

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VI • EXAMINATION – SUMMER 2013

Subject Code: 160502

Date: 27-05-2013

Subject Name: Chemical Process Industries - II

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) Classify different types of dyes based on usage and write in brief about each. **07**
(b) Explain the manufacturing process of sugar from sugarcane with a detailed flowsheet. **07**
- Q.2** (a) Explain the manufacturing process of Penicillin with the help of a detailed flowsheet. **07**
(b) Describe the manufacturing process of Ethyl Alcohol by fermentation route. Also discuss the major engineering problems. **07**
- OR**
- (b) Discuss the important steps in beer production. Write in brief about different types of beers? **07**
- Q.3** (a) Answer in brief: (i) What is inversion of sugar and how it is prevented? **08**
(ii) List the various design principles followed for sterile operations in fermentation industries.
(b) Write a short note on application and uses of various types of surface coatings. **06**
- OR**
- Q.3** (a) Answer in brief: (i) Discuss various ways of bagasse disposal. **08**
i) List the various separation routes to produce absolute alcohol.
(b) Write a short note on usage of titanium dioxide in exterior white paints. **06**
- Q.4** (a) Classify different surface coatings based on their components. **07**
(b) Discuss Aniline production and its application. **07**
- OR**
- Q.4** (a) Write short notes on: (i) Natural dyes (ii) food, drug and cosmetic colours. **06**
(b) Explain manufacturing process of vinyl sulphone with a neat flowsheet. Also discuss the major engineering problems. **08**
- Q.5** (a) What are Vitamins? List the essential vitamins for human and write in brief about each. **08**
(b) Write short notes on: (i) Phenobarbital (ii) analgesics **06**
- OR**
- Q.5** (a) What are antibiotics? Write in brief about the essential antibiotics available in market. **08**
(b) Write short note on insulin. **06**
