

A-1005

Total Pages : 3

Roll No.

CHE-554

Drugs and Pharmaceuticals

M.Sc. Chemistry (MSCCH)

Examination 2026 (Feb.)

Time: 02:00 hrs

Max. Marks: 70

Note : This paper is of Seventy (70) marks divided in to two (02) Section A and B. Attempt the questions contained in these sections according to the detailed instructions given therein. *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)

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.

(2x19=38)

P.T.O

A-1005

1. What is QSAR? Explain the Hansch method of QSAR studies. Discuss the merits and demerits of QSAR.
2. (a) What is the importance of carbonic anhydrase? Explain the carbonic anhydrase inhibition.
(b) Explain the importance of the X-ray crystallographic studies in drug design and development.
3. What are receptors? Briefly explain the role of receptors in the regulation of physiological reactions.
4. (a) What are the prodrugs? Write the principles of prodrug design.
(b) What is genetic engineering process?
5. Explain the importance of enzymes and enzyme product in drug discovery.

Section-“B”

(Short -answer - type questions)

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.

(4x8=32)

1. Write the mechanism of the action of DNA-polymerase inhibitors.

2. Write a short note on classification of nervous system.
3. What are vaccines? Explain its importance.
4. Define the resin. What are the resins used in combinatorial synthesis.
5. Give the structure, chemical name and others names of the four naturally occurring penicillin.
6. Differentiate the Random Screening and Non-random Screening.
7. Give the mechanism of the synthesis of (S) Ibuprofen.
8. Attempt any two of the following:
 - (a) History of fermentation of drugs
 - (b) How the NMR and UV spectroscopy useful the drug analysis?
 - (c) Bioisosteres
