

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph. - SEMESTER- 4• EXAMINATION – WINTER -2024

Subject Code: BP401TT**Date: 19/12/2024****Subject Name: PHARMACEUTICAL ORGANIC CHEMISTRY - III****Time: 02:30pm to 05:30pm****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) Write a note on Geometric isomerism in detail. | 06 |
| | (b) Explain Conformational isomers of Cyclohexane. | 05 |
| | (c) Discuss R and S Configuration with example. | 05 |
| Q.2 | (a) Write a note on Stereochemistry of biphenyl Compounds. | 06 |
| | (b) Explain Chemical reactions given by Furan. | 05 |
| | (c) Give Structure of i) indole ii) Pyridine iii)imidazole iv)Thiophene v)Quinoline | 05 |
| Q.3 | (a) Explain any two methods of synthesis of purine and its medicinal uses. | 06 |
| | (b) Define(any five): i) Enantiomers ii) Atropiisomers iii) isomers
iv)mesocompund v) Chirality vi) Racemic mixture | 05 |
| | (c) Discuss the sequence rule to assign configuration with example. | 05 |
| Q.4 | (a) Give difference between Stereospecific and Stereoselective reaction. | 06 |
| | (b) Explain any two methods for synthesis of Thiophene. | 05 |
| | (c) Write a note on reactions given by Chiral Molecules. | 05 |
| Q.5 | (a) Explain i) Oppenauer oxidation reaction ii) Dakin reaction | 06 |
| | (b) Discuss chemical and Physical properties of Pyrazole. | 05 |
| | (c) Explain Relative aromaticity of Pyrrole, Furan and Thiophene | 05 |
| Q. 6 | (a) Write a note on Metal hydride reduction. | 06 |
| | (b) Explain preparation and reactions of Pyridine. | 05 |
| | (c) Give medicinal uses of Pyrazole and Imidazole. | 05 |
| Q.7 | (a) Explain Clemmensen reaction in detail. | 06 |
| | (b) Discuss and compare basicity of pyridine, pyrrole and aliphatic Amines. | 05 |
| | (c) Justify(any two) : i) Electrophilic substitution takes place at 2-position in
Pyrrole
ii) Furan undergoes diels alder reaction
iii) Furan has high boiling point than Pyrrole | 05 |
