

**M. PHARMACY FIRST YEAR FIRST SEMESTER - 2024**

**ADVANCED MEDICINAL CHEMISTRY**

**Time: 3 Hrs**

**Full Marks: 75**

Answer any **five** questions taking at least one from each group.

**Group A**

Answers to all parts of a question should be written in one place.

1. Discuss different physicochemical factors governing the biological activity of drugs. [15
2. How can NMR spectroscopy be used to check the affinity of small molecules to macromolecular targets? What is affinity screening? [10 + 5 = 15
3. Discuss the strategies of ring expansion/contraction, ring variation, and ring fusion in optimizing drug-receptor interactions. [15
4. Write on endogenous compounds as drug candidates. [15

**Group B**

5. Write about Chemistry and biological action of Prostaglandins and Thromboxane. 10+5=15
6. a) Classify Peptidomimetics with suitable example. 8+7=15
- b) Write about modification of peptide backbone or conformational constraints.

**Group C**

7. Write notes on: 5×3=15
  - a) Proto-oncogenesis and tumour suppression gene
  - b) Abnormal signaling pathway
  - c) Abnormalities in cell cycle regulation.
8. a) How do you synthesize gefitinib? Write different steps with chemical reactions. 5+4
- b) Discuss proteasome inhibitors. 6