

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-III • EXAMINATION – WINTER 2013

Subject Code: 130501**Date: 28-11-2013****Subject Name: Organic Chemistry and Unit Processes****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.

- Q.1** (a) Give classification of Carbohydrates. **07**
(b) (I) Explain Optical isomerism in Tartaric acid. **04**
(II) Discuss Amination of Naphthalene. **03**

- Q.2** (a) Explain SN^1 and SN^2 reaction with mechanism. **07**
(b) Discuss formation of an ester via Grignard Synthesis. **07**

OR

- (b) (I) What is a soap? Briefly describe manufacture of soap. **04**
(II) Write a note on Reformatsky reaction. **03**

- Q.3** (a) Write a note on preparation and properties of Carboxylic acids. **07**
(b) Give example and mechanism of the following reaction. **07**
(I) Addition reaction.
(II) Electrophilic substitution reaction.

OR

- Q.3** (a) Explain properties and uses of following compounds: **07**
(I) Acetone (II) chloroform
(b) (I) Give Manufacturing process, properties and uses of Phenol. **04**
(II) Write Properties of Polymers. **03**

- Q.4** (a) Discuss preparation of acetic acid by fermentation method. **07**
(b) Write the Composition of Crude Oil. Explain preparation of "Synthetic Petrol" by Bergius process. **07**

OR

- Q.4** (a) What do you mean by Heterocyclic compound? Discuss about any one Five member ring compound. **07**
(b) Explain the benzene in following points- **07**
(I) Aromaticity
(II) Friedel Crafts alkylation

- Q.5** (a) Write short note on Dyes and Pigments. **07**
(b) (I) Give the conversion:- Glucose to Fructose **04**
(II) What do you mean by Walden Inversion? **03**

OR

- Q.5** (a) Write a short note on:- **07**
(I) Resonance
(II) Inductive Effect
(b) Define Unit Process. Discuss the manufacturing of Nitrobenzene from benzene with mechanism. **07**
