

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.Ph. - SEM- IV • EXAMINATION – SUMMER -2022**

**Subject Code: BP402TP****Date: 16/07/2022****Subject Name: Medicinal Chemistry I****Time: 10:30AM TO 1:30PM****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) Enlist Physio-chemical parameter of drug affecting biological activity and write about Ionization, solubility and partition coefficient. **06**
- (b) What are Xenobiotics? How drug metabolized in Phase - I reaction? Explain with mechanism. **05**
- (c) Define Bioisosterism. Classify it and write any 4 application of Bioisosterism. **05**
- Q.2** (a) Give SAR of beta phenyl ethyl amine class. **06**
- (b) Explain biosynthesis and catabolism pathway of Acetylcholine. **05**
- (c) Write synthetic pathway of following drugs: **05**
- i) Propranolol
- ii) Tolazoline
- Q.3** (a) Discuss Ring Analogues of Phenothiazines. **06**
- (b) Discuss SAR of muscarinic antagonist **05**
- (c) Write Synthesis of following drugs: **05**
- i. Carbachol
- ii. Neostigmine
- Q.4** (a) Explain SAR of Barbiturates. **06**
- (b) Explain mechanism of action of anticonvulsant agents. **05**
- (c) Write synthesis of following drugs: **05**
- i. Carbamazepine
- ii. Ethosuximide
- Q.5** (a) Short note on volatile Inhalation Anesthetics. **06**
- (b) Discuss SAR of Morphine analogues **05**
- (c) Explain synthetic pathway of following drugs: **05**
- i. Ketamine HCl
- ii. Ibuprofen

- Q. 6** (a) Give classification of Narcotic and non-narcotic analgesics. **06**
- (b) Write about Phase – II metabolism and explain glucuronide conjugation and glutathione conjugation. **05**
- (c) Give structure and use of (i) Alprazolam (ii) Salbutamol (iii) Clonazepam (iv) Ethosuximide (v) Diclofenac **05**
- Q.7** (a) Classification of antiepileptic or anti-seizure agents or anticonvulsant agents. **06**
- (b) Explain following parameter in terms of how it affects biological activity: **05**
- i. Bioisosterism Optical
- ii. Geometrical isomerism
- (c) Write a note on Fluro buterophenones with its mechanism. **05**

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