GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-III (NEW)• EXAMINATION – SUMMER 2015

Subject Code: 2133601 Date: 27/05/2015 Subject Name: Introduction to Medicinal Chemistry & Biochemistry Time:02.30pm-05.00pm **Total Marks: 70 Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. Q.1 Explain the biosynthesis of protein in detail. 07 (a) (i) What do you mean by photosynthesis? **(b)** 02 (ii) Explain Glycolysis. Give a brief account of TCA cycle. 05 **O.2** (i) Give one example each of first generation, second Generation, third 04 (a) generation & fourth generation Cephalosporins. (ii) Write a note on Anti HIV drugs. Mention its classifications. Give one 03 example each. (i) Write a note on antileprotic drugs. Mention its classifications. Give one 07 **(b)** example from each class. Write the synthesis of any one antileprotic drug. OR (i) Write a brief note on the importance & applications of Good Manufacturing 05 **(b)** Practices in Pharmaceutical Industry. (ii) Write the mode of action of Chitin synthetase inhibitor antifungal agent. 02 Give one example. Explain the terms: DNA, Gene and Chromosome. Draw a neat labeled diagram Q.3 **(a)** 07 of DNA. **(b)** (i) Describe the concept of Acidity & Basicity of drugs. 04 (ii) Explain 'drug pKa value'. 03 OR Describe the concept of drug metabolism? Discuss the pathways of drug **Q.3** (a) 07 metabolism with examples. (i) What are coenzymes? 02 **(b)** (ii) Write briefly on the role of vitamin as coenzyme. 05 **(a)** (i) Give one example each of an antibiotic antifungal agent. Write its mode of **Q.4** 03 action. (ii) Write a note on (a). Antiseptic agent, (b). Disinfectant 04 (i) Write the synthesis of Sulphanilamide – a Sulphonamide antibacterial drug. **(b)** 04 (ii) Write the Structure Activity Relationship of Sulphonamide antibacterial 03 agents. OR (i) Mention the classifications of antiamoebic drugs. Write one example from **O.4** 03 **(a)** each class. (ii)What are Anthelminitics?. Give one example with structure. Write its mode 04 of action. (i) Write a note on Diagonostic agents. Mention the classifications. Give one 03 **(b)** example. (ii). Write a note on Antineoplastic drugs. Mention its limitations. Give any two 04 examples.

Q.5	(a)	(i). Write the synthesis of Isoniazid-an anti tubercular drug	03
		(ii).Write the mode of action & metabolism of Isoniazid.	04
	(b)	Explain "Michaelis-Menton's kinetics" in detail.	07
		OR	
Q.5	(a)	(i). Give one example each of first generation, second Generation, third generation & fourth generation Quinolone antibacterial drug.	04
		(ii).Write a note on Anti malarial drugs. Give one example each in the following class of antimalarial drugs: (a). 8-amino quinolines, (b). Cinchona alkaloid	03
	(b)	(i). Define "Drug".	02
	. ,	(ii). Write about the classifications of drug with an example.	05
