

# **2010 scheme**

**QP CODE: 401006**

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

## **Final Year B.Pharm Degree Supplementary Examinations May 2023**

### **Pharmaceutical Chemistry - V**

### **(Medicinal Chemistry)**

**Time: 3 Hours**

**Total Marks: 100**

- *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*
- *Write chemical structures wherever necessary.*

**Essays**

**(3x10=30)**

1. Explain the chemistry, classification and SAR of cholinergic agonist. Outline the synthesis of carbachol.
2. Classify H<sub>1</sub> receptor antagonist with examples. Give the structure and uses of any two proton pump inhibitors and outline the synthesis of diphenhydramine.
3. Classify diuretics with examples. Discuss the SAR of any two classes of diuretics and outline the synthesis of furosemide.

**Short notes**

**(14x5=70)**

4. Explain Pka and hydrogen bonding in relation to biological action of drugs.
5. Write a note on ligand based drug design approaches in CADD.
6. Give the SAR of sulfonylureas as oral hypoglycaemic agents and write the synthesis of any one.
7. What are the general SAR features of NSAIDs.
8. Explain the mechanism of action and synthesis of phenytoin.
9. What are anxiolytic agents. Explain the SAR of benzodiazepines as anxiolytic agents.
10. SAR of local anesthetics.
11. What are sympathomimetic drugs. Discuss the SAR of sympathomimetic agents.
12. Write the mechanism of action of tricyclic antidepressants and give the synthesis of imipramine.
13. Explain the mechanism of action of sulphonamides. Outline the synthesis of sulphacetamide.
14. Chemistry of tetracyclines and mention their specific uses.
15. Explain the mechanism of action and synthesis of methotrexate.
16. Discuss the chemistry of phenothiazines as antipsychotics and outline the synthesis of chlorpromazine.
17. Explain the effect of ionization and optical isomerism on biological activity of a drug.

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