Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–III • EXAMINATION – WINTER • 2014

Subject Code: 133601 Date: 18-12-2014

Subject Name: Introduction to Medicinal Chemistry and Biochemistry

Time: 02:30 pm – 05:00 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	**(a)**		Explain Structure activity relationship and mode of action of Sulfonamides.	**07**
	(b)		What is Transamination? Discuss Urea cycle in detail.	**07**
Q.2	**(a)**	i.	Explain enzyme inhibition in detail.	**05**
		ii.	Define the terms: Bacteriostatic and Bactericidal activity	**02**
	(b)		What is cell? Explain different cell organelles and their function with diagram?	**07**
			OR	
	(b)		What are hormones? Give the classification of hormones with their functions.	**07**
Q.3	**(a)**		Give classification of anti-viral agents with two examples in each class.	**07**
	(b)		Explain pentose phosphate cycle.	**07**
			OR	
Q.3	**(a)**		Write a note on various routes of drug administration.	**07**
	(b)	i.	Write a short note on role of vitamins as co-enzymes with suitable example.	**04**
		ii.	Explain key-lock model for enzymatic activity.	**03**
Q.4	**(a)**		What is drug metabolism? Discuss any one in detail.	**07**
	(b)	i.	Explain Electron Transport chain in detail.	**05**
		ii.	What is coenzyme?	**02**
			OR	
Q.4	**(a)**	i.	What is drug? Discuss classification of drugs according to chemical structure.	**04**
		ii.	Discuss the various factors affecting the enzyme activity.	**03**
	(b)		Discuss TCA cycle in detail.	**07**
Q.5	**(a)**		What is Glycolysis? Explain Glycolysis in detail with ATP synthesis.	**07**
	(b)	i.	Discuss structural variation of Cephalosporins.	**05**
		ii.	Define the terms: Gram negative bacteria and Gram positive bacteria.	**02**
			OR	
Q.5	**(a)**	i.	Discuss urea cycle in detail.	**05**
		ii.	Define the terms: in vivo and in vitro activity.	**02**
	(b)		Give the classification of Sulfonamides on the basis of duration of action.	**07**

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