Name: **Enrolment No:**	

UPES

End Semester Examination, May 2024

Course: Production Engineering **Semester: II**

Program: M.Tech Petroleum Engineering **Time : 03 hrs.**

Course Code: PEAU7015 **Max. Marks: 100**

Instructions: Attempt all the questions.

SECTION A
(5Qx4M=20Marks)

S. No.		Marks	CO
Q1	Show schematic of an oil well with all the completions starting from surface to perforations and label all the components.	**4**	**CO1**
Q2	Multistage separation is important for better separation of hydrocarbons. Analyze this statement.	**4**	**CO2**
Q3	Explain the working principle of double barrel horizontal	**4**	**CO2**
Q4	Explain the functions of level, temperature and flow control system of hydrocarbons.	**4**	**CO2**
Q5	Infer the purpose of Lease Automatic Custody Transfer (LACT)	**4**	**CO3**

SECTION B
(4Qx10M= 40 Marks)

Q6	Organize in order the internal floating roof tank, external floating roof tank, open top tank, fixed roof tank, closed floating roof tank in terms of improvements in the safety and product loss control using simple diagrams.	**10**	**CO4**
Q7	**A.** Discuss the three-stage desalting process with a neat diagram. **OR** **B.** Discuss the working of Gun Barrel with Internal Gas Boot	**10**	**CO2**
Q8	Compare the direct and indirect fired heaters for emulsion treatment using suitable diagrams.	**10**	**CO2**
Q9	Differentiate between the working of the following meters with diagram a) Orifice Gas Meters b) Turbine Meters	**5 + 5**	**CO3**

	SECTION-C **(2Qx20M=40 Marks)**		
Q10	**A.** Explain briefly the working with neat diagrams and proper labelling of the following facilities I. Horizontal Heater Treater II. Electrostatic Heater Treaters **OR** **B.** Explain briefly the working with neat diagrams and proper labelling of the following facilities I. Vertical Skimmer Vessel for effluent Treatment. II. Corrugated Plate Vessel for effluent Treatment	**10 + 10**	**CO2**
Q11.	**A.** Examine the hydrocarbon tank storage working conditions by discussing the following terms. a) Vapor recovery system of hydrocarbons b) Filling /Pumping Operations c) Gas Blanketing Systems **B.** Illustrate the diagram of a storage tank and label its components.	**12 + 8**	**CO4**