

20PEB308P					Petroleum Engineering Practical – I					
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 provide basic knowledge related to petroleum engineering laboratory equipment.
- To teach the fundamental aspects of petroleum engineering, which includes: core plug making, core trimming and swabbing.
- To determination of permeability and porosity of the core sample by the different-different method and compared with each other for the research point of view.

**LIST OF EXPERIMENTS:**

**Week 1:** Make Core Plug ready for Experiment in Core Plugging

**Week 2:** Core Trimming and Swabbing

**Week 3:** Determination of Effective porosity of given core sample by saturation method.

**Week 4:** Determine the Permeability of given sample by using Ruska Liquid Permeameter

**Week 5:** Permeability measurement by using Gas Permeameter

**Week 6 and Week 7:** Study the petrophysical properties of core in core flooding apparatus

**Week 8:** Determine the viscosity of oil by using capillary viscometer.

**Week 9:** Drilling Equipment

**Week 10:** Sucker Rod Pumping System: A Case Study

**Week 11:** Study the working of Gas Lift system.

**Week 12:** Understanding of GGS System

**COURSE OUTCOMES**

On completion of the course, student will be able to

CO1: Understand and demonstrate core preparation techniques for various core flooding environments.

CO2: Determination of the petrophysical properties.

CO3: Design of enhanced oil recovery experiment using core flooding apparatus.

CO4: Determination of viscosity of light oil samples.

CO5: Demonstration of drilling equipment and production process

CO6: Demonstration of artificial lift equipment.

**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**