

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-IV EXAMINATION – WINTER 2015

Subject Code: 141303**Date: 01/01/2016****Subject Name: Chemical Engineering Processes****Time: 02:30pm to 05:00pm****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) Explain the importance of studying chemical engineering processes **07**
(b) Draw the neat sketch of solid handling equipments **07**
- Q.2** (a) Explain in detail the process of hydrogenation of Vegetable Oil **07**
(b) Explain in detail the process design modifications in Urea manufacturing **07**
- OR**
- (b) Explain in detail the major engineering problems associated with the hydrogenation of Vegetable Oil **07**
- Q.3** (a) Discuss Urea manufacturing with a neat flow diagram **07**
(b) Enlist the uses of Urea and Methanol **07**
- OR**
- Q.3** (a) Explain with a neat flow diagram manufacturing of Hydrogen Cyanide **07**
(b) Write down the reactions involved in Vinyl Chloride production. Discuss the health and safety aspects of the same. **07**
- Q.4** (a) Discuss the sources of pollution and health & safety aspects of Nitric acid production **07**
(b) Draw only a neat sketch of ethanol production from ethylene **07**
- OR**
- Q.4** (a) Draw only a neat sketch of Furfural production **07**
(b) Discuss in detail: Cyclone separator and Electrostatic precipitator **07**
- Q.5** (a) Explain with a neat flow diagram manufacturing of Methanol. **07**
(b) Discuss Phenol production along with the health and safety aspects of the same **07**
- OR**
- Q.5** (a) Discuss the manufacturing of Ethyl Acetate in detail **07**
(b) Explain production of Cellulose Acetate in detail **07**
