

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-III • EXAMINATION – SUMMER • 2014

Subject Code: 130501**Date: 26-05-2014****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) Discuss the fractional distillation of crude oil and state the various important fractions and their uses. **07**

(b) Write short notes on: Occurrence, composition and types of crude oil. **07**

Q.2 (a) Write physico-chemical properties of chloroform and ethanol. **07**

(b) Describe carbohydrates along with classification and explain the manufacturing process of glucose. **07**

OR

(b) What are polynuclear aromatic compound? Give examples and explain nitration of naphthalene. **07**

Q.3 (a) Give the manufacturing process of phenol from benzene. Also give reactions of benzene with bromine water, trichloro methane and chlorine. **07**

(b) Give one preparation method of each: Chloroform, Acetone, Acetic Acid, Ethyl alcohol, Aniline, Polyethylene and Styrene. **07**

OR

Q.3 (a) What is meant by organo metallic compound? Give manufacturing process of Ethyl magnesium bromide in detail with its applications. **07**

(b) What is LPG? Explain CNG and what are the alternatives for them. **07**

Q.4 (a) Give the manufacturing process for naphthalene and its sulphonation. **07**

(b) Explain the reaction mechanism of Perkin condensation and Cannizzaro reaction. **07**

OR

Q.4 (a) Explain unit process for amination and oxidation in detail. **07**

(b) Explain nucleophilic substitution reaction in detail with their mechanism. **07**

Q.5 (a) What do you understand by dyes? Explain its classification with suitable examples. **07**

(b) Write short notes with applications of Hyperconjugation and Inductive effect. **07**

OR

Q.5 (a) Explain Walden Inversion giving suitable example. **07**

(b) Explain with example any two: **07**

(1) Esterification.

(2) Homolysis.

(3) Addition Reaction.
