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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.

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