

GUJARAT TECHNOLOGICAL UNIVERSITY
M. Pharm. – SEMESTER – I • EXAMINATION – SUMMER 2013

Subject Code: 910103**Date: 15-05-2013****Subject Name: Cellular and Molecular Pharmacology****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)	Write in brief on structural and functional characteristics of transport proteins.	06
	(b)	Discuss significance of schild plot. Write different types of receptor antagonism with suitable examples.	05
	(c)	Describe structural characteristics of GPCR.	05
Q.2	(a)	Write in detail biosynthesis and pharmacotherapeutic applications of nitric oxide.	06
	(b)	Discuss synthesis and pathophysiological role of serotonin.	05
	(c)	Differentiate nuclear receptor and kinase linked receptor.	05
Q.3	(a)	Explain signal transduction pathways of adrenergic receptor in heart muscle.	06
	(b)	Discuss pathological role of bradykinin.	05
	(c)	Write a short note on endothelin.	05
Q.4	(a)	What is cytokines? Write pathological roles of any two cytokines.	06
	(b)	Write a note on NMDA receptor.	05
	(c)	Explain neuromuscular junction at molecular level.	05
Q.5	(a)	Describe synthesis of histamine. Discuss its physiological and pathological role.	06
	(b)	Write a note on prostaglandins.	05
	(c)	What is mechanism for acute hypoglycemic action of insulin?	05
Q. 6	(a)	Explain dopaminergic pathways in central nervous system.	06
	(b)	Discuss drug receptor interaction.	05
	(c)	Describe role of adenosine receptor in platelets.	05
Q.7	(a)	What is gene therapy? Write its therapeutic uses in detail.	06
	(b)	Describe radio ligand binding assay with any one suitable example.	05
	(c)	Write therapeutic significance of voltage gated sodium channels.	05
