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: i) Propranolol ii) Tolazoline	**05**
Q.3	**(a)**	Discuss Ring Analogues of Phenothiazines.	**06**
	(b)	Discuss SAR of muscarinic antagonist	**05**
	(c)	Write Synthesis of following drugs: i. Carbachol ii. Neostigmine	**05**
Q.4	**(a)**	Explain SAR of Barbiturates.	**06**
	(b)	Explain mechanism of action of anticonvulsant agents.	**05**
	(c)	Write synthesis of following drugs: i. Carbamazepine ii. Ethosuximide	**05**
Q.5	**(a)**	Short note on volatile Inhalation Anesthetics.	**06**
	(b)	Discuss SAR of Morphine analogues	**05**
	(c)	Explain synthetic pathway of following drugs: i. Ketamine HCl ii. Ibuprofen	**05**

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**

****