

Name:  
Enrolment No:



**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**END Semester Examination December 2021**

**Program: B-Tech All (SOE, SOCS)**  
**Course: Introduction to Petroleum Engineering**  
**Course Code: SOE20B003**  
**Number of pages: 02**  
**Note: online submission**

**Semester: III**  
**Time: 180 minute (3 hour)**  
**Max. Marks: 100**

**SECTION A**

- 1. Each questions carry 5 Marks** **5 X 4 = 20 M**  
**2. Type answer for all the questions in the answer sheet using given space.**  
**3. The maximum word limit is 30 or 3 lines.**

Q.No	Question	COs
1	Define the terms Pinchot and Oil window	CO1
2.	Distinguish between the following terms: 1. Katagenesis and Metagenesis 2. Paramagnetism and Ferromagnetism	CO2
3	Write a note on following terms in context with Petroleum exploration. i) Blowout ii) Kerogen.	CO3
4	Fill in the blanks with suitable answer: i) ..... is a recording of the Earth's response to seismic energy passing from the source, through subsurface layers, and back to the receiver ii) A well-defined negative gravity anomaly centered over and the circular gravity contours reflect the circular outline in ..... Structure. iii) ..... is an area of a three dimensional subdivision of a seismic survey. iv) A geometrical arrangement of seismic receivers (geophones) with signals recorded by one channel is known as.....	CO4
5	TRUE/False (Choose correct answer and type the answer) <div style="border: 1px solid black; padding: 5px; margin-top: 5px;">i) An unusual occurrence of hydrocarbon in which molecules of methane are trapped in ice molecules is called hydrates.</div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;">ii) The Inertinite is a dead carbon with low H/C ration and maceral of coal.</div> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;">iii) The Imbuing is the process of fluid moment penetrating through liquid .</div>	CO5

	iv) Hydrocarbons may move upward as colloidal bubbles by the process of Brownian motion.	
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<b>SECTION B</b>		
<b>1. Each questions carry 10 Marks</b> <b>2. The maximum word limit is 500 or one page</b>		<b>4 X 10 = 40 M</b>
Q.No	Question	COs
1	Write brief short note on sedimentary basins of India in context with petroleum prospect.  OR  Define trap and discuss in brief classification of trap.	CO5
2	Describe in brief the procedure and application of gravity survey in petroleum engineering.	CO3
3	Explain in brief various methods of well testing and well logging in context with petroleum exploration.	CO2
4	Explain in brief the working principle, merits and demerits magnetic survey.	CO4

<b>SECTION -C</b>		
<b>1. Answer all the questions (in question number 1 answer either question a, b or c)</b>		<b>2 X 20 = 40 M</b>
Q.No	Question	COs
1	a) Distinguish the various processes involved in gas well and Oil well operations. b) Define rig and explain in brief the classification of rigs and its applications.  <b>Or</b>  c) Discuss in brief the role following terms in Seismic survey i) P & S waves ii) Density iii) Reflection survey iv) Refraction survey v) Geophones and Hydrophones.	CO6
2	Define Drilling and discuss in brief the classification of drilling Casing, drilling bits and methods of drilling importance in petroleum engineering.	CO5