Teaching Scheme					Chemical Engineering Practical (22PCM213P)					
					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

- Develop student's ability to investigate and experiment.
- Develop experimental skills.
- Analyze the data and interpret the results.
- Report observations and results in appropriate manner.

LIST OF EXPERIMENTS

I. HEAT TRANSFER EXPERIMENTS

1. Determination of thermal conductivity of solids.
2. Determination of heat transfer by forced convection.
3. To compare overall heat transfer coefficients for parallel flow and counter flow in double pipe heat exchanger.
4. To study the performance of shell and tube heat exchanger and calculate overall heat transfer coefficient.
5. Determination of heat transfer coefficient in laminar flow.
6. Radiation heat transfer.

II. MECHANICAL OPERATION EXPERIMENTS

1. Performance of sieve analysis of a given sample and determination of effectiveness of a screen.
2. Study the performance and characteristics of size reduction equipment.
3. Determine of the collection efficiency of the cyclone separator.
4. Study the performance of plate and frame filter press.
5. Study the performance of batch sedimentation.
6. Study the operational characteristics of batch centrifuge.

Max. 28 Hr.

COURSE OUTCOMES

On completion of the course, student will be able to

CO1: Determine the rate of heat transfer by conduction, convection and radiation.
CO2: Estimate the overall heat transfer coefficient of heat exchangers.
CO3: Design and analyze various parameters of heat transfer equipment.
CO4: Analyze the efficiency of various size reduction equipment.
CO5: Evaluate the efficiency of cyclone separator and filter press.
CO6: Analyze sedimentation and centrifugal separation operations.

END SEMESTER EXAMINATION QUESTION PAPER PATTERN

Max. Marks: 100 **Exam Duration: 3 Hr.**

Part A: Lab Work 50 Marks

Part B: Lab Exam/Viva 50 Marks