Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm - SEMESTER–IV • EXAMINATION – SUMMER-2018

Subject Code: 240003 **Date: 21/05/2018**

Subject Name: Pharmaceutical Chemistry-IV

Time: 10:30AM TO 01:30PM **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)	Explain Friedal Craft's alkylation with reaction and mechanism with its limitation.	06
	(b)	Give any TWO method of preparation and TWO chemical reaction of Phenol.	05
	(c)	What is resolution? List the methods of resolution and explain any two methods of recemic modifications.	05
Q.2	(a)	What are phenols?How they differ from alcohols?Write a reaction mechanism of Reimer-Tiemann reaction.	06
	(b)	Explain briefly following terms with examples: (i) Aromaticity (ii) Electrophile (iii) Nucleophile (iv) Dienophiles (v) Arenes	05
	(c)	Explain reaction and mechanism of Riemer-Tiemann Reaction.	05
Q.3	(a)	Define conformation.discuss the stability and potential energy changes of conformations of n-Butane.	06
	(b)	What is Huckel rule? Write examples of two compounds that follow this rule.	05
	(c)	Write an note on Green chemistry.	05
Q.4	(a)	Correct , if necessary and answer each of the following statements: i) Ammonia is more basic than Aniline. ii) Benzene easily undergoes electrophilic substitution only. iii) Nucleophilic addition reaction is common for carboxylic acid.	06
	(b)	Explain benzyne mechanism.	05
	(c)	What is polynuclear compound and explain its aromaticity.	05
Q.5	(a)	Give reason. i) Halogens are ortho-para director in elctrophilic substitution reaction of benzene. ii) ketones are giving positive Tollen's test. iii) only mono substituted benzene undergoes nucleophilic aromatic substitution reaction.	06
	(b)	Write a note on aldol Condensation and Cannizaro reaction.	05

	(c)	Write a note on Hoffmann Degradation of Amine.	05
Q.6	(a)	Define the following terms with two examples for each. i) Chirality ii) Optical activity iii) α-β unsaturated carbonyl compounds	06
	(b)	Define Nucleophilic aromatic substitution reaction? Justify with reaction and mechanism.	05
	(c)	Explain the sequences rule to assign conformation. Draw the possible stereoisomer of 2,3-dichlorohexane.	05
Q.7	(a)	Discuss various preparation of carboxylic acid.	06
	(b)	Write a note on Biphenyls and Allens.	05
	(c)	What is conjugated system? Explain the michael addition reaction.	05

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