

GUJARAT TECHNOLOGICAL UNIVERSITY**Diploma Engineering - SEMESTER-III • EXAMINATION – SUMMER • 2015****Subject Code: 330504****Date: 14-05-2015****Subject Name: Chemical Process Technology - I****Time: 02:30 pm - 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. English version is considered to be Authentic.

- Q.1** (a) Write the physical and chemical properties of Sulfuric Acid and Caustic soda. **07**
- (b) Describe the manufacturing of Na_2CO_3 by Solvay process. **07**
- Q.2** (a) Write the major engineering problem in production of Cement Industry. **07**
- (b) Explain the process for the production of Caustic soda by electrolytic process with detail flow sheet. **07**
- OR
- (b) Discuss the classification of chemical industries in details **07**
- Q.3** (a) Describe manufacturing process of Portland cement. **07**
- (b) Differentiate stainless steel and mild steel **07**
- OR
- Q.3** (a) Write down physical properties of phosphors, phosphoric acid and Hydrochloric acid., **07**
- (b) Explain manufacturing process of Lime by Hydrated lime process **07**
- Q.4** (a) Explain production of aluminum from bauxite **07**
- (b) Discuss Hydrogenation of Coal with neat diagram and major engineering problems. **07**
- OR
- Q. 4** (a) Explain the manufacturing process of aniline by reduction of nitrobenzene **07**
- (b) Define following: Explosive, refrigerant, propellants and soap **07**
- Q.5** (a) Define Polymer and Polymerization explain the mode of polymerization **07**
- (b) Write short note on types of polymer **07**
- Q.5** (a) Differentiate thermosetting and thermoplastic polymer **07**
- (b) Describe manufacturing process of phenol formaldehyde **07**
