

**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.

		<b>MARKS</b>
<b>Q.1</b>	(a) Discuss the distillation characteristics of petroleum crude.	<b>03</b>
	(b) Discuss reserves and deposits of crude in world and discuss the scenario of Petrochemical industry in India and in Gujarat.	<b>04</b>
	(c) Define petrochemicals and list out important raw materials commonly used in manufacture of petrochemicals and their industrial applications.	<b>07</b>
<b>Q.2</b>	(a) Classify types of gases and describe any one of them.	<b>03</b>
	(b) Define petrochemicals and mention the reasons for studying petrochemical industries. Enlist various petrochemical units in state of Gujarat.	<b>04</b>
	(c) Explain the manufacturing process of methanol along with its application.	<b>07</b>
	<b>OR</b>	
	(c) Explain the manufacturing process of ethylene with flow diagram and its application.	<b>07</b>
<b>Q.3</b>	(a) Discuss about different types of pigment.	<b>03</b>
	(b) With a neat process flow diagram, describe the production glycol.	<b>04</b>
	(c) Explain the manufacturing process of sulphuric acid with flow diagram.	<b>07</b>
	<b>OR</b>	
<b>Q.3</b>	(a) Discuss about different types of fertilizers.	<b>03</b>
	(b) Discuss major engineering problems in ethylene oxide manufacture.	<b>04</b>
	(c) Explain the manufacturing process of urea with flow diagram.	<b>07</b>
<b>Q.4</b>	(a) State the uses and applications of caustic soda.	<b>03</b>
	(b) Discuss all major engineering problems in the manufacture of phosphoric acid.	<b>04</b>
	(c) Explain the manufacturing process of sugar from sugarcane with flow diagram.	<b>07</b>
	<b>OR</b>	
<b>Q.4</b>	(a) Discuss the major engineering problems in the manufacture of ammonia.	<b>03</b>
	(b) Briefly describe the production of vinyl chloride, with reactions.	<b>04</b>
	(c) Explain the manufacturing process of ammonia with flow diagram.	<b>07</b>
<b>Q.5</b>	(a) State the uses and applications of phosphoric acid.	<b>03</b>
	(b) State industrial chemical compounds of phenol and aniline each and their uses.	<b>04</b>
	(c) Explain the manufacturing process of nitrobenzene with flow diagram	<b>07</b>

**OR**

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

\*\*\*\*\*

[www.FirstRanker.com](http://www.FirstRanker.com)