

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph. - SEMESTER-3 • EXAMINATION – WINTER -2022

Subject Code: BP301TP**Date: 15/02/2023****Subject Name: Pharmaceutical Organic Chemistry II****Time: 10:30am to 01:30pm****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) What are electrophilic aromatic substitution reaction? Give the mechanism of Friedel craft alkylation. | 06 |
| | (b) Explain about the Huckel's rule for aromaticity with examples. | 05 |
| | (c) Write the structure and uses of DDT, BHC and Chloramine. | 05 |
| Q.2 | (a) Explain about effect of substituents on orientation of mono substituted benzene compounds towards electrophilic substitution reaction. | 06 |
| | (b) Why benzene donot undergo addition reaction? Justify your answer. | 05 |
| | (c) What are the limitations of Friedel craft alkylation? Explain in detail. | 05 |
| Q.3 | (a) Give structure and uses of cresol, resorcinol and naphthol. | 06 |
| | (b) What are benzene diazonium chloride salt? How it is prepared and enumerate its synthetic utility. | 05 |
| | (c) Comment:
1) Phenol is more acidic as compared to para nitro phenol.
2) Phenol is considered as weak acid. | 05 |
| Q.4 | (a) Explain Haworth synthesis of Naphthalene. | 06 |
| | (b) Give structure and medicinal uses of Anthracene, Diphenylmethane, and Triphenylmethane. | 05 |
| | (c) Write the reactions of naphthalene. | 05 |
| Q.5 | (a) Define and explain the analytical importance of, Acid value and Saponification value. | 06 |
| | (b) Enumerate the reactions given by fatty acid and explain Iodine value in detail. | 05 |
| | (c) Write a note on Cannizaro reaction. | 05 |
| Q. 6 | (a) Explain Baeyer's strain theory and its limitations. | 06 |
| | (b) Draw all the conformers of cyclohexane and justify why chair conformer is more stable? | 05 |
| | (c) Write a note on theory of strainless rings. | 05 |
| Q.7 | (a) Explain reactions of cyclopropane and cylcobutane in detail. | 06 |
| | (b) Write a note on Hoffmann degradation reaction. | 05 |
| | (c) Write a note on Reimer-Tiemann reaction. | 05 |
