Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

B. Pharm. – SEMESTER – IV (OLD Syllabus) • EXAMINATION – SUMMER • 2015

Subject Code: 240005 **Date: 05-06-2015**

Subject Name: Pharmacology-I

Time: 10:30 am - 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)	Explain in detail various factors modifying drug action.	**06**
	(b)	Describe the relative autonomic tone and effects of ganglionic blockade on various organ functions.	**05**
	(c)	Give mechanism of action and pharmacological actions of amide linked local anaesthetic agents.	**05**
Q.2	(a)	Differentiate between the following i. Somatic and autonomic nervous system ii. N_N and N_M subtypes of nicotinic receptor	**06**
	(b)	Write in short on the following i. Various factors governing choice of route of drug administration. ii. Limitations of oral route of administration.	**05**
	(c)	Describe various adrenergic responses mediated through alpha (α) receptors.	**05**
Q.3	(a)	Describe in short on the following i. Prostaglandins ii. Platelet activating factor	**06**
	(b)	Write in short on combined effect of drugs, with suitable examples.	**05**
	(c)	Explain in detail the concept of Apparent Volume of distribution and redistribution of drug distribution.	**05**
Q.4	(a)	Explain the following terminologies with suitable examples: i. Drug dependence ii. Bioavailability iii. Stimulation iv. Therapeutic window phenomenon v. Teratogenecity vi. Receptor regulation	**06**
	(b)	Describe the mechanism of action and uses of Anticholinesterases	**05**
	(c)	Describe the action-effect sequence of G-Protein coupled receptor in myocardial cells with special reference to muscarinc (M_2) and Adrenergic (β) receptor activation.	**05**

Q. 5	(a)	Explain about drug potency, efficacy, selectivity and risk-benefit ratio using Dose Response Curve.	**06**
	(b)	Describe the role of microsomal enzyme inductions, its consequences and possible use in drug metabolism.	**05**
	(c)	Describe the pharmacological actions of second generation antihistaminics.	**05**
Q.6	(a)	Explain the kinetics of drug elimination.	**06**
	(b)	Explain the terminologies like agonist, antagonist, inverse agonist, partial agonist using receptor occupation theory and two state receptor models.	**05**
	(c)	Write a short note on anorectic agents.	**05**
Q.7	(a)	Describe the methods and advantages of prolongation of drug action.	**06**
	(b)	Describe the pharmacological and physiological role of serotonin.	**05**
	(c)	Write in brief on the following i. Comparative features of atropine and hyoscine, ii. Atropine substitutes	**05**

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