



**Advanced Pharmacology and Toxicology**  
**(Revised Scheme 4)**

**Q.P. CODE: 9349**

Your answers should be specific to the questions asked.  
Draw neat, labeled diagrams wherever necessary.

**LONG ESSAY (Answer any TWO)**

**2 X 20 = 40 Marks**

1. Enumerate various cell surface receptor families and explain the transduction pathway involved in ion channel receptors and tyrosine kinase linked receptors.
2. Explain pathophysiology and pharmacotherapy of Parkinson's and Alzheimer's disease. (10+10)
3. What is mutagenicity? Enlist and explain various mutagenicity studies. (2+18)

**SHORT ESSAY (Answer any FIVE)**

**5 X 10 = 50 Marks**

4. Explain the pathogenesis of cardiac arrhythmias and write the pharmacology of any one drug used for treatment of arrhythmias. (4+6)
5. Explain the role of neurotransmitters as signaling molecules with examples.
6. Explain biosynthesis, physiological roles of 5-hydroxy tryptamine. (4+6)
7. Explain the principles and methods involved in male reproductive toxicity studies. (5+5)
8. Write a note on pharmacotherapy and critical analysis of rational use of drugs for COPD. (7+3)
9. Explain cAMP as intracellular signal transduction secondary messenger.

**SHORT NOTES**

**2 X 5 = 10 Marks**

10. Explain the pharmacotherapy of congestive heart failure.
11. Explain the generation and actions of cytokines.

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