

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

## GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. – SEMESTER – IV • EXAMINATION – SUMMER 2013

**Subject Code: 240005**

**Date: 21-05-2013**

**Subject Name: Pharmacology-I**

**Time: 10.30 pm - 01.30 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 cholinergic receptors emphasizing on subtypes and also explain the muscarinic and nicotinic action of acetylcholine. [06]  
B Differentiate between the following: [05]  
a) Autonomic and Somatic Nervous System  
b) Phase I and Phase II metabolism  
C Give mechanism of action of the following drugs: [05]  
a) Lignocaine  
b) Famotidine  
c) Prazosin  
d) Cetrizine  
e) Succinylcholine
- Q.2 A Write short note on the following: [06]  
a) Adrenergic Neuron Blockers  
b) Adrenaline  
B Describe the mechanism of action, pharmacological actions and toxicity of non-depolarizing skeletal muscle relaxants. [05]  
C Describe the various types of Drug Antagonism. [05]
- Q.3 A Give a brief account on beta blockers. [06]  
B Explain the signal transduction mechanism of tyrosine kinase receptors. [05]  
C Give the advantages and disadvantages of intravenous route of drug administration. [05]
- Q.4 A Write a detailed account on angiotension receptors and its antagonist. [06]  
B Explain the importance of Structure Activity Relationship giving suitable examples. [05]  
C Classify anticholinesterase agents, giving their mechanism of action and pharmacological actions. [05]
- Q.5 A Classify and explain all types of drug interaction giving suitable examples. [06]  
B Describe the following concepts giving suitable examples and explanations [05]  
a) Constitutive receptor activation  
b) Inverse agonist  
c) Spare receptor  
d) Desensitization  
C Describe pharmacological actions of prostaglandins. [05]

- Q.6 A State whether the following statements are true or false, justify giving suitable explanation [06]
- a) Protein binding of drugs affects their pharmacokinetics.
  - b) Atropine is used as a pre-anaesthetic medication.
  - c) Edrophonium is used to differentiate cholinergic and myasthenic crisis.
  - d) Thymectomy helps in improvement of the condition of patients with myasthenia gravis.
  - e) Local anaesthetics often fail to afford adequate pain control in inflamed tissue.
  - f) Acetylcholine is not used therapeutically.
- B Write short notes on: [05]
- a) Drug tolerance and dependence
  - b) Factors affecting drug absorption.
- C Explain various types of animal toxicity studies. [05]
- Q.7 A Classify serotonin receptors and describe its pharmacological actions. [06]
- B Describe the following terminologies using dose response curve. [05]
- (a) Drug selectivity
  - (b) Risk-benefit ratio
  - (c) Drug potency
  - (d) Drug efficacy
- C Explain type A and type B Adverse drug reaction giving suitable example. [05]

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