

Teaching Scheme					Petroleum Product Testing Practical (22PCM214P)					
					Examination Scheme					
L	T	P	C	Hours/Week	Theory			Practical		Total Marks
					MS	ES	IA	LW	LE/Viva	
0	0	2	1	2	--	--	--	50	50	100

**COURSE OBJECTIVES**

- Gain expertise of handling liquid petroleum products and their analysis.
- Analyze the problems of storage and transportation of petroleum products.
- Identify the design parameters related to petroleum distillation.
- Evaluation of the petroleum product properties.

**LIST OF EXPERIMENTS**

1. Determination of acid number of fuel samples.
2. Determination of boiling point range of petroleum fraction by ASTM distillation apparatus.
3. Determination of viscosity of a sample by Say Bolt viscometer.
4. Identification of smoke point and luminosity number.
5. Determination of calorific value of solid and liquid fuels by bomb calorimeter.
6. Determination of flash and fire point by Pensky-Martin apparatus.
7. Determination of flash and fire point by Cleveland open cup apparatus.
8. Identification cloud point and pour point of petroleum products.
9. Determination of aniline point.
10. Evaluation of diesel index and cetane number of given samples
11. Study of copper corrosion for a given sample.
12. Determination of the moisture content of the given fuel sample using dean and stark apparatus.
13. Determination of the saponification value of an oil sample.

**Max. 28 Hr.****COURSE OUTCOMES**

On completion of the course, student will be able to

**CO1:** Understand the experiments related physical characterization.

**CO2:** Estimate the calorific value of fuels by bomb calorimeter.

**CO3:** Examine the flash and fire point of diesel and kerosene oil.

**CO4:** Estimate the aniline point of refinery products to confirm the organic contents.

**CO5:** Understand the quality assurance issues as per the requirements of industry.

**CO6:** Assess the characteristics of refinery products by ASTM distillation apparatus.

**END SEMESTER EXAMINATION QUESTION PAPER PATTERN**

**Max. Marks: 100**

Part A: Lab Work

Part B: Lab Exam/Viva

**Exam Duration: 3 Hr.**

50 Marks

50 Marks