

GUJARAT TECHNOLOGICAL UNIVERSITY
B.PHARM - SEMESTER-4 EXAMINATION – WINTER -2024

Subject Code:BP402TP**Date: 21-12-2024****Subject Name: Medicinal Chemistry I****Time:02.30 PM TO 05.30 PM****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q-1.** a) What is Medicinal Chemistry? Give importance of Medicinal chemistry in drug discovery. [6]
b) What is bioisosterism? Explain in detail with examples. [5]
c) Write a note on Partition coefficient and Ionization that affect biological activity. [5]
- Q-2.** a) Explain mode of action & detail chemistry about Phenyl ethanolamine derivatives. [6]
b) Write a note on Phase II metabolism. [5]
c) Write a note on β -blockers. [5]
- Q-3.** a) Explain biosynthesis, storage & release of norepinephrine, epinephrine & dopamine. [6]
b) Give structure and uses of ANY TWO of the following drugs: [5]
i) Dopamine, ii) Isoprenaline and iii) Ephedrine. [5]
c) Write synthesis of Salbutamol and propranolol.
- Q-4.** a) Enlist various cholinergic receptors. Discuss SAR of acetyl choline. [6]
b) What are Parasympathomimetics? Classify them with suitable examples. [5]
c) Write a chemical name & synthesis of dicyclomine & propranolol. [5]
- Q-5.** a) What are Analgesics? Write SAR and mode of action of morphine. [6]
b) Classify Muscarinic antagonists with suitable examples. [5]
c) Give synthesis and uses of: i) Neostigmine, ii) Halothane [5]
- Q-6.** a) What are NSAIDs? Classify them with two examples of each class. Write synthesis of one non-steroidal NSAID having one chiral centre. [6]
b) Classify barbiturates with examples. Give SAR of barbiturates. [5]
c) Write note on general anaesthetics. [5]

- Q-7.**
- a) Write a short note on narcotic antagonists. [6]
 - b) Give synthesis and uses of Phenytoin and chlorpromazine. [5]
 - c) What is schizophrenia? Explain SAR of Phenothiazine derivatives as CNS depressants. [5]