

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-III (New) EXAMINATION – WINTER 2015

Subject Code:2133601**Date:18/12/2015****Subject Name: Introduction to Medicinal Chemistry & Biochemistry (DE-I)****Time: 2:30pm to 5:00pm****Total Marks: 70****Instructions:**

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

MARKS

Q.1	Short Questions	14
	1 Define Medicinal Chemistry	
	2 Define "Drug"	
	3 What do you mean by "Structure Activity Relationship" (SAR).	
	4 What are the functions of cell organelle-Lysosome ?	
	5 What are the functions of Golgi apparatus in a cell?	
	6 Define "Gene"	
	7 Name two differences between DNA & RNA	
	8 What do you mean by Drug metabolism?	
	9 What is the end product of Amino acid metabolism?	
	10 What are 'Diagnostic Agents'?. Write one example.	
	11 Name two anti cancer drugs obtained from plants.	
	12 What do you mean by "Anthelminitic"?	
	13 Define " Coenzyme". Give one example.	
	14 Define "disinfectant"?	
Q.2	(a) How to interpret drug pKa value	03
	(b) Draw a neat labeled diagram of Eukaryotic cell (animal cell)	04
	(c) Explain the Glycolysis pathway in detail.	07
	OR	
	(c) Explain Urea cycle in detail.	07
Q.3	(a) Write the SAR of sulphonamide class of antibacterials.	03
	(b) Write the synthesis of Sulphanilamide-a sulphonamide class of antibacterial drug.	04
	(c) Write in detail- the role of Vitamins as Co-enzymes.	07
	OR	
Q.3	(a) What are the classifications of anti amoebic drugs. Give suitable examples in each category.	03
	(b) What are the classifications of Anti HIV drugs? Write their mode of action.	04
	(c) Explain Tri Carboxylic Acid (TCA) cycle in detail	07
Q.4	(a) Write a note on Chitin synthetase inhibitor class of antifungal agents	03
	(b) Write a note on (i). Antiseptic agents. Give suitable examples. Mention the requirements for an ideal antiseptic agent.	04
	(c) Write the synthesis of any one anti tubercular drug. Write its metabolism & mode of action.	07
	OR	
Q.4	(a) What are antineoplastic drug? What are the problems associated with chemotherapy.	03
	(b) Write in detail the SAR of 4-amino substituted Quinoline	04

- antimalarial drug with suitable examples.
- (c) What is the concept & the importance of Drug metabolism. Briefly explain the drug metabolism pathways **07**
- Q.5** (a) Explain 'mycoses'. Give two examples each in Antibiotic & Azole classes of antifungal agents **03**
- (b) What are NSAIDs.? Write the mode of action of NSAID. Give one example with structure of p-amino phenol derivative NSAID **04**
- (c) Explain biosynthesis of protein in detail. **07**
- OR**
- Q.5** (a) What is the medical condition called 'Gout'? What are the two different mechanisms by which antigout agents work? Give example in each category. **03**
- (b) Briefly explain GMP in pharmaceutical industries. Mention its importance & application. **04**
- (c) Explain DNA, RNA, Chromosome. Draw a neat labeled diagram of DNA. **07**
