



PRESIDENCY UNIVERSITY

BENGALURU

Roll No.														
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End - Term Examinations – MAY 2025

Date: 31-05-2025

Time: 01:00 pm – 04:00 pm

School: SOE	Program: Bachelor of Technology (B.Tech)	
Course Code : PET1013	Course Name: Fundamentals of Oil and Gas Operations	
Semester: II	Max Marks:100	Weightage: 50%

CO - Levels	C01	C02	C03	C04
Marks	20	25	25	30

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.

10Q x 2M=20M

1.	Memorize some petroleum-based products.	2 Marks	L1	C03
2.	Define wildcat well.	2 Marks	L1	C03
3.	Describe Nuclear energy and hydroelectric energy.	2 Marks	L1	C03
4.	Name the three stages involved in the generation of fossil fuels.	2 Marks	L1	C03
5.	Define reserves and mention its different types.	2 Marks	L1	C03
6.	Define kick and blowout.	2 Marks	L1	C04
7.	Identify the function of HWDP.	2 Marks	L1	C04
8.	Recall basin in oil and gas along with an example.	2 Marks	L1	C04
9.	Identify the function of Grapple Spear.	2 Marks	L1	C04
10.	Outline two functions of blowout preventer.	2 Marks	L1	C04

Part B

Answer the Questions.

Total Marks 80M

11.	Summarize a brief history of the petroleum industry, highlighting its key developments. Also, explain the stages involved in the generation of petroleum and natural gas formation.	10 Marks	L2	CO1
Or				
12.	Summarize the evolution of the Indian oil and gas industry from 1886 to 2016, highlighting key milestones from the pre-industrial era to the modern day. Discuss significant developments, discoveries, and policy changes that shaped the industry's growth.	10 Marks	L2	CO1
13.	Explain when and where OPEC was founded, identify its founder members, locate its headquarters, and analyze the countries that joined later.	10 Marks	L2	CO1
Or				
14.	Discuss the importance of health and safety in oil and gas industry. Summarize Brent Crude and WTI by identifying five key differences between them.	10 Marks	L2	CO1
15.	Identify all the rotating components of the drilling rig and explain each of them in details.	10 Marks	L2	CO2
Or				
16.	Explain how petroleum reserves are classified according to industry standards. Discuss the key criteria used in their assessment. Also, differentiate between Contingent and Prospective resources.	10 Marks	L2	CO2
17.	Explain all the seven hoisting component in detail and draw a schematic diagram to show the connections between the different hoisting components.	15 Marks	L2	CO2
Or				
18.	Identify all the 12 circulating component in a drilling rig and explain each of them in detail. Draw a schematic diagram to support your answer.	15 Marks	L2	CO2
19.	Describe the life cycle of an oil well, outlining each stage from exploration to abandonment. Discuss the importance of each phase in optimizing oil and gas production.	15 Marks	L2	CO3
Or				
20.	Explain the Van Krevelen Diagram with a well-labeled plot. Discuss its significance in characterizing organic matter in petroleum systems and how diagenesis, catagenesis, and metagenesis are represented in the plot.	15 Marks	L2	CO3
21.	Outline the three stages of oil recovery/production process and explain each of them in details.	20 Marks	L2	CO4
Or				
22.	Explain NELP along with its background, summary, why is it necessary, salient features, details about NELP rounds, and what happened to NELP-X.	20 Marks	L2	CO4

