Seat No.: _____ Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B.PHARM – SEMESTER – 2 EXAMINATION – SUMMER-2025

Subject Code:BP202TP Date: 19-06-2025

Subject Name: Pharmaceutical Organic Chemistry I

Time: 10:30 AM TO 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)**	Write a detailed note on "Common & IUPAC system of nomenclature of organic compounds (up to 10 carbons open chain compounds)".	**06**
	(b)	Define: (1) Isomers (2) Free Radical (3) Carbocation (4) Nucleophilic addition reaction (5) Qualitative test.	**05**
	(c)	Discuss acidity of Carboxylic acids.	**05**
Q-2	**(a)**	Compare and contrast SN1 & SN2 reactions. Enlist the factors affecting SN1 & SN2 reactions.	**06**
	(b)	Give the qualitative tests, structure and uses of Glycerol and Acetone.	**05**
	(c)	Write a detailed note on Aliphatic amines.	**05**
Q-3	**(a)**	Compare and contrast E_1 & E_2 reactions. Enlist the factors affecting E_1 & E_2 reactions.	**06**
	(b)	Give the structure and uses of Acetyl salicylic acid and Tartaric acid.	**05**
	(c)	Explain SP hybridization in Alkenes with example.	**05**
Q-4	**(a)**	Explain Markownikoff's & Anti-Marklownikoff's orientation with example.	**06**
	(b)	Give the structure of: (1) Propylene glycol (2) Cinnamaldehyde (3) Lactic acid (4) Dimethyl phthalate (5) Paraldehyde.	**05**
	(c)	Write a detailed note on Free radical addition reaction of Conjugated dienes.	**05**
Q-5	**(a)**	Give the general methods for the preparation of Alkanes. Explain mechanism of any one method.	**06**
	(b)	Write a detailed note on Aldol and Crossed Aldol condensation.	**05**
	(c)	Give the structure and uses of Iodoform and Tetrachloromethane.	**05**
Q-6	**(a)**	Explain Cannizzaro and Crossed Cannizzaro reaction.	**06**
	(b)	What is Ozonolysis? Explain its mechanism.	**05**
	(c)	What is qualitative test? Discuss qualitative tests for carboxylic acids.	**05**
Q-7	**(a)**	Write a detailed note on Amide and Ester.	**06**
	(b)	Differentiate between Electrophilic and Nucleophilic reaction.	**05**
	(c)	Explain any two reactions for Alkyl halide.	**05**

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