



**THIRD YEAR B.PHARM. EXAM  
PAPER II – MEDICINAL CHEMISTRY -I  
Q.P. Code: 564262**

**Time: Three Hours**

**Maximum: 100 marks**

**I. Elaborate on: (2X20=40)**

1. a) Explain the various types of Phase – I Biotransformation Pathways.  
b) Discuss factors affecting metabolism.
2. a) Classify H<sub>1</sub> Receptor Antagonists? Give the synthesis for the following drugs.  
i) Diphenhydramine hydrochloride ii) Triprolidine hydrochloride  
iii) Cyclizine hydrochloride iv) Promethazine hydrochloride.  
b) Brief the SAR of H<sub>1</sub> – receptor antagonist.

**II. Write notes on: (8X5=40)**

1. Explain the chemistry and biological significance of prostaglandins.
2. Outline the synthetic steps involved in a) Lignocaine b) Procaine.
3. Classify Anti-inflammatory agents and write the synthesis of Ibuprofen.
4. Brief the SAR of barbiturates.
5. Describe the synthesis and clinical use of the following:  
(a) Dextroamphetamine (b) Nikethamide.
6. Name the cholinergic blocking agents and explain the synthesis of any one of them.
7. How does hydrogen bonding affect biological activity? Explain with example.
8. Explain the methods of development of prodrugs.

**III. Short Answers on: (10X2=20)**

1. Chelation with examples.
2. Define antitussive and Write the structure of any two drugs?
3. Mechanism of action of Acetazolamide.
4. Structure, Chemical name and Uses of Phenobarbitone.
5. Neuromuscular blocking drugs.
6. Synthesis of Propranolol.
7. Write the structure of any two CNS stimulants.
8. Describe the synthesis and clinical use of thiamylal sodium.
9. Discuss the SAR of phenothiazines.
10. Proton pump inhibitors

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