

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B. PHARM SEMESTER-IV EXAMINATION – WINTER 2023**

**Subject Code: BP404TP****Date: 18/01/2024****Subject Name: Pharmacology I****Time: 2:30 PM TO 5:30 PM****Total Marks: 80****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

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|------------|---|-----------|
| <b>Q.1</b> | (a) Classify the $\beta$ (beta)-adrenergic receptor blocking drugs. Justify the use of $\beta$ (beta)-adrenergic receptor blocking drugs in cardiovascular disease. | <b>06</b> |
|            | (b) Classify the neuroleptic drugs. Discuss the adverse effects and therapeutic uses of neuroleptic drugs.  | <b>05</b> |
|            | (c) Write in detail about the nature and source of the drugs.   | <b>05</b> |
| <b>Q.2</b> | (a) Explain the molecular structure and signal transduction pathway of G-protein-coupled receptor.  | <b>06</b> |
|            | (b) Classify the drug used in the treatment of Parkinson's disease. Justify, "The combination of levodopa and cabidopa is a rational fixed dose combination".       | <b>05</b> |
|            | (c) Classify the antiepileptic drugs. Explain the mechanism of action and adverse effects of phenytoin.   | <b>05</b> |
| <b>Q.3</b> | (a) Explain the ethanol toxicity. Justify, "Disulfiram use to treat alcohol dependence".  | <b>06</b> |
|            | (b) What is a dose-response relationship? Describe the application of a graded dose-response curve.   | <b>05</b> |
|            | (c) Write the difference between sedative and hypnotic agents. Justify, "Benzodiazepines are preferred over barbiturates"   | <b>05</b> |
| <b>Q.4</b> | (a) Explain the following terms with examples: a) Drug dependence; b) Tachyphylaxis; c) Drug idiosyncrasy   | <b>06</b> |
|            | (b) Define anaesthesia. Discuss in detail the preanaesthetic medication.  | <b>05</b> |
|            | (c) Enlist different steps of the drug discovery and development process. Explain the preclinical evaluation phase in detail.                                       | <b>05</b> |
| <b>Q.5</b> | (a) Explain the physicochemical factors affecting drug absorption.  | <b>06</b> |
|            | (b) Classify parasympatholytic drugs. Write the pharmacological actions of atropine.  | <b>05</b> |
|            | (c) Enlist various routes of administration. Write merits and demerits of the parenteral route of administration.   | <b>05</b> |
| <b>Q.6</b> | (a) Define antagonism. Explain in detail pharmacological antagonism.  | <b>06</b> |
|            | (b) Classify antidepressant drugs. Write mechanism of action and adverse effects of tricyclic antidepressants.  | <b>05</b> |
|            | (c) Define ADR. Explain the types of adverse drug reactions with examples.  | <b>05</b> |
| <b>Q.7</b> | (a) Classify anticholinesterase drugs. Write pharmacological action and poisoning of anticholinesterase drugs.  | <b>06</b> |
|            | (b) Explain the pharmacokinetic drug-drug interaction with examples.  | <b>05</b> |
|            | (c) Write mechanism of action and adverse effects of local anaesthetic agents.  | <b>05</b> |