

M.Sc.(Chem.) Semester - 3 (CBCS) Examination**Nov/Dec-2023 (NEW COURSE)****Medicinal Chemistry (Elective-1 (New))****Time: 2:30 Hours****Marks: 70****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate marks.

-
- Que.1(A) Answer the following. (04)
1) Discuss the conventional approach for drug discovery
- Que.1(B) Answer any two questions out of three. (10)
1) Discuss the following terminology:
(A) LD₅₀ (C) IC₅₀
(B) ED₅₀ (D) MIC
2) Describe various clinical trials in detail for the drug development.
3) Explain the following in detail:
(A) SAR
(B) Me-too Analogues
- Que.2(A) Answer the following. (04)
1) What is QSAR? Explain Hammett equation with example.
- Que.2(B) Answer any two questions out of three. (10)
1) Draw craig's plot and discuss its application.
2) What is lead modification? Describe following strategies for lead modification with example:
(A) Ring transformation
(B) Pharmacophore identification
3) What is Bioisosterism? Describe bioisosters in detail.
- Que.3(A) Answer the following. (04)
1) Discuss the routes of drug administration.
- Que.3(B) Answer any two questions out of three. (10)
1) Explain following modes of Drug absorption:
(A) Facilitated transport
(B) Endocytosis
2) Write a note on:
(A) Polymorphism and amorphism
(B) BBB for drug diffusion
3) Explain briefly various factors affecting the drug absorption.
- Que.4(A) Answer the following. (04)
1) Discuss the following term:
(A) Efficacy
(B) Potency
- Que.4(B) Answer any two questions out of three. (10)
1) Discuss hydrolytic Phase-I biotransformation reaction with examples.
2) Write a short note on phase-II reactions.
3) Describe ED₅₀ and Therapeutic window.
- Que.5(A) Answer the following. (04)
1) Discuss Bioprecursor prodrug with examples.
- Que.5(B) Answer any two questions out of three. (10)
1) What is combinatorial chemistry? Discuss Merrifield Resin technique in detail.
2) Give examples of following prodrug:
(A) Improve taste and odour
(B) Prolong activity
3) What is carrier-prodrug? Discuss site specific carrier-prodrug.
