

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM - SEMESTER-2 EXAMINATION – WINTER -2024

Subject Code:BP202TP**Date: 24-12-2024****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.

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| Q.1 | (a) Explain in details structural isomerism with suitable examples. | 06 |
| | (b) Define hybridization? Explain SP hybridization of alkenes. | 05 |
| | (c) Explain the stereochemistry and rearrangement of carbocation. | 05 |
| Q.2 | (a) Give Structure and uses of Ethanolamine, Ethylenediamine, Amphetamine | 06 |
| | (b) Write short notes on Diels Alder reaction. | 05 |
| | (c) Give the general methods of preparation of alkyl halides. | 05 |
| Q.3 | (a) Explain Markownikoff's orientation and Anti-Markownikoff's orientation. | 06 |
| | (b) Explain the factors affecting SN1 and SN2 reactions. | 05 |
| | (c) Discuss the Electrophilic addition reactions of alkenes, | 05 |
| Q.4 | (a) Give the structure and uses of Chloroform, iodoform, tetrachloroethylene. | 06 |
| | (b) Discuss the qualitative test of alcohols. | 05 |
| | (c) Differentiate between E1 and E2 mechanism. | 05 |
| Q.5 | (a) What is a SN1 reaction? Explain its mechanism with suitable example. | 06 |
| | (b) Explain the nucleophilic addition reaction of aldehyde and ketones. | 05 |
| | (c) Explain Cannizaro and Cross Cannizaro reaction with examples. | 05 |
| Q. 6 | (a) Explain aldol condensation and benzoin condensation. | 06 |
| | (b) Discuss the basicity of amines. | 05 |
| | (c) Give the chemical properties of amide. | 05 |
| Q.7 | (a) Draw the structure of following compound- | 06 |
| | i) Citric acid ii) Salicylic acid iii) Methyl salicylate, | |
| | iv) Benzoic acid v) Dimethyl phthalate vi) Acetyl salicylic acid. | |
| | (b) Explain mechanism and importance of Perkin reaction. | 05 |
| | (c) What is acidity of carboxylic acid? Explain the effect of substituents on acidity. | 05 |
