

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B.Ph. – SEMESTER VI EXAMINATION – WINTER -2024**

**Subject Code: 2260004****Date: 21/11/2024****Subject Name: Pharmaceutical Chemistry-VIII (Medicinal Chemistry II)****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) State and explain drug metabolism. Enlist phase-I reactions and explain oxidation reactions in detail. **06**
- (b) Define and classify the anxiolytics with chemical structures. **05**
- (c) Give a synthetic scheme for the synthesis of Mefenamic acid and Diclofenac. **05**
- Q.2** (a) Discuss the SAR of tricyclic antidepressants with appropriate structural examples. **06**
- (b) Give synthesis of Thiopental sodium and Phenobarbitone. **05**
- (c) Write brief note on factors affecting drug metabolism. **05**
- Q.3** (a) Define hypnotics? Classify the sedative-hypnotics with chemical structures. **06**
- (b) State and explain in detail about microsomal oxidation catalyzed by CYP450 including CYP450 cycle. **05**
- (c) Give brief account of anti-gout agents, **05**
- Q.4** (a) Define and Classify the NSAIDs with chemical structures. **06**
- (b) Write synthetic pathway for the synthesis of the (i) Lignocain (ii) Phenytoin **05**
- (c) What is Parkinsonism ? Write synthesis of L-Dopa **05**
- Q.5** (a) Discuss SAR of Benzodiazepines with appropriate structural examples. **06**
- (b) Write synthesis of Phenobarbitone and Chlormpromazine **05**
- (c) Give brief note on factors influencing the drug-receptor interaction. **05**
- Q. 6** (a) Draw structure of **06**
- I) Amphetamine                      II) Fluoxetine                      III) Imipramine
- IV) Halothane                      V) Chlordiazepoxide                      VI) Thiopental sodium
- (b) Define and classify the antiepileptics with chemical structures. **05**
- (c) Define and classify the DMARDs with appropriate chemical structures. **05**
- Q.7** (a) Enlist types of receptors. Discuss different theories of drug-receptor interaction in detail **06**
- (b) Discuss in detail about SAR of barbiturates with appropriate structural examples. **05**
- (c) Define and give brief note on drugs used in Alzheimer's disease. **05**

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