

**QP Code: 521006**

**Reg. No.....**

**Fifth Semester B. Pharm Degree Regular/Supplementary  
Examinations May 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 diuretics giving one structure from each class. Discuss the chemistry of carbonic anhydrase inhibitors and outline synthesis of acetazolamide
2. Classify local anaesthetics giving the structure of one agent from each class. Explain the mechanism of action and SAR of benzoic acid derivatives. Outline the method of synthesis of Dibucaine

**Short Notes**

**(7x5=35)**

3. Explain the nomenclature and stereochemistry of steroids.
4. Classify anticoagulants and outline the method of synthesis of warfarin
5. Classify DNA alkylators giving the structure of one agent from each class and discuss the mechanism of action of DNA alkylators
6. Write the structure and uses of Thyroxine, Minoxidil, Clonidine, Hydralazine
7. Classify antiarrhythmic agents giving one structure from each class. Outline the synthesis of Disopyramide.
8. Discuss the chemistry of sulfonylurea derivatives as oral hypoglycaemics.
9. Explain how nitrovasodilators produce smooth muscle relaxation and write the synthesis of glyceryl trinitrate

**Answer Briefly**

**(10x2=20)**

10. Write the structure and uses of any two corticosteroids
11. Why chlorpropamide is more potent antidiabetic agent than tolbutamide. Explain with structures
12. Outline the synthesis of chlorthalidone
13. Outline the method of synthesis of triprolidine
14. Why second generation H<sub>1</sub> antihistamine loratadine is less sedative than first generation H<sub>1</sub> antihistamine
15. What are bile acid sequestering agents. Give its mechanism of action and uses
16. Outline the method of synthesis of Methotrexate
17. Give the structure and uses of any two proton pump inhibitors
18. Explain the structural features of lovastatin responsible for inhibiting HMG-CoA reductase enzyme
19. Write the structure and uses of sildenafil

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