Seat No.:	Enrolment No.

Subject Code: 141303

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV • EXAMINATION – SUMMER 2013

Date: 14-06-2013

Subject Name: Chemical Engineering Processes			
Time	: 10	:30am - 01:00pm Total Marks: 70	
Instru	ction		
	1.	Attempt all questions.	
		Make suitable assumptions wherever necessary.	
	3.	Figures to the right indicate full marks.	
Q.1	(a)	Explain the manufacturing process of aniline with a neat flow sheet.	08
		Discuss hazardous health aspects related to aniline.	
	(b)		06
		i) Adsorption ii) Heat Exchangers	
Q.2	(a)	Write manufacturing process of Phenol with flow diagram and the related safety aspects.	07
	(b)	· ·	07
	(0)	related health and safety hazards.	07
		OR	
	(b)	_	07
Q.3	(a)	List the advantages and disadvantages of using V ₂ O ₅ catalyst in sulphuric	04
	()	acid manufacture.	
	(b)	Write the properties of ammonia and its uses.	04
	(c)	Discuss the various types of conveyers used in industry for solid handling.	06
		OR	
Q.3	(a)	Write manufacturing process of Ethanol from ethylene by sulfonation.	07
	(b)	Write a note on various types of equipment used for crushing and grinding operations.	07
Q.4	(a)	With the help of a flowsheet explain the manufacturing process of Urea.	08
	` '	List the uses of urea.	
	(b)	Write short note on plate and frame filter press.	06
		OR	
Q.4	(a)	Discuss the major engineering problems in manufacture of urea.	05
	(b)	Discuss waste handling in manufacture of Acetic acid. Also list the uses of	05
		Acetic acid.	
	(c)	Write a short note on Electrostatic Precipitator.	04
Q.5	(a)	Write in detail the manufacturing process of Ethyl Acetate.	07
Q.S	(b)		07
	(0)	OR	37
Q.5	(a)		07
₹	(b)		07
	(~)	1	
