

Seat No.: \_\_\_\_\_

Enrolment No.: \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**DIPLOMA ENGINEERING – SEMESTER – III EXAMINATION – SUMMER 2016**

**Subject Code: 330504**

**Date: 24 -05 -2016**

**Subject Name: Chemical Process Technology - I**

**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.
4. Each question carry equal marks (14 marks)

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|------------|---|-----------|
| <b>Q.1</b> | (a) Discuss the classification of chemical industries in details                    | <b>07</b> |
|            | (b) Describe the Manufacture of hydrochloric acid by synthetic method               | <b>07</b> |
| <b>Q.2</b> | (a) Explain manufacture of sulfuric acid by DCDA process                            | <b>07</b> |
|            | (b) Discuss the scope of chemical industries with respect to Gujarat.               | <b>07</b> |
| <b>OR</b>  |   |           |
| <b>Q.3</b> | (b) Describe the manufacturing of Na <sub>2</sub> CO <sub>3</sub> by Solvay process | <b>07</b> |
|            | (a) Write the physical and chemical properties of soda ash, caustic soda, chlorine  | <b>07</b> |
|            | (b) Define following: Explosive, refrigerant, propellants and soap                  | <b>07</b> |
| <b>OR</b>  |   |           |
| <b>Q.3</b> | (a) Explain manufacturing process of Lime by Hydrated lime process                  | <b>07</b> |
|            | (b) Write the major engineering problem in production of Cement Industry            | <b>07</b> |
| <b>Q.4</b> | (a) Explain Manufacturing method of phosphoric acid by HCL leaching                 | <b>07</b> |
|            | (b) Explain Method of soap production by continuous hydrolysis and saponification   | <b>07</b> |
| <b>OR</b>  |   |           |
| <b>Q.4</b> | (a) Explain production of pig iron by Blastmer process                              | <b>07</b> |
|            | (b) Write a short note on Distillation of coal tar                                  | <b>07</b> |
| <b>Q.5</b> | (a) Explain Hydrogenation of coal.  | <b>07</b> |
|            | (b) Difference between thermosetting and thermoplastic                              |           |
| <b>OR</b>  |   |           |
| <b>Q.5</b> | (a) Differentiate stainless steel and mild steel                                    | <b>07</b> |
|            | (b) Write short note on types of polymer  | <b>07</b> |

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