

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-III (NEW) EXAMINATION – SUMMER 2015

Subject Code: 2132805**Date: 04/06/2015****Subject Name: Organic Chemistry****Time: 02.30pm-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 in short. **07**
1. What is Polarity?
 2. Does Electro negativity effects the course of reaction. Explain.
 3. What is Enantiomers?
 4. Give one example of any Nitrile compound?
 5. Define Aromaticity?
 6. Structure of Phthalic Anhydride?
 7. Write Aufbau Principle?
- (b) Define the following terms: **07**
- (1) Plane polarized light. (2) Azo Coupling Reaction. (3) Assymmetric Carbon atom. (4) Benzene on nitration gives. (5) Heterocyclic compound. (6) Structure of Gamma and Sulphanilic acid. (7) Principle of Chromatography
- Q.2** (a) Describe in detail different general methods of preparation, properties and uses of Aliphatic and Aromatic Alcohols. **07**
- (b) (1) Steam Distillation. **07**
- (2) Different types of Hybridization.
- OR**
- (b) (1) Simple Distillation **07**
- (2) Fractional Crystallization and Sublimation.
- Q.3** (a) Explain in brief about different type of Isomerism. Detail Geometrical Isomerism. **07**
- (b) Explain reaction mechanism. Give the importance of the formation of different reactive intermediates. **07**
- OR**
- Q.3** (a) Write in detail the preparation, properties and uses of Naphthalene. **07**
- (b) Write in general preparation, properties and uses of Chloro Benzene and Nitro benzene. **07**
- Q.4** (a) Write preparation, properties and uses of Pyridine and Furan. **07**
- (b) Define Solubility. Write in detail the information about the Protic and Aprotic solvents considering its utility in processing industries. **07**
- OR**
- Q.4** (a) Explain Electrophillic Substitution and Addition reactions with mechanism. **07**
- (b) Write in general preparation, properties and uses of Esters and Ethers. **07**
- Q.5** (a) Explain the principle of Chromatography. Enlist different Chromatographic techniques in brief with its special properties. **07**
- (b) Define Optical activity. Explain in detail about Polarimeter. **07**
- OR**
- Q.5** (a) Write Preparation of Acetone, Aniline, Citric acid. **07**
- (b) Brief different test to analyze organic molecule. **07**