

K-887

Total Page No. : 3]

[Roll No.]

CHE-554

**M.Sc. (Chemistry) IInd Year
Examination Dec., 2023**

DRUGS AND PHARMACEUTICALS

Time : 2 Hours]

[Max. Marks : 70

Note :- This paper is of Seventy (70) marks divided into two (02) Sections 'A' and 'B'. Attempt the questions contained in these Sections according to the detailed instructions given there in. Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

Section-A

(Long Answer Type Questions) 2×19=38

Note :- Section 'A' contains Five (05) Long-answer type questions of Nineteen (19) marks each. Learners are required to answer any two (02) questions only.

K-887

(1)

P.T.O.

1. What are receptors ? Briefly explain the role of receptors in the regulation of physiological reactions.
2. Write the structures of captopril, cimetidine and oxammiquine and the structure of led from which there drugs developed.
3. Classify histamine receptors. Name any *two* drugs acting as H₂ histamine receptors antagonists and write their structures.
4. (a) What are prodrugs ? Write the principles of prodrug design.
(b) Discuss briefly about the prodrugs which can improve membrane permeability.
5. What is QSAR ? Explain the Hansch method of QSAR studies. Discuss the merits and demerits of QSAR.

Section–B

(Short Answer Type Questions) 4×8=32

Note :- Section ‘B’ contains Eight (08) Short-answer type questions of Eight (08) marks each. Learners are required to answer any *four* (04) questions only.

1. What are vaccines ? Explain its importance.
2. What is genetic engineering process ? Explain.

3. (a) What are theory are involved in development of chiral drugs ?
(b) What is Pfeiffer's rule explain ?
4. Write the structures of any two sulphonamide antibacterial and benzodiazepine drugs.
5. Write a short note on the discovery of penicillin.
6. Attempt any *two* of the following :
 - (a) How the NMR and UV spectroscopy useful the drug analysis ?
 - (b) Central nervous system
 - (c) Proton pump inhibitors
7. Write short notes on the following :
 - (a) Random screening
 - (b) Non random screening
8. What is ADME study ? Explain briefly.
