

M. PHARMACY FIRST YEAR FIRST SEMESTER - 2025

ADVANCED MEDICINAL CHEMISTRY

Time: 3 hours

Full Marks: 75

Answer **any five** taking *at least two* from each group

Group A

1. Write notes on: [5 x 3]
 - (a) Selective optimization of a side effect for a new use of existing drugs
 - (b) Fragment-based drug design
 - (c) Scintillation proximity assay

2. Give examples and explanations for: [5 x 3]
 - (a) Bioisosters for polar drugs
 - (b) Increasing polarity in antifungal agents for better pharmacokinetics
 - (c) Metabolic blockers

3. Give an account of OECD guidelines for QSAR model development and validation. What is applicability domain of a QSAR model? What is the difference between regression and classification? Give examples of steric substituent constants. [5+3+2+5]

Group B

4. Write about Chemistry and biological action of Prostaglandins and Leukotrienes. 10+5=15
5. a) Classify Peptidomimetics with suitable example. 8+7=15
b) Write about modification of peptide backbone or conformational constraints.
6. Write about methodologies, application and challenges of non-covalently binding Enzyme inhibitors used in medicine. 15
7. Write a descriptive note on Enzyme inhibitors used in basic research. 15