Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. - SEMESTER– IV - EXAMINATION – SUMMER - 2017

Subject Code: 2240004 **Date: 04/05/2017**

Subject Name: Pharmaceutical Chemistry – VI (Organic Chemistry – II)

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)**	Discuss the Sequence rule in detail by giving suitable examples.	**06**
	(b)	Write a note on Nucleophilic aromatic substitution reaction.	**05**
	(c)	Explain Hoffmann degradation of amide with mechanism.	**05**
Q.2	**(a)**	What is resolution? Enlist different methods for racemic modification in to enantiomers. Explain Conversion to Diastereomers method in detail.	**06**
	(b)	Write note on Reactions of aldehydes.	**05**
	(c)	Discuss various methods of preparation of carboxylic acid.	**05**
Q.3	**(a)**	Define: Chirality, Specific rotation, Stereogenic centre, Mesomers, Configuration, Racemate.	**06**
	(b)	Give any two synthesis and any two reactions of Imidazole & Thiazole.	**05**
	(c)	Write a brief note on microwave synthesis.	**05**
Q.4	**(a)**	Give structures of following compounds. 1. Furan 2. Indole 3. Thiazole 4. Piperidine 5. Quinoline 6. Aziridine	**06**
	(b)	Give reaction and mechanism for Kolbe reaction.	**05**
	(c)	Write various reactions of pyrrole.	**05**
Q.5	**(a)**	Comment: (each carries two marks) 1. Electrophilic substitution takes place at 2-position in Pyrrole. 2. Pyrrole is more aromatic than furan. 3. Pyridine is more basic than pyrrole.	**06**
	(b)	Give preparation and use of Tollens' reagent.	**05**
	(c)	Write a note on canizzaro's reaction.	**05**
Q. 6	**(a)**	Define conformations. What are the different conformations of Cylcohexane? Which one is more stable? Why?	**06**
	(b)	Explain preparation and reactions of imidazole.	**05**
	(c)	Explain Hell Wolhard-Zelinsky reaction with mechanism.	**05**
Q.7	**(a)**	Give reaction and mechanism for aldol condensation and perkin condensation.	**06**
	(b)	Write a note on Nano chemistry.	**05**
	(c)	Write in detail about various methods for synthesis of pyridine.	**05**

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