

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.PHARM – SEMESTER – 4- EXAMINATION –WINTER - 2018**

**Subject Code: 240003**

**Date: 10/12/2018**

**Subject Name: Pharmaceutical Chemistry - IV**

**Time:02:30 PM TO 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 following **06**  
1. Optical activity    2. Chirality    3. Configuration  
4. Racemic mixture    5. Geometrical isomerism    6. Tautomerism
- (b) Write an informative note on Stereochemistry of Biphenyl. **05**
- (c) Discuss the Haworth synthesis for naphthalene. **05**
- Q.2** (a) Discuss any three-general method of preparation and three reactions of amines. **06**
- (b) Discuss Grignard reagents utility in organic chemistry with specific example. **05**
- (c) Give any three methods of preparations of Phenols. **05**
- Q.3** (a) Explain the following statements. **06**  
1. Ammonia is more basic than aniline.  
2. Acetone is less reactive than Acetaldehyde  
3. Chloroacetic acid is stronger than acetic acid
- (b) Give mechanism for Kolbe reaction. **05**
- (c) Explain enantiomer and diastereomer with one common example. **05**
- Q.4** (a) Describe preparation and synthetic utility of diazonium salts. **06**
- (b) Give the chemistry of anthracene **05**
- (c) Give mechanism for Diels alder reaction **05**
- Q.5** (a) Give the method for preparation of carboxylic acid. **06**
- (b) Write a note on Witting reaction. **05**
- (c) Give mechanism for Reimer–Tiemann reaction. **05**
- Q. 6** (a) How will you convert **06**  
1. Phenol to Aspirin    2. Aniline to Phenol    3. Aniline to p-Nitro Aniline
- (b) Write a note on Microwave synthesis. **05**
- (c) Give any three chemical reactions of **05**  
1. Amides    2. Ketone
- Q.7** (a) What is Green chemistry? Discuss any four principles of it. **06**
- (b) Give the mechanism of Sulphonation and Chlorination of benzene. **05**
- (c) Give a brief discussion on acidity of carboxylic acids. **05**

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