

B.Pharm 3rd Year 1st Semester Examination-2022-23
Medicinal Chemistry II, Theory (BP-501T)

FM-75

Time- 3hrs

Answer any five questions taking at least one each from Group A and Group B and at least two questions from Group C

Group A

1. Define Histamine. What is its distribution? Mention the pathophysiological role of Histamine. Define and classify antihistaminic H1 receptor antagonists with examples. Discuss the SAR and mode of action of antihistamines. [1+1+1+5+7]
2. Outline the synthesis, chemical names and uses of the following. [5x3]
Chlorpheniramine maleate
Promethazine. HCl
Chlorcyclizine. HCl
Diphenhydramine hydrochloride
Mepyramine maleate
3. (a) What are H2-receptor antagonists? Write the structure and therapeutic uses of Cimetidine, Ranitidine, Famotidine. (b) What are proton pump inhibitors? Discuss the mode of action, SAR and synthesis of any one proton pump inhibitor [7+8].

Group B

4. What are steroids hormones? Discuss its nomenclature, stereochemistry and metabolism processes. [1+3+3+8]
5. Write the structure, mechanism and therapeutic uses of following drugs (a) Sildenafil (b) Diethylstilbestrol (c) Norgestrel (d) Mifepristone (e) Nandrolone [5x3]

Group C

6. Write a note on osmotic diuretics [15]
7. (a) How do you prepare m-chlorotoluene? Using m-chlorotoluene, how do you prepare a diuretic drug? Discuss with chemical equations. (b) How do you synthesize methazolamide using hydrazine hydrate? Discuss with chemical equations. [(4+5)+6]
8. How do you synthesize (a) Hydrochlorothiazide (b) Flumethazide and (c) Bendroflumethazide. [5x3]