Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PHARM – SEMESTER –2 EXAMINATION – SUMMER-2024

Subject Code: BP202TP Date: 11/06/2024

Subject Name: Pharmaceutical Organic Chemistry I

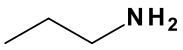
Time: 10.30 a.m. to 1.30 p.m. Total Marks: 80

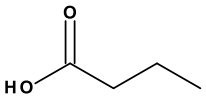
Instructions:

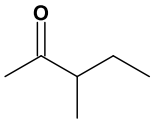
1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

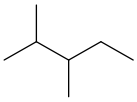
Q-1	**a.**	What are elimination reactions? Explain the factors affecting E2 reaction.	**6**
	b.	Write a note on Cannizzaro reaction.	**5**
	c.	Explain the electrophilic addition to 1,3-butadiene.	**5**
Q-2	**a.**	What kind of addition takes place, when HBr is added in alkene in presence of peroxide. Explain the mechanism for the same.	**6**
	b.	Explain the effect of electron withdrawing groups and electron releasing groups on basicity of aliphatic amines with suitable examples.	**5**
	c.	Write a note on methods of preparation for carboxylic acids.	**5**
Q-3	**a.**	Write down the synthetic route for following conversions with appropriate reagents. I. Benzoic acid to aniline II. Benzoic acid to ethyl benzoate III. Propanol to propanal	**6**
	b.	Give the structure and uses of benzyl benzoate, hexamine & chlorobutanol.	**5**
	c.	Write a note on electrophilic addition to alkenes.	**5**
Q-4	**a.**	Explain the qualitative tests of aldehydes and ketones.	**6**
	b.	Draw the structure of I. 2-methyl-1-butene iv. 2-aminopentane II. Acetic acid v. Ethyl pentanoate III. 2,3-dimethylpentanal	**5**
	c.	Write a note on SN_2 reaction.	**5**
Q-5	**a.**	Comment on followings i. CH_3CHO is more reactive than CH_3COCH_3 towards reaction with HCN. Why? ii. Chloroacetic acid is more acidic than acetic acid. Why? iii. Which type of isomerism is shown by the following pair of compounds. Acetone and Propanal 1-Butanol and 2-butanol	**6**

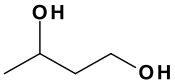
	b.	Write a note on methods of preparation of alcohols.	**5**
	c.	Give the structure and uses of trichloroethylene, dichloromethane and iodoform.	**5**
Q-6	**a.**	Write the IUPAC name of the following compounds.	**6**

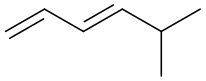
I. 

II. 

III. 

IV. 

V. 

VI. 

	b.	Write a note on hybridization present in ethyne.	**5**
	c.	Write a note on factors affecting SN1 reaction.	**5**
Q-7	**a.**	Write a note on aldol condensation reaction.	**6**
	b.	Write a note on preparation of aldehydes.	**5**
	c.	write a note on qualitative test for carboxylic acid, amides and esters.	**5**

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