

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph. -SEMESTER- IV • EXAMINATION – WINTER -2023

Subject Code: BP402TP**Date: 11/01/2024****Subject Name: Medicinal Chemistry I****Time: 02:30pm to 05:30pm****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) Enumerate Physicochemical properties affecting biological action. Explain how hydrogen bonding & Optical isomerism contribute to biological action of a drug **06**
(b) Explain biosynthesis and catabolism of nor-adrenaline **05**
(c) Describe the SAR of Sympathomimetic agents **05**
- Q.2** (a) Discuss the various factors affecting drug metabolism **06**
(b) Give structure of following drugs i) Dobutamine ii) Terbutaline iii) Naphazoline iv) Pseudoephedrine v) Clonidine **05**
(c) Write a brief note on Beta adrenergic blockers **05**
- Q.3** (a) Discuss about the oxidation reactions of drug metabolism **06**
(b) Give synthesis of (i) Propranolol (ii) Dicyclomine hydrochloride **05**
(c) Write a short note on Cholinesterase inhibitors **05**
- Q.4** (a) Give synthesis and use of (i) Salbutamol (ii) Tolazoline **06**
(b) Explain the SAR of Parasympathomimetic agent **05**
(c) Discuss SAR of Benzodiazepines **05**
- Q.5** (a) Give synthesis and use of (i) Ipratropium bromide (ii) Carbachol **06**
(b) Give structure, use and mechanism of actions (i) Atropine sulphate (ii) Pilocarpine **05**
(c) Give synthesis and use of (i) Ketamine hydrochloride (ii) Neostigmine **05**
- Q. 6** (a) Discuss the SAR of Phenothiazine **06**
(b) Give structure and uses of (i) Valproic acid (ii) Gabapentin (iii) Haloperidol (iv) Alprazolam (v) Meprobamate **05**
(c) Give synthesis of (i) Ibuprofen (ii) Halothane **05**
- Q.7** (a) (i) Explain the SAR of barbiturates (ii) Give Synthesis of carbamazepine **06**
(b) Write a brief note on Narcotic antagonists **05**
(c) Discuss the SAR of Morphine analogues **05**
