Seat No.:	Enrolment No.

Subject Code:2130505

Time: 10:30 AM to 01:00 PM

Subject Name: Chemical Process Industries-1

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III(New) EXAMINATION - SUMMER 2016

Date:31/05/2016

Total Marks: 70

Instr	uction	as:	
		Attempt all questions.	
	2.	Make suitable assumptions wherever necessary.	
	3.	Figures to the right indicate full marks.	
Q.1		Answer Short Questions	14
	1	Write a full form of RDX.	
	2	Write the name of processes used for the manufacturing of pulp.	
	3	Enlist the processes used for the manufacturing of Portland Cement.	
	4	Define the term: Conditioning of Water.	
	5	Define the term: Glass	
	6	Write down the chemical formula for Sodium Sulfate and sodium sulfite.	
	7	Name the equipment used for the manufacturing of paper in wet process.	
	8	Name the process by which sodium carbonate (Na ₂ CO ₃) can be made.	
	9	List out the uses of Acetylene.	
	10	What is the chemical name of Picric Acid?	
	11	What is photography?	
	12	Enlist various uses of lime.	
	13	Write the chemical formula of Epsom Salt.	
	14	Write the uses of borosilicate glass.	
Q.2	(a)	Give difference between detonating & deflagrating agent.	03
	(b)	Discuss in brief: Calcium Carbonate & Calcium Sulfide	04
	(c)	Discuss in detail about Propellants and also describe its types.	07
		OR	
	(c)	Starting with neat flow diagram and chemical reactions, discuss the	07
		manufacture of Ammonia (NH ₃).	
Q.3	(a)	Discuss Settling & Hardening of Cement in brief.	03
	(b)	Give classification of Explosives	04
	(c)	Describe mining of Sulfur by Frasch process.	07
		OR	
Q.3	(a)	Discuss in brief: Continuous & Batch Process	03
	(b)	Write in brief about Color Photography.	04
	(c)	Explain municipal raw water treatment plant with a neat and clean flow	07
Q.4	(a)	diagram. Enlist advantages and disadvantages of Solvay Process.	03
ų.T	(b)	Describe in brief about graphite & carbon.	03
	(c)	Explain manufacturing of pulp by using Kraft process. Discuss recovery of	07
	(C)	chemicals from black liquor.	07
		OR	
Q.4	(a)	List out the uses of dry CO_2 .	03
	(b)	Write a short note on Reverse osmosis and enlist its applications.	04
	(c)	Discuss Linde's process for manufacture of O ₂ and N ₂ . Discuss in brief the	07
		uses and properties of nitrogen and oxygen gases.	
Q.5	(a)	Write the uses of Pozzolans cement and Masonry Cement.	03
	(b)	Enlist the types of glass and explain any two in brief	04

(c) Write a short note on Montecatini process for Nitric acid production with neat diagram.

OR

- Q.5 (a) Discuss in brief: NPK fertilizer.
 - (b) Write the difference between Sulphite and Sulphate process for pulp 04 manufacturing.
 - (c) Enlist various processes used for manufacturing of Caustic Soda. Explain in detail the mercury cell process for the production of Caustic Soda.

03