Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–IV(New) EXAMINATION – SUMMER 2016

Subject Code:2143601 Date:03/06/2016

Subject Name:Medicinal Chemistry & Physio-pharmacology (Department Elective-II)

Time:10:30 AM to 01:00 PM Total Marks: 70

Instructions:

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

Q.1		**Short Questions**	**14**
	1	What is the functional unit of kidney	
	2	Which is the functional respiratory unit in the lungs where gases are exchanged?	
	3	Write two diseases of respiratory system.	
	4	What are the steps in urine formation	
	5	Write the structure of Histamine	
	6	What is anemia?	
	7	What are the two forms of Diabetes Mellitus	
	8	Write any two functions of rennin-angiotensin pathway.	
	9	Write any two antihypertensive agents.	
	10	For what purpose the major portion of absorbed iron by the body is used for?	
	11	Where is iron stored in liver.	
	12	Write two oral iron formulation	
	13	Define Immunopharmacology.	
	14	What are diuretics?	
Q.2	**(a)**	Mention the important roles the agents that modulate the immune system play. Classify the agents that modulate the immune system.	**03**
	(b)	What is Hematinics? Explain the importance of iron in body.	**04**
	(c)	Write the SAR amongst H1 receptor antagonist with suitable examples.	**07**
		OR	
	(c)	Write the synthesis, mechanism of action and uses of any one aminoalkyl ether class of antihistamine.	**07**
Q.3	**(a)**	Briefly explain “early safety Tests”	**03**
	(b)	Write the synthesis of any one antihypertensive drug with a brief note on the process.	**04**
	(c)	Draw neatly labeled structures of Kidney & Nephron. Mention the functions of kidney and the steps in urine formation	**07**
		OR	
Q.3	**(a)**	Write a note on (1). Antacids, (2). Thrombolytics	**03**
	(b)	Write a note on Loop & High ceiling class of diuretics. Give suitable examples with structures.	**04**
	(c)	Draw a neatly labeled structure of upper & lower human respiratory system. Write the functions of upper & lower respiratory tracts.	**07**
Q.4	**(a)**	Write the SAR of Thiazide diuretics.	**03**
	(b)	Write a short note on discovery of Cimetidine.	**04**

	(c)	Write a note on Serendipitous drug discovery in detail.	**07**

OR

Q.4	**(a)**	Write synthesis of Glbenclamide	**03**
	(b)	Explain “Lipinski rule of 5”	**04**
	(c)	Explain the term “Bioisosterism” in detail.	**07**
Q.5	**(a)**	Explain the SAR of antidiabetics- Sulphonyl Urea.	**03**
	(b)	Differentiate between “Lente” & Ultralente” insulin.	**04**
	(c)	Write Synthesis of Metformin, Glimepiride and Pioglitazone HCl	**07**

OR

Q.5	**(a)**	Write short note on isolation and storage of Insulin	**03**
	(b)	What are symptoms of Diabetes Mellitus	**04**
	(c)	Explain SAR of Thiazolidinediones	**07**

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