

Name:	 UPES UNIVERSITY WITH A PURPOSE
Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, December 2019

Course: Introduction to Petroleum Operations

Semester: III

Program: B.Tech APE (Gas)

Time 03 hrs.

Course Code: PEAU 2002

Max. Marks: 100

Instructions:

- 1. The question paper consists of three sections.**
- 2. Answer the questions section wise in the answer booklet.**
- 3. Neat Diagrams must be drawn wherever necessary.**

SECTION A (5 x 4=20 Marks)

S. No.	Question	Marks	CO
Q 1.	Discuss the three major activities involved in discovering a petroleum reservoir.	5	CO1
Q 2.	What is the purpose of well casing and cementing the casing?	5	CO2
Q 3.	Explain the basics of drill stem test operations.	5	CO3
Q 4.	Write short notes on core analysis.	5	CO4

SECTION B (10 x 4= 40 Marks)

Q 5.	Explain various well activation methods.	10	CO3
Q 6. (a)	What are the major components of well logging unit and well logging set up?	5+5	CO4
(b)	Discuss the principle of Density logging and its limitations.		
Q 7.	What are the assumptions and fundamentals used in sizing gas-oil separators?	10	CO5
Q 8.	What are the most important gas sweetening processes and the factors to be considered in the selection of a given sweetening process?	10	CO6

SECTION-C (20 x 2= 40 Marks)

Q 9.	With a schematic sketch, explain the process and internal components of any one of the commercial type gas-oil separator.	20	CO5
Q 10. (a)	Sketch and briefly describe a two stage desalting process. What is the main advantage of two-stage desalting process over a single stage desalting process?	10	CO6
(b)	Describe the principles of operation of the stage vaporization with stripping gas in the crude oil sweetening processes.	10	

OR

Q 10. (a)	List different types of storage tank. What is the difference between floating roof tanks and fixed roof tanks? Which one requires the installation of a vapory recovery unit? Why?	10	CO6
(b)	Explain the most common dehydration method used for natural gas processing?	10	