

20PEB327P					Petroleum Engineering Practical – II					
Teaching Scheme					Examination Scheme					
L	T	P	C	Hrs/Week	Theory			Practical		Total Marks
					MS	ES	IA	LW	LE/Viva	
0	0	2	1	2	-	-	-	50	50	100

COURSE OBJECTIVES

- To train professional candidates capable of applying engineering principles and practices for the safe and efficient exploration, development, production, transportation and management of petroleum resources.
- To teach a student about rheological properties of any type of oil, slurry and chemical.
- To give knowledge about core flooding and hydrofracturing application in oil and gas industry.

Week 1: Determine the acid value of the given oil sample.

Week 2: Determine the Sulphur content of the given oil sample.

Week 3: Draw a ternary phase diagram for solubility of water benzene isopropyl alcohol (IPA) solution.

Week 4& 5: Determine the rheological properties of a given oil sample using Rheometer.

Week 6: Determine the particle size of the given oil sample using Zetasizer Particle Size analyser.

Week 7: Determine the Formation resistivity of the saturated rock sample.

Week 8: Water Coning using Resistance Analogy

Week 9: Understanding of Auto-Tensiometer

Week 10: Understanding of Proppant Conductivity System at normal temperature conditions.

Week 11: Understanding of Proppant Conductivity System at high temperature conditions

Week 12: Understanding of Formation Damage System with temperature conditions.

Week 13: Understanding of Formation Damage System without temperature conditions

COURSE OUTCOMES

On completion of the course, student will be able to

CO1: Determine crude oil property and its components.

CO2: Understand rheology and determine rheological properties for sample: Oil, Slurry, and Chemicals

CO3: Analyse the particle size distribution, interfacial tension, and solubility for any given fluid considering upstream and downstream applications.

CO4: Determine reservoir physical property and productivity index using an electrical analogy.

CO5: Evaluate proppant pack conductivity at different temperature conditions.

CO6: Understanding of formation damage at different temperature conditions.

END SEMESTER EXAMINATION QUESTION PAPER PATTERN

Max. Marks: 100

PART A: Evaluation Based on the class performance and Laboratory book

PART B: Viva Examination based conducted experiments

Exam Duration: 3 Hrs

50 Marks

50 Marks