

GUJARAT TECHNOLOGICAL UNIVERSITY
B.Ph. - SEMESTER-VI • EXAMINATION – SUMMER -2022

Subject Code: 2260004**Date: 09/06/2022****Subject Name: Pharmaceutical Chemistry-VIII (Medicinal Chemistry II)****Time: 10:30am To 01:30pm****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) Explain N-dealkylation, O-dealkylation and oxidative deamination metabolic reaction with suitable example. **06**
- (b) Define biotransformation and xenobiotics. What happens to drugs in phase I and phase II metabolism? **05**
- (c) Discuss any two phase II metabolic reactions. **05**
- Q.2** (a) What is the advantage of selective COX-II inhibitors as NSAIDs? Write five examples with structure of nonselective COX inhibitors as NSAIDs. **06**
- (b) Classify the anti-gout agents with chemical structures and mechanism of action. **05**
- (c) Define and classify the DMARDs with chemical structures. **05**
- Q.3** (a) Write the synthesis and use of thiopental sodium and chlorpromazine. **06**
- (b) Describe the SAR of aniline derivatives with local anaesthetic activity. **05**
- (c) Write the mechanisms of action of general anaesthetics. Write any three examples with structure of intravenous general anaesthetics. **05**
- Q.4** (a) Write the synthesis of **06**
- i) any one antiepileptic from hydantoin class
- ii) any one antiepileptic from iminostilbene class.
- (b) Classify the anxiolytics with chemical structures. **05**
- (c) Discuss the SAR of barbiturates as sedative-hypnotics. **05**
- Q.5** (a) Write the chemistry aspects of tricyclic antidepressants. **06**
- (b) Enumerate the classes of CNS stimulants. Write in detail on psychomotor stimulants. **05**
- (c) Define psychedelics. Write any four examples of them with structures. **05**
- Q.6** (a) Write a detailed note on G-protein coupled receptors. **06**
- (b) Discuss macromolecular perturbation theory and activation-aggregation theory of drug-receptor interaction. **05**
- (c) Explain hydrogen bonding and covalent bonding between drug and receptor by giving suitable example. **05**
- Q.7** (a) Discuss the factors affecting drug metabolism. **06**
- (b) Discuss the chemistry aspects of antiparkinsonian drugs which affect dopamine level. **05**
- (c) Write a note on drugs used in Alzheimer's disease. **05**
