

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM – SEMESTER – 2 EXAMINATION – WINTER-2025

Subject Code: BP202TP**Date: 11-12-2025****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) Explain about structural isomerism in organic compounds. **06**
(b) Write about sp^3 hybridization of alkane. **05**
(c) Discuss about chlorination of alkane. **05**
- Q.2** (a) Define organic compounds. Discuss classification of organic compounds in details. **06**
(b) Write a note on Diel-Alder reaction with suitable examples. **05**
(c) Write about qualitative tests of alcohols. **05**
- Q.3** (a) Write about aldol condensation and crossed aldol condensation reaction with suitable example. **06**
(b) Discuss in details about allylic rearrangement. **05**
(c) Draw the structure and uses of following compounds: **05**
1) Iodoform
2) Glycerol
3) Vanilin
4) Amphetamine
5) Salicylic acid
- Q.4** (a) Discuss markownikoff's orientation and anti markownikoff's orientation with suitable example. **06**
(b) Write down qualitative test of aldehyde and ketone. **05**
(c) Explain stereochemistry and factors affecting SN_1 reaction. **05**
- Q.5** (a) Write down preparation and chemical reactions of alcohols. **06**
(b) Write down differences between E_1 and E_2 reactions. **05**
(c) Discuss chemical reactions of aliphatic amines. **05**
- Q. 6** (a) Write down various chemical reactions of carboxylic acid. **06**
(b) Explain about Saytzeffs rule with examples. **05**
(c) Write about benzoin condensation with appropriate example. **05**
- Q.7** (a) Discuss basicity of aliphatic amine. Explain effect of substituent on basicity of aliphatic amine. **06**
(b) Write a note on preparation of carboxylic acid. **05**
(c) Write a note on perkin condensation reaction. **05**
