

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 Riemeier 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	06
	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	
	(b)	Explain sequence rule to assign conformation	05
	(c)	Write a note on Diels Alder reaction.	05
Q. 6	(a)	Comment on the following	06
	i)	Phenol is more acidic than alcohol	
	ii)	Meso compounds are optically active	
	iii)	P-nitrophenol is more volatile than o-nitroaniline	
	(b)	Explain conformation of cyclohexane	05
	(c)	Give structural formula for	05
	i)	Catechol	(ii) Resorcinol
	iii)	Benzaldehyde	(iv) Phthalic acid (v) Diphenylamine
Q.7	(a)	Write a note on friedel craft alkylation. Discuss with its limitation	06
	(b)	Give preparation and synthetic utility of a Diazonium salt	05
	(c)	Define the following:	05
	i)	Dextrorotatory (ii) Chiral centre (iii) Meso compound (iv) Optical activity (v) Configuration	
