


Name:			
Enrolment No:			
UNIVERSITY OF PETROLEUM AND ENERGY STUDIES End Semester Examination, December 2022			
Course: Petroleum Geology		Semester: I	
Program: M.Sc. Petroleum GeoSciences		Time : 03 hrs.	
Course Code: PEGS 7004		Max. Marks: 100	
Instructions:			
SECTION A (5Qx4M=20Marks)			
S. No.		Marks	CO
Q 1	Explain the significances of S3 peak and Tmax in Rock Eval Pyrolysis?	4M	CO2
Q.2	Calculate the API gravity of the crude with specific gravity of 0.99 and also mention the type of crude oil.	4M	CO4
Q.3	Distinguish between build -up period and plateau period in oil and gas production phase	4M	CO1
Q.4	If you consider the porosity of a reservoir rock as 0%, What can be the permeability of the formation and why?	4M	CO3
Q.5	Define Oil in place and Recovery Factor	4M	CO1
SECTION B (4Qx10M= 40 Marks)			
Q.6	Illustrate the factors that control the porosity, one of the most important petrophysical properties of reservoir rock.	10M	CO3
Q.7	Describe the zone in the earth's crust where oil and gas are generated. Illustrate your answer with a neat figure.	10M	CO2
Q.8	Describe the characteristics of kerogen types. Illustrate your answer with a neat figure.	10M	CO2
Q.9	Explain the process of hydrocarbon trapping mechanism because of the presence of salt dome. Illustrate your answer with a neat figure.	10M	CO2

	OR, Describe the stratigraphic trapping mechanism for hydrocarbons. Illustrate your answer with a neat figure.		
SECTION-C (2Qx20M=40 Marks)			
Q.10	(a) Define sedimentary basin (b) Why sedimentary basins are important to mankind? (c) Describe the basins that are formed by divergent plate boundary. OR, (a) Illustrate the various theories that explains the basin formation. (b) Describe the basins that are formed due to convergent plate boundary.	5+5+15M 10+ 10M	CO3
Q.11	(a) Evaluate the significance of Boiling Point, API gravity, Fire point and Viscosity of crude oil in oil and gas industry. (b) Describe NSO compound and its significance in the oil and gas industry.	16+4M	CO4