

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III EXAMINATION – SUMMER 2015****Subject Code: 132805****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 Aromaticity?
 2. To show optical activity which possibilities should match?
 3. Name different Quantum No.
 4. Stability of free radical depends on what?
 5. Show Red azo dye test?
 6. Presence of Hetero atom in the aryl ring confirms which molecule?
 7. Secondary alcohol on oxidation gives what?
- (b) Define the following terms: **07**
- (1) Enantiomers. (2) Hund's rule of Multiplicity. (3) Plane Polarized light. (4) Diazotization. (5) Keto-Enol Conversion. (6) Name two Protic Solvents. (7) Bond Length.
- Q.2** (a) Describe in detail different general methods of preparation, properties and uses of Aryl Halides. **07**
- (b) (1) Vacuum Distillation **07**
(2) Hybridization
- OR**
- (b) (1) Crystallization (Simple, Fractional) **07**
(2) Overlapping.
- Q.3** (a) Define Isomerism. Write in brief about Optical Isomerism. **07**
- (b) What is Unshared pair of Electrons? Explain how it plays role in deviation in the structural configuration of different molecules with two examples. **07**
- OR**
- Q.3** (a) Write in detail the preparation, properties and uses of Anthracene. **07**
- (b) Write in general preparation, properties and uses of Nitro compounds. **07**
- Q.4** (a) Write preparation, properties and uses of Alcohols. **07**
- (b) Explain (a) Cumene process. (b) Sandmeyer reaction (c) Haworth's synthesis to prepare Naphthalene. **07**
- OR**
- Q.4** (a) Explain Resonance and Inductive effect. **07**
- (b) Write preparation, properties and uses of Thiophene and Quinoline. **07**
- Q.5** (a) Write in detail about Nucleophilic Substitution and Electrophilic Addition reaction with example. **07**
- (b) Write a note on Carbonium, Carbanion and Free radical. **07**
- OR**
- Q.5** (a) Explain stereoisomerism. Brief Geometrical isomerism with example. **07**
- (b) Brief Lassaigne's, Mulliken & Barker and Ignition test. **07**