

[Time: 3 Hours]

[Max. Marks: 75]

Advanced Medicinal Chemistry**Q.P. CODE: 5119**

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary.

LONG ESSAY (Answer any Three)**3 X 10 = 30 Marks**

1. Classify antineoplastic agents with examples. Give the MOA and synthesis of any one antimetabolite drug.
2. Explain the significance of prodrugs in drug design and development with specific examples.
3. Write a note on enzyme inhibitors in basic research and medicine.
4. What do you understand by drug receptor interactions? Explain the theories of receptor interactions.

SHORT ESSAY (Answer any Nine)**9 X 5 = 45 Marks**

5. What do you understand by drug resistance? Explain its causes.
6. Outline the biosynthetic pathway of prostaglandins.
7. Write a note on classical and non classical bioisosteric replacement strategies in analog design of drugs.
8. Write a note on COX2 inhibitors. Write the synthesis of any one COX2 inhibitor.
9. Explain the MOA and synthesis of any one anti-viral drug.
10. What are H₂ receptor antagonists? Write the MOA and synthesis of any one H₂ receptor antagonist.
11. Write a note on principles of enzyme inhibitors.
12. Outline the design of peptidomimetics by modification of peptide backbone.
13. Write a note on solution phase synthesis.
14. What do you understand by parallel synthesis in combinatorial chemistry? Explain with examples

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