

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII(NEW) EXAMINATION – SUMMER 2019****Subject Code:2183608****Date:17/05/2019****Subject Name:Chemical Process Technology****Time:10:30 AM TO 01:00 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) Discuss the distillation characteristics of petroleum crude.	03
	(b) Discuss reserves and deposits of crude in world and discuss the scenario of Petrochemical industry in India and in Gujarat.	04
	(c) Define petrochemicals and list out important raw materials commonly used in manufacture of petrochemicals and their industrial applications.	07
Q.2	(a) Classify types of gases and describe any one of them.	03
	(b) Define petrochemicals and mention the reasons for studying petrochemical industries. Enlist various petrochemical units in state of Gujarat.	04
	(c) Explain the manufacturing process of methanol along with its application.	07
OR		
	(c) Explain the manufacturing process of ethylene with flow diagram and its application.	07
Q.3	(a) Discuss about different types of pigment.	03
	(b) With a neat process flow diagram, describe the production glycol.	04
	(c) Explain the manufacturing process of sulphuric acid with flow diagram.	07
OR		
Q.3	(a) Discuss about different types of fertilizers.	03
	(b) Discuss major engineering problems in ethylene oxide manufacture.	04
	(c) Explain the manufacturing process of urea with flow diagram.	07
Q.4	(a) State the uses and applications of caustic soda.	03
	(b) Discuss all major engineering problems in the manufacture of phosphoric acid.	04
	(c) Explain the manufacturing process of sugar from sugarcane with flow diagram.	07
OR		
Q.4	(a) Discuss the major engineering problems in the manufacture of ammonia.	03
	(b) Briefly describe the production of vinyl chloride, with reactions.	04
	(c) Explain the manufacturing process of ammonia with flow diagram.	07
Q.5	(a) State the uses and applications of phosphoric acid.	03
	(b) State industrial chemical compounds of phenol and aniline each and their uses.	04
	(c) Explain the manufacturing process of nitrobenzene with flow diagram	07

OR

- Q.5** (a) Discuss about Citric acid by Fermentation **03**
(b) Discuss major engineering problems in manufacture of acetic acid. **04**
(c) Explain the manufacturing process of acetic acid with flow diagram. **07**
