

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI- EXAMINATION – SUMMER 2016

Subject Code:160502

Date:21/05/2016

Subject Name:Chemical Process Industries-II

Time: 10:30 AM to 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) With a neat flow diagram explain the manufacture of insulin. **07**
(b) Define dyes. Discuss classification with respect to application. **07**
- Q.2** (a) Answer the following: **07**
(i) Define (1) proof gallon (2) absolute alcohol (3) pigment.
(ii) Draw structural formula of (1) penicillin (2) riboflavin (3) aspirin
(4) Vitamin C
(b) Explain the manufacture and isolation of streptomycin. **07**
- OR**
- (b) What are antibiotics? List types of penicillin stating the 'R' in side chain of each. **07**
- Q.3** (a) Write short note on cane sugar refining. **07**
(b) Discuss production of nitrobenzene and aniline with a neat flowsheet. **07**
- OR**
- Q.3** (a) Discuss major engineering problems in cane sugar manufacture. **07**
(b) Discuss production of simple vat dyes. **07**
- Q.4** (a) What are the constituents of paint? Discuss 'paint failure' and 'paint application.' **07**
(b) Write short note on varnishes. **07**
- OR**
- Q.4** (a) What is pigment volume concentration? Explain mixing of paint with a neat flowchart. **07**
(b) Write short notes on red and yellow pigments. **07**
- Q.5** (a) Draw the flow diagram for dehydration of ethanol to absolute alcohol by azeotrope distillation. Discuss separation routes to absolute alcohol. **07**
(b) Explain production of distilled liquors. **07**
- OR**
- Q.5** (a) With a neat flowchart explain production of citric acid. State its uses. **07**
(b) Write short note on enzymes. **07**
