

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM – SEMESTER – 3 EXAMINATION – SUMMER-2025

Subject Code: BP301TP**Date: 29 - 05 - 2025****Subject Name: Pharmaceutical Organic Chemistry II****Time: 02.30 PM TO 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) Write qualitative tests of Phenol. **06**
(b) Write a note on: Acidity of Phenols. **05**
(c) Describe the limitations of: **05**
 i) Friedel-Crafts alkylation reaction
 ii) Baeyer's strain theory
- Q.2** (a) Outline the synthesis of Naphthalene and Anthracene by Haworth's method. **06**
(b) Write a note on: Aromaticity. **05**
(c) Describe the important reactions of benzoic acid. **05**
- Q.3** (a) Explain the significance of Reichert Meissl (RM) value and Iodine value. **06**
(b) Give the general mechanism of electrophilic aromatic substitution reaction of benzene. **05**
(c) Write a note on structure and stability of benzene. **05**
- Q.4** (a) Justify the following: **06**
 i) Benzene undergoes electrophilic substitution reactions whereas alkenes undergo addition reactions.
 ii) Halogens although ortho-para directors are ring deactivators.
(b) Give the reactions of fatty acids. **05**
(c) Explain the effect of substituents on basicity of amines. **05**
- Q.5** (a) Describe Diazotization reaction with its mechanism and synthetic applications. **06**
(b) Write a note on: Directive influence of nitro group. **05**
(c) Write reactions of cyclopropane and cyclobutane. **05**
- Q. 6** (a) Describe the important reactions of Naphthalene and Phenanthrene. **06**
(b) Write a note on Reimer-Tiemann reaction. **05**
(c) Explain: Sachse Mohr's theory of cycloalkanes. **05**
- Q.7** (a) What are fats and oils? Explain rancidity of oils. **06**
(b) Convert the following: **05**
 i) Benzene to n-propyl benzene
 ii) Aniline to benzoic acid
(c) Write the structure and use of following organic compounds: **05**
 i) DDT
 ii) Saccharin
 iii) Diphenylmethane
 iv) Resorcinol
 v) BHC