

		PRPC III SEM CHEMICAL PROCESS TECHNOLOGY		
			HRS	MARKS
COURSE OUTCOME-1	To explain the concept of unit operation and unit process and use sulphuric acid as a raw material in appropriate process			
LEARNING OUTCOME-1	To differentiate between unit operation and unit process in chemical industry			
		Unit operation and unit process schematic representation of various unit operation and unit process.		
ASSESSMENT METHOD				
LEARNING OUTCOME-2	To draw process flow diagram for manufacturing of sulphur and sulphuric acid.			
CONTENTS	Sulphur Industry : Mining and purification of sulphur, sulphuric acid manufacturing, major engineering problems, economics and uses.			
ASSESSMENT METHOD				
COURSE OUTCOME-2	To describe manufacturing process of chloroalkali and nitrogenous chemical			
LEARNING OUTCOME-1	To select the equipment for the production of soda ash.			
CONTENTS	Chloroalkali Industries - Method of production of soda ash, major engineering problems, economics and uses.			
ASSESSMENT METHOD				
LEARNING OUTCOME-2	To compare processes for the production of chloro alkali chemicals.			
CONTENTS	Caustic soda, Sodium Carbonate, Chlorine and hydrochloric acid. Their manufacturing major engineering problems, economics and uses.			
ASSESSMENT METHOD				
LEARNING OUTCOME-3	To identify equipments for productions of nitrogen based chemicals.			
CONTENTS	Nitrogen Industry : Ammonia, nitric acid and urea. Their manufacturing major engineering problems, economics and uses.			
ASSESSMENT				

COURSE OUTCOME-3	To identify engineering problems in production process of phosphorous industries and manufacture paint and varnish in small scale.		
LEARNING OUTCOME-1	To describe the technology adopted to produce phosphorous based chemicals and fertilizers.		
CONTENTS	Phosphorous Industries : Phosphorous, Phosphoric acid, super phosphate and triple super phosphate.		
ASSESSMENT METHOD			
LEARNING OUTCOME-2	To explain different types of paint on the basis of chemical and physical properties.		
CONTENTS	Paints and varnishes : Introduction, difference between paint, varnish and laequers, types of paint, varnish and laequers, manufacturing of paint, varnish and lequers.		
ASSESSMENT METHOD			
LEARNING OUTCOME-3	To use different pigments for paint and varnish preparation.		
CONTENTS	Uses of white lead, titanium dioxide, zinc oxide, lithophone, lead chromate, copper sulphate and iron oxide in paint and varnish industries.		
ASSESSMENT METHOD			
COURSE OUTCOME-4	To identify raw materials required for manufacture of specific chemicals.		
LEARNING OUTCOME-1	To describe the technology adopted to produce saturated and unsaturated oils.		
CONTENTS	Characteristics of oil, fats and waxes. Extraction and refining of oils, hydrogenation of oil.		
ASSESSMENT METHOD			
LEARNING OUTCOME-2	To apply knowledge of latest trends in soap and detergents industries.		
CONTENTS	Manufacture of soap and glycerine recovery cleaning action of soap, classification of detergent, manufacture of aryl allay sulfonates.		
ASSESSMENT METHOD			
LEARNING OUTCOME-3	To convert the tree cellulose in to usable pulp cellulose form.'		
	Manufacture of pulp. paper cellulose and viscose		

CONTENTS	uses.						
ASSESSMENT METHOD							
COURSE OUTCOME-5	To use some common industrial solvents and formulation based chemicals appropriately.						
LEARNING OUTCOME-1	To prepare commonly used industrial solvents.						
CONTENTS	Industrial solvents – manufacture of methane acetone and normal hexane.						
ASSESSMENT METHOD							
LEARNING OUTCOME-2	To identify unit operation involved in fermantetion industries.						
CONTENTS	Fermantetion Industries : Principles of fermantetion production of citric acid penicillin ethanol.						
ASSESSMENT METHOD							