

Roll No: |

BPHARM
(SEM IV) THEORY EXAMINATION 2021-22
PHARMACEUTICAL ORGANIC CHEMISTRY III – THEORY

Total Marks: 75

Time: 3 Hours

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt all questions in brief.

10 x 2 = 20

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| a. | Define enantiomers with examples. |
| b. | Define meso compounds with examples. |
| c. | Distinguish between E and Z isomers with examples. |
| d. | Discuss sequence rules. |
| e. | Compare the reactivity and aromaticity of pyrrole, furan and thiophene. |
| f. | What is the reduction product of furan? Give its reaction. |
| g. | Discuss the structure and pharmaceutical uses of Oxazole. |
| h. | Write the pharmaceutical uses of quinoline and isoquinoline. |
| i. | Write the synthetic importance of Birch reduction. |
| j. | Discuss the Claisen Schmidt condensation reaction. |

SECTION B

2. Attempt any two parts of the following:

2 x 10 = 20

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| a. | Outline the various conformations of cyclohexane in detail. |
| b. | Classify heterocyclic compounds. Discuss the nomenclature of heterocyclic compounds with suitable examples. |
| c. | Write down the synthesis, reactions and medicinal uses of Imidazole and Thiazole. |

SECTION C

3. Attempt any five parts of the following:

5 x 7 = 35

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| a. | Describe DL system of nomenclature of optical isomers with suitable example. |
| b. | Describe stereo isomerism in biphenyl compounds and its conditions for optical activity. |
| c. | Write down the synthesis, reactions, and medicinal uses of Pyrrole and Thiophene. |
| d. | Describe in detail about the stereospecific and stereoselective reactions with examples. |
| e. | Write down the synthesis and medicinal uses of Pyridine also discuss basicity of Pyridine. |
| f. | Discuss in detail about the synthesis and pharmaceutical uses of pyrimidine and purine. |
| g. | Discuss the reaction and mechanism of Metal hydride reduction. |