

Rajiv Gandhi University of Health Sciences, Karnataka
Fourth Semester B. Pharm Degree Examination – 06-Nov-2023

Time: Three Hours

Max. Marks: 75

Medicinal Chemistry - I

Q.P. CODE: 5014

Your answers should be specific to the questions asked

Draw neat labeled diagrams wherever necessary

All the Questions are compulsory

LONG ESSAYS

2 x 10 = 20 Marks

1. Define and classify adrenergic agents. Discuss the chemistry of adrenergic blocking agents in detail and give the synthesis of propranolol.

OR

Define and classify sedatives and hypnotics with examples. Explain the SAR of barbiturates. Write the synthesis of barbital.

2. What is general anaesthesia? Classify general anaesthetics with structural examples. Outline the synthesis of Ketamine hydrochloride and explain its mechanism of action.

SHORT ESSAYS

7 x 5 = 35 Marks

3. Discuss reductive and hydrolytic drug metabolism with their importance.

OR

Explain the role of solubility and hydrogen bonding in biological actions of drug.

4. Explain optical and geometrical isomerism in relation to biological action.

OR

Write the structure, mechanism of action and uses of Oxymetazoline and Clonidine.

5. Explain the biosynthesis of acetyl choline and its function via various receptors.
6. Discuss the SAR of cholinolytic agents.
7. Explain the role of cholinesterase enzyme. Write the Synthesis, mechanism of action and uses of neostigmine.
8. **Write the structure and uses of Promazine Hydrochloride, Triflupromazine and Trifluoperazine.**
9. Write the SAR of morphine with respect to its nuclear modifications.

SHORT ANSWERS

10 x 2 = 20 Marks

10. Write a note on sites of biotransformation
11. Give the importance of partition coefficient in drug action
12. Write a short note on non-selective beta blockers.
13. Write any two drug structures used in the treatment of asthma.
14. Write the structure and uses of Carvedilol.
15. Give the synthesis of carbachol
16. Write the structure and uses of Atropine sulphate.
17. Write the structure and uses of Benzotropine mesylate.
18. Write the structure and specific uses of Alprazolam.
19. Write the structure and specific uses of Sulindac.