

Ref. No.: Ex/BP501T/2024(S)

**B. PHARMACY THIRD YEAR FIRST SEMESTER SUPPLEMENTARY EXAM 2024**

**Subject: Medicinal Chemistry II (BP-501T)**

Time : Three hours

Full Marks : 75

Write any five by taking at least one from each group

**Group A**

1. (a) Define Histamine. How can it be biosynthesized? Outline the pathophysiology of Histamine.  
(b) Define and classify classic antihistamines with examples. (c) Outline the SAR and mode of action of ethylenediamine derivatives. [5+5+5]
2. Outline the synthesis and chemical names of the following: diphenhydramine HCl, triprolidine HCl, triprollanamine HCl, chlorphenoramine maleate and meclizine HCl [5x3]
3. (a) Discuss the mode of action and SAR of aminoalkylethers (b) Outline the synthesis of promethazine HCl and draw the structure of buclizine HCl, dimenhydrinate, chlorcyclizine HCl [5+(4+6)]
4. (a) What are H<sub>2</sub> receptor antagonists? Draw the structure and uses of cimetidine, ranitidine, and famotidine (b) What are proton pump inhibitors? draw the structure and uses of omeprazole, lansoprazole and pantoprazole [(1.5+6)+(1.5+6)]

**Group B**

5. What are steroid hormones? Discuss about their nomenclature. Write about Phase II metabolism of steroids. [3+6+6]
6. Write the structure, mechanism and therapeutic uses of the following drugs (a) mifepristone (b) nandrolone (c) diethylstilbestrol (d) sildenafil (e) tadalafil [5x3]
7. Discuss the structure, mechanism of action and SAR of testosterone. Write about glucocorticoids and mineralocorticoids. [9+6]