

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III (NEW) EXAMINATION – SUMMER 2019

Subject Code: 2130505

Date: 04/06/2019

Subject Name: Chemical Process Industries-1

Time: 02:30 PM TO 05:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	(a) Differentiate between batch and continuous process.	03
	(b) State uses of sulphuric acid and urea	04
	(c) Mention several methods of water treatment. Describe any one method in detail, with neat sketch.	07
Q.2	(a) State the sources and uses of any one rare gas.	03
	(b) Write short notes on compound fertilizers.	04
	(c) With a process flow diagram, describe the manufacture of sulfuric acid by DCDA process.	07
	OR	
	(c) Draw a neat process flow diagram for the production of urea by ammonium carbamate decomposition.	07
Q.3	(a) Classify cement and mention its characteristics.	03
	(b) Explain manufacturing of graphite with neat diagram.	04
	(c) Discuss Lime beneficiation process for cement manufacture.	07
	OR	
Q.3	(a) Write down application of Soda ash and Caustic soda	03
	(b) Write a short note on Explosives and propellants.	04
	(c) Explain the manufacturing of paper in detail.	07
Q.4	(a) Write a short note on activated carbon.	03
	(b) What is the function of gypsum in the manufacture of cement?	04
	(c) Discuss Solvay process for Soda ash production.	07
	OR	
Q.4	(a) Define TNT and DNT	03
	(b) State factors effecting setting time of cement.	04
	(c) Discuss major engineering problems in manufacture of Phosphoric acid.	07
Q.5	(a) Write a note on Toxic chemicals.	03
	(b) Describe manufacturing of glass in brief.	04
	(c) Discuss the difference between the wet and dry process of manufacturing of Portland cement.	07
	OR	
Q.5	(a) Write short note on commercial glass	03
	(b) Write short note on setting and hardening of cement.	04
	(c) Describe Linde's process of oxygen and nitrogen production	07
