

**B.PHARM. DEGREE EXAMINATION
THIRD YEAR
PAPER II – MEDICINAL CHEMISTRY – I**

Q.P. Code: 564262

Time: Three hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Explain the following physiochemical parameters related to biological activity with example.
a) Optical isomerism b) Surface activity c) Chelation d) pKa values.
2. a) Sketch the synthesis for: (i) Amitriptyline HCl (ii) Mephenytoin.
b) Give the detailed account of structure activity relationship of Barbiturates.
c) Define Antipsychotics and classify with examples.

II. Write notes on:

(8 x 5 = 40)

1. Give the route of synthesis and mechanism of action of Diazepam.
2. Classify local anesthetics with at least one structure for each class.
3. Give the structure, synthesis and uses of Acetazolamide.
4. Describe the significance of drug metabolism.
5. Illustrate the structure, synthesis and uses of Meclizine HCl.
6. Draw any four structures as Antitussives.
7. Describe the biosynthesis of Eicosanoids.
8. Explain the structure activity relationship of morphine analogues.

III. Short answers on:

(10 x 2 = 20)

1. Draw two structures of metabolized products of adrenergic neurotransmitters.
2. Give two examples for Neuromuscular blockers and mention their uses.
3. Sketch the structure and medicinal uses of Phenylephrine and Etomidate.
4. Give two examples for Prodrugs.
5. Outline the structure and medicinal uses of Metoprolol and Phenoxybenzamine.
6. Add a note on Cholinergic Neurochemistry.
7. Give the reaction product of Diphenylamine with sulphur in the presence of Iodine.
8. Give any two structures of drugs used as proton pump inhibitor.
9. Sketch the structure and medicinal uses of Tropicamide.
10. Outline the structure and uses of Zomepirac sodium.