Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III (OLD) - EXAMINATION – SUMMER 2017

	-	t Code: 130505 Date: 31/05/20 t Name: Chemical Process Industries-1	17
Tir	me: 1 truction 1.	10:30 AM to 01:00 PM Total Marks:	70
Q.1	(a) (b)	Discuss major engineering problems associated with the production of Nitric acid. Write a short note on Solvay process for the production of Soda ash.	07 07
Q.2	(a) (b)	Distinguish Sulfate and Sulfite process for pulp manufacturing. Explain manufacturing of Caustic and Chlorine with flow diagram. OR	07 07
	(b)	Write a short note on manufacturing process of Paper with neat flow diagram.	07
Q.3	(a) (b)	Write a short note on Explosives. What is Portland cement? State different types of Portland cement. What are the relative advantages and disadvantages of high alumina cement as compared with Portland cement	07 07
		OR	
Q.3	(a) (b)	Discuss manufacturing of glass in detail with neat diagram. Describe mining of Sulfur by Frasch process.	07 07
Q.4	(a)	Explain waste water treatment by activated sludge process. Discuss treated effluent disposal management.	07
	(b)	Discuss Monte catini solution recycle process for urea production. OR	07
Q.4	(a)	What is 'conditioning of water'? Discuss Ion-exchange process with all chemical reactions for conditioning fresh water.	07
	(b)	Describe various engineering problems which occur during the manufacturing of Ammonia.	07
Q.5	(a) (b)	Write short note on NPK fertilizer and its application List out various methods for production of Hydrogen. Discuss any one in details OR	07 07
Q.5	(a)	Discuss major engineering problems associated with production of H ₂ SO ₄ by contact	07
_	(b)	process. Describe Linde's process of Oxygen and Nitrogen production. Also state the properties and uses of above gases.	07
