



**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. Write the pathophysiology, pharmacotherapy and critical analysis of rational use of drugs in asthma.
2. Write the molecular mechanisms involved in cell regulation.
3. Write the pathophysiology, pharmacotherapy and critical analysis of rational use of drugs in CHF.

**SHORT ESSAY (Answer any FIVE)**

**5 X 10 = 50 Marks**

4. Write the intracellular signal transduction through mitogen-activated protein kinase (MAPK) and cytokine-activated Janus kinase (JAK) / signal transducer and activator of transcription (STAT) pathway.
5. Write the pathophysiology and pharmacotherapy of diabetes mellitus.
6. Write a note on female reproductive toxicity.
7. Write a note on *in vitro* tests for gene mutations in bacteria.
8. Pathophysiology and pharmacotherapy of myasthenia gravis
9. Pathophysiology and pharmacotherapy of peptic ulcer

**SHORT NOTES**

**2 X 5 = 10 Marks**

10. G-protein coupled receptors
11. Biosynthesis of eicosanoids

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