Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. – SEMESTER – IV • EXAMINATION – WINTER • 2014

Subject Code: 2240004 Date: 29-12-2014

Subject Name: Pharmaceutical Chemistry VI (Organic Chemistry II)

Time: 02:30 pm - 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)**	Give the IUPAC name of following. 1) $CH_3CH_2CH_2CH_2CH(Cl)COOH$ 2)$CH_3CH_2COCH(CH_3)_2$ 3) CH_3CH_2BrCHO 4) $CH_3CH_2CH_2ClCH_2NHCH_3$ 5)$C_6H_5CONH_2$ 6)$CH_3CH=CHCHO$	**06**
	(b)	Write brief note on Hofmann degradation of amides.	**05**
	(c)	What is resolution? Explain the methods for racemic modification in to enantiomers.	**05**
Q.2	**(a)**	What do you mean by Green Chemistry? Give its applications.	**06**
	(b)	Write note on preparation methods of aldehydes.	**05**
	(c)	Give difference between cannizaro reaction and aldol condensation? Write a mechanism for aldol condensation.	**05**
Q.3	**(a)**	Give prepaparation and reaction of diazonium salt.	**06**
	(b)	What are nano particles ? Discuss uses of nano particles in Pharmacy.	**05**
	(c)	Write a short note on Microwave synthesis.	**05**
Q.4	**(a)**	Discuss the Sequence rule in detail to assignconfiguration.	**06**
	(b)	What are phenols? How they differ from alcohols? Write a note on Reimer-Tiemann reaction.	**05**
	(c)	Define the following terms: (i) Specific rotation (ii) Diasteromer (iii) Meso compound (iv) Enantiomer (v) Chiral center	**05**
Q.5	**(a)**	Give the structure of: (1) Pyrrazole (2) Pyridine (3) Quinoline (4) Pyridazine (5) 3-methyloxazole (6) Indole	**06**
	(b)	Define Nucleophilic aromatic substitution reaction. Explain the Benzyne Mechanism.	**05**
	(c)	Comment on the following 1. Pyridine is more basic than Pyrrole. 2. Pyridine is less basic than aliphatic amines.	**05**
Q. 6	**(a)**	Explain the following reaction: (i) Kolbe reaction (ii) Fries rearrangement	**06**
	(b)	Give TWO reactions of the following: (1)Furan (2)Thiazole (3)Pyrrol (4)Pyrimidine (5) Pyridine	**05**

	(c)	Give structure and IUPAC name of following 1. Salicylic acid 2. O-Phenylene diamine 3. p-Cresol 4. o-chlro, p-amino benzoic acid 5. Ethyl-ispropylamine	**05**
Q.7	**(a)**	Discuss the conversion of carboxylic acid to their corresponding chloride, esters and amide derivative.	**06**
	(b)	Write a short note on the following. i) Stereochemistry of Biphenyl ii) Stereochemistry of Allenes	**05**
	(c)	Explain preparation and reactions of imidazole.	**05**

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