Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

B. E. - SEMESTER - III • EXAMINATION - WINTER 2012

Subject code: 130505 Date: 07-01-2		013	
Subj	ect I	Name: Chemical Process Industries-I	
Time	<b>: 1</b> 0	0.30 am – 01.00 pm Total Marks: 70	
Instr	uct	ions:	
	2.	Attempt all questions.  Make suitable assumptions wherever necessary.  Figures to the right indicate full marks.	
Q.1	(a	) What are the different processes for manufacturing of soda ash? Discuss 'Dual Process' with a neat flowsheet.	07
	(b	) Discuss the major engineering problems in urea production by ammonium carbamate decomposition process.	07
Q.2	(a	) Discuss the difference between sulphate and sulphite process for manufacturing of paper.	07
	(b		07
	(b	) Discuss Scope of Fertilizer Industries in India.	07
Q.3	(a	Discuss advantages and disadvantages of Mercury cell, Diaphragm cell and Membrane cell process for chlorine-caustic soda production.	07
	(b	flowsheet.	07
0.2	,	OR	<b>~</b> =
Q.3	(a (b		07 07
Q.4	(a	Explain the manufacturing process of Portland Cement with a neat flowsheet.	07
	(b		07
Q.4 Q.4	(a (b		07 07
Q.5	(a	) Discuss manufacturing of phosphoric acid by wet process and give comparison of wet process and electric furnace process.	07
	(b		07
Q.5	(a (b	Explain ion-exchange process with neat diagram for water softening.	07 07

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