Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. SEMESTER – IV (OLD Syllabus) • EXAMINATION – SUMMER • 2015

Subject Code: 240003 **Date: 03-06-2015**

Subject Name: Pharmaceutical Chemistry - IV

Time: 10:30 am - 01:30 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)	Give mechanism for Nucleophilic aromatic substitution reaction	**06**
	(b)	Give method of preparation of carboxylic acid	**05**
	(c)	Write a note on Riemer Tiemann and Kolbe reaction	**05**
Q.2	(a)	Give the mechanism of Nitration and Chlorination of benzene	**06**
	(b)	Write a note on Hofmann's degradation of amines	**05**
	(c)	How is Phenol prepared? Give four method of preparation	**05**
Q.3	(a)	Explain Enantiomers and Diastereomers. Enlist different methods for racemic resolution and explain any one	**06**
	(b)	What is Huckel rule? Write examples of two compounds that follow this rule.	**05**
	(c)	What are advantage of Microwave synthesis over conventional synthesis?	**05**
Q.4	(a)	How are ketones prepared?	**06**
	(b)	Write a note on stereochemistry of Biphenyls.	**05**
	(c)	Write a note on Aldol Condensation and Cannizzaro reaction	**05**
Q.5	(a)	Comment on the following i) Aromatic ring containing the amino functional group does not undergo friedel craft alkylation ii) Acetone are less reactive than acetaldehyde iii) Staggered confirmation is more stable than eclipsed	**06**
	(b)	Explain sequence rule to assign conformation	**05**
	(c)	Write a note on Diels Alder reaction.	**05**
Q. 6	(a)	Comment on the following i) Phenol is more acidic than alcohol ii) Meso compounds are optically active iii) P-nitrophenol is more volatile than o-nitroaniline	**06**
	(b)	Explain conformation of cyclohexane	**05**
	(c)	Give structural formula for i) Catechol (ii) Resorcinol iii) Benzaldehyde (iv) Phthalic acid (v) Diphenylamine	**05**
Q.7	(a)	Write a note on fridel craft alkylation. Discuss with its limitation	**06**
	(b)	Give preparation and synthetic utility of a Diazonium salt	**05**
	(c)	Define the following: i)Dextrorotatory (ii) Chiral centre (iii) Meso compound (iv) Optical activity (v) Configuration	**05**

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