

QP Code: 521006

Reg. No.....

**Fifth Semester B. Pharm Degree Supplementary Examinations
September 2025
Medicinal Chemistry II
(2017 Scheme)**

Time: 3 Hours

Max. Marks: 75

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw diagrams wherever necessary*

Essays

(2x10=20)

1. Classify H₁ antihistamines giving one structure from each class. Discuss the chemistry of H₁ antihistamines. Outline the synthesis of diphenhydramine
2. Classify steroid hormones giving one structure from each class and explain the stereochemistry of steroids and outline the method of synthesis of warfarin

Short Notes

(7x5=35)

3. Classify antimetabolites giving the structure of one agent from each class and discuss the mechanism of action of Doxorubicin
4. Classify antihypertensives giving the structure of one agent from each class and explain the mechanism of action of ACE inhibitors
5. Chemistry, synthesis and uses of Disopyramide
6. Structural features of "statins" responsible for inhibiting HMG-CoA reductase enzyme. Give the structure of any one statin and mention its use.
7. Chemistry of 1, 4-dihydropyridines used as calcium channel blockers
8. Classify oral hypoglycemic agents giving one structure from each class and outline the synthesis of tolbutamide
9. Discuss the chemistry of thiazide diuretics and outline the synthesis of chlorthiazide

Answer Briefly

(10x2=20)

10. Why hydrochlorthiazide is more potent diuretic than chlorthiazide
11. Outline the synthesis of furosemide
12. Outline the method of synthesis of Procaine
13. Why second generation H₁ antihistamine cetirizine is less sedative than first generation H₁ antihistamines
14. What are osmotic diuretics. Give the structure of any one
15. Explain how nitrovasodilators produce vasodilation
16. Give the structure of any two steroid drug used as oral contraceptives
17. Give the structure and uses of two endothelial receptor antagonist
18. Give structure and uses of any one natural drug used in congestive heart failure
19. Give the structure and uses of Methimazole
