Name: Enrolment No:	

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2023

Course: Upstream and Downstream Petroleum   Semester: VI
Program: B.Tech CSE spl in AIML   Time   : 03 hrs.
Course Code: CSOG 3017P   Max. Marks: 100

Instructions: Kindly stick to the question and support every answer with proper explanation.

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	Recall with proper diagram different types of Stratigraphic traps	4	CO1
Q 2	Illustrate the Sniffer Surveys used during petroleum exploration	4	CO2
Q 3	Calculate the API gravity of Hydrocarbon	4	CO1
Q 4	List different type of catalyst used in refinery	4	CO3
Q 5	Explain the role of emulsifier in de-salter.	4	CO3

SECTION B
(4Qx10M= 40 Marks)

Q 6	Exploration and production processes abruptly affect the surrounding area. Illustrate the statement by highlighting the social and environmental impact of Exploration and Production	10	CO4
Q 7	Investigate the importance of drilling fluid and explain different types of Drilling Fluids	10	CO3
Q 8	Enlist the concept of E- Oilfield. Explain the various AI technologies used to optimize the process.	10	C04
Q 9	Elucidate the working principle of Seismic Survey. Explain the Seismic noise and role of earth ways in performing Seismic survey. **Or** Elucidate the working principle of Gravity Survey. Explain the Seismic noise and role of earth ways in performing Seismic survey.	10	C02

SECTION-C
(2Qx20M=40 Marks)

Q 10	Write the detail note for the following.
	  a) Geologic Porosity
	  b) Kerogen Formation
	  c) CBM and Tight Gas
		7+7+6	CO1

Q 11	Identify and explain the different simulation software in the downstream sector. **OR** Explain in detail the working design of SCADA System. State the History and use of the same in Upstream and Down stream Industry.	20	CO4