

GUJARAT TECHNOLOGICAL UNIVERSITY**B.E. Sem-IV Examination June- 2010****Subject code: 141303****Subject Name: CHEMICAL ENGINEERING PROCESSES****Date: 19 / 06 /2010****Time: 10.30 am – 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.

- Q.1** (a) Write manufacturing process of Ethyl acetate with flow diagram and explain source of pollution. **10**
(b) Explain in detail Unit operation (Any two) : **04**
Absorption (iii) Screening (ii) Distillation
- Q.2** (a) Draw flow diagram of Cellulose acetate and write its manufacturing process. **07**
(b) Draw flow diagram of Nitric acid and write its manufacturing process. **07**
OR
(b) Draw flow diagram of Hydrogen cyanide and write its manufacturing process. **07**
- Q.3** (a) Draw and explain Gaseous diffusion and Jacketed kettle. **04**
(b) Explain manufacturing process of Phenol and draw flow diagram with source of pollution and Health and safety aspect. **10**
OR
- Q.3** (a) Draw and explain Screw conveyer and Elutriation **04**
(b) Write manufacturing process of Vinyl acetate with flow diagram and explain source of pollution and Health and safety aspect. **10**
- Q.4** (a) Explain manufacturing process of Furfural and draw flow diagram with source of pollution. **10**
(b) Draw neat diagram and explain Froth flotation and Jigging. **04**
OR
- Q.4** (a) Draw flow diagram of Cotton seed oil and write its manufacturing process. **07**
(b) Write manufacturing process of Ethylene chloro hydrin with its flow diagram. **07**
- Q.5** (a) Draw flow diagram of Sulfuric acid and explain its manufacturing process, also write source of pollution. **10**
(b) Explain in detail Unit operation (Any two) : **04**
(i) Magnetic separation (iii) Crushing (ii) Solids blending
OR
- Q.5** (a) Write manufacturing process and flow diagram of Vinyl chloride. **10**
(b) Explain in detail Unit operation (Any two) : **04**
(i) Grinding (ii) Screening (iii) Bucket elevator
