

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
B. Pharm. – SEMESTER – IV • EXAMINATION – WINTER • 2014

Subject Code: 240005

Date: 31-12-2014

Subject Name: Pharmacology-I

Time: 02:30 pm - 05:30 pm

Total Marks: 80

Instructions:

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

- Q.1**
- (a) Classify Drug interaction and explain them with suitable examples. **06**
 - (b) Describe the pharmacological actions of histamine. **05**
 - (c) Differentiate between the following: **05**
 - i) Somatic and Autonomic Nervous system
 - ii) Physostigmine and Neostigmine
- Q.2**
- (a) Explain the drug action mediated through modification of various steps/sites of adrenergic transmission. **06**
 - (b) Write in brief on the following: **05**
 - i) Practice to minimize adverse drug effects
 - ii) Mechanisms and types of allergic reactions
 - (c) Define receptor and summarize their functions. Classify various types of receptor based on the mechanism of translation of receptor activation into functional response. **05**
- Q.3**
- (a) Explain Dose response relationship and its importance. **06**
 - (b) Explain the following terminologies: **05**
 - i) First order kinetics
 - ii) Plasma half-life
 - iii) Plateau principle of drug accumulation
 - iv) Clearance of a drug
 - v) Apparent volume of distribution
 - (c) Classify Beta Adrenergic blocking agents and give their uses. **05**
- Q.4**
- (a) Classify Biotransformation reactions and explain them in detail. **06**
 - (b) Explain the prominent effects of anticholinergic drugs on the following: **05**
 - i) CNS
 - ii) Eye
 - (c) Explain the term Drug antagonism and classify it depending on the mechanism involved. **05**
- Q.5**
- (a) Explain the mechanism of action, pharmacological actions and toxicity of Non-depolarizing Skeletal Muscle relaxants. **06**
 - (b) Explain plasma protein binding of drugs and its clinically significant implications with suitable examples. **05**
 - (c) Describe in short on the following **05**
 - i) Prostaglandins
 - ii) Platelet activating factor

- Q.6** (a) Explain in detail Animal Toxicity Studies. **06**
(b) Explain the following with suitable examples: **05**
 i) Factors governing the choice of route of administration of the drug
 ii) Limitations of the oral route of drug administration
(c) Describe the pharmacological and physiological role of serotonin. **05**
- Q.7** (a) Explain the mechanism of action, pharmacological actions and toxicity of Local anesthetics. **06**
(b) Explain the pharmacological actions and physiological role of Angiotensin. **05**
(c) Write a brief note on the following: **05**
 i) Scope of Pharmacology
 ii) Drug Nomenclature
