

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

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

## GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. - Semester-IV, Examination -SUMMER 2017

**Subject code: 240003**

**Date: 04/05/2017**

**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 terms. **06**  
i) Chiral centre, ii) Configuration, iii) Conformations, iv) Enantiomers  
v) Diastereomers, vi) Specific rotation
- (b) What is optical activity? How is it measured? **05**
- (c) Explain Stereoselective and stereospecific reactions with examples. **05**
- Q.2** (a) Give the general mechanism of electrophilic aromatic substitution in benzene. **06**
- (b) Write a note on friedel crafts reaction. **05**
- (c) Haworth synthesis of naphthalene **05**
- Q.3** (a) Discuss the mechanism of Hoffmann's degradation of amide. **06**
- (b) What is Gabriel phthalimide synthesis? **05**
- (c) Write a note on Hinsberg method. **05**
- Q.4** (a) Discuss the mechanism of Reimer Tiemann Reaction and Kolbe Schmitt reaction. **06**
- (b) How will you prepare Diazonium salt? **05**
- (c) Discuss preparations of carboxylic acid derivatives. **05**
- Q.5** (a) Write a note on aldol condensation **06**
- (b) Write various methods of preparations for aldehyde or ketone. **05**
- (c) Write a note on Knoevenagel reaction. **05**

<b>Q.6</b>	(a) Give the mechanism of Cannizzaro reaction.	<b>06</b>
	(b) Write a note on pinacol pinacolone rearrangement.	<b>05</b>
	(c) Give the mechanism of witting reaction.	<b>05</b>
<b>Q.7</b>	(a) Explain orientation of nucleophilic aromatic substitution.	<b>06</b>
	(b) Write a short note on Microwave synthesis.	<b>05</b>
	(c) Give brief idea about Nano Chemistry	<b>05</b>

\*\*\*\*\*