following in context to petroleum industry: a. Weighted average cost of capital b. Net present value c. Deterministic model d. Probabilistic model	**20**	**CO2** **CO3**

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Name of Examination (Please tick, symbol is given)	:	**MID**		**END**	☐	**SUPPLE**	
Name of the School (Please tick, symbol is given)	:	**SOE**	☐	**SOCS**		**SOP**	
Programme	:	**OGI**					
Semester	:	**3rd**					
Name of the Course	:	**Fundamentals of Oil and Gas**					
Course Code	:	CSOG 2001					
Name of Question Paper Setter	:	**Dr. Aviral Sharma**					
Employee Code	:	**40001814**					
Mobile & Extension	:	**9419165244/9596796929**					
Note: Please mention additional Stationery to be provided, during examination such as Table/Graph Sheet etc. else mention "NOT APPLICABLE":							

FOR SRE DEPARTMENT		
Date of Examination	:	
Time of Examination	:	
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Note: - Pl. start your question paper from next page

Model Question Paper (Blank) is on next page

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SECTION A

S. No.		Marks	CO
Q 1	What are the issues related to CBM?	4	CO1, CO2
Q2	Explain geo chemical methods?	4	CO1
Q3	What are the salient features of Hydrocarbon policy -2025.	4	CO1
Q4	What do you understand by intelligent well.	4	CO2
Q5	Explain rotary drilling rig?	4	CO1
	SECTION B		
Q 6	Explain the tubing and casing in context of fracturing?	10	CO3
Q7	Write a short note on metamorphic rocks and compare them with sedimentary rocks.	10	CO2
Q8	Define sedimentary basin and its categories?	10	CO2,CO1
Q9	Explain the following types of traps: d. structural trap e. stratigraphic trap f. combination traps OR Explain the following geographical method: c. sub surface d. trial pit	10	CO2,CO1
	SECTION-C		
Q 10	Explain the following: (4 marks each) e. Conventional wells f. Horizontal wells	20	CO2

	g. Designer wells h. Multilateral wells i. Sidetrack wells		
Q11	Discuss the various parameters (events and actions by individuals as well as organizations and countries), which can have an impact on the price of crude oil in the international markets. OR Explain the following methods of estimating the oil and gas reserves: (5 marks each) a. Volumetric, b. Decline analysis, c. Material balance calculations for oil reservoirs, d. Material balance calculations for gas reservoirs	**20**	**CO3, CO2**