

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM - SEMESTER-3 EXAMINATION – WINTER -2024

Subject Code:BP301TP**Date: 19-12-2024****Subject Name: Pharmaceutical Organic Chemistry II****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 notes on acidity and effect of substituents of phenol. **06**
(b) Explain, Haworth synthesis of naphthalene in detail. **05**
(c) Explain the general mechanism of electrophilic aromatic substitution in detail. **05**
- Q.2** (a) Define the following and give its significance: **06**
i) Acid value
ii) Iodine value
iii) Reichert Meissl (RM) value
(b) Write a note on reaction of fatty acid. **05**
(c) Write structure and uses of Cresol and Naphthols. **05**
- Q.3** (a) Write and explain Huckel's rule for aromaticity with examples. **06**
(b) Write structure and medicinal uses of Phenanthrene, Diphenylmethane and Triphenylmethane. **05**
(c) Write the structure of followings: Aniline, Salicylic acid, Benzoic acid, Diphenylamine, P-amino benzoic acid **05**
- Q.4** (a) Write structure and uses of DDT, Saccharin, and BHC. **06**
(b) Justify the below statements. **05**
1. Even though benzene is having three double bonds do not undergo addition reaction
2. Para nitro phenol is less acidic than phenol
(c) Write a note on saponification value and Rancidity of Oil. **05**
- Q.5** (a) Write reaction, reaction mechanism and limitation of Friedel Craft alkylation. **06**
(b) What is Bayer's strain theory? Explain it and also discuss its limitations. **05**
(c) Explain Sachse Mohr's theory in detail. **05**
- Q.6** (a) Write the general method to prepare benzene diazonium salt and explain its synthetic applications. **06**
(b) Write three reaction cyclopropane and cyclobutane. **05**
(c) Justify the following: **05**
1. Though halides are electron withdrawing group, they are o-p directing group on benzene.
2. Chloroacetic acid is more acidic than acetic acid.
- Q.7** (a) Explain the effect of substituents on acidity of benzoic acid with suitable examples. **06**
(b) Write a note on reaction of Phenanthrene. **05**
(c) Write a note Hoffman degradation reaction. **05**