

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. – SEMESTER – IV • EXAMINATION – WINTER 2013

Subject Code: 240003**Date: 30-11-2013****Subject Name: Pharmaceutical Chemistry - IV****Time: 02.30 pm - 05.30 pm****Total Marks: 80****Instructions:**

- 1. Attempt any five questions.**
- 2. Make suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**

- Q.1** (a) Define and Classify amines? Give any three general methods of preparation and three reactions of amines. **06**
- (b) How cannizzaro reaction differs from aldol condensation? Write a mechanism for aldol condensation. **05**
- (c) Give mechanism of action for Hofmann's Degradation of amides. **05**
- Q.2** (a) What is resolution? Explain the methods for racemic modification into enantiomers. **06**
- (b) Write a note on Biphenyls and Allenes with suitable examples. **05**
- (c) Write various reactions involved in oxidation and reduction of aldehydes and ketones. **05**
- Q.3** (a) What is polynuclear aromatic compound? Discuss the reactions of naphthalene. **06**
- (b) What are phenols? How do they differ from alcohols? Give general methods of preparation of phenol. **05**
- (c) Enlist the various acid derivatives. Give one general method for preparation of each of them with one example. **05**
- Q.4** (a) Discuss the preparation and reactions of Diazonium salt. **06**
- (b) Write note on stereoselective and stereospecific reactions. **05**
- (c) What are arenes? Write a note on Friedel craft alkylation. Discuss the limitation of it. **05**
- Q.5** (a) Write a note on Green Chemistry. Mention the advantages of microwave heating over convectional heating. **06**
- (b) Give mechanism for Reimer Tiemann reaction. **05**
- (c) What is nano chemistry? Discuss four nano particles used in Pharmacy. **05**
- Q.6** (a) Explain the following statements. **06**
1. Chloroacetic acid is stronger acid than acetic acid.
2. Halogens are ortho-para director but ring deactivator.
3. Staggered conformation is more stable than eclipsed.
- (b) Differentiate between the following with suitable examples **05**
1. Enantiomers and Diastereomers
2. Electrophile and Nucleophile
- (c) Write the reaction steps for conversion of **05**
1. Nitrobenzene to P-nitro aniline. 2. Toluene to Benzamide

- Q.7** (a) Explain Diels-Alder reaction with reference to conservation of orbital symmetry rules. **06**
- (b) What do you understand by reactive methylene group? Write a detail on synthesis of aceto acetic ester. **05**
- (c) Give the name of following. **05**


