

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-III • EXAMINATION – WINTER • 2014****Subject Code: 2133601****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) (i). Write about the concept of acidity & Basicity of drugs. **04**
 (ii). How to interpret the drug pka value. **03**
 (b) What is the concept of drug metabolism ? Discuss the pathways of drug metabolism with examples **07**
- Q.2** (a) (i). What are the classifications of Antiamoebic agent? Give one example in each category. **02**
 (ii). Write the metabolism & mechanism of action of any one antiamoebic agent. **05**
 (b) Explain biosynthesis of proteins in detail **07**
- OR**
- (b) (i). What do you mean by photosynthesis? **02**
 (ii). Explain glycolysis. Give a brief account of TCA cycle. **05**
- Q.3** (a) Explain about the cell & cell organelles with proper diagrams **07**
 (b) (i). What are antimalarial agents. Give two examples of 7-Chloro-4-Amino Quinoline antimalarial agents with structure. **04**
 (ii). What are Anthelminitics?. Give one example with structures in Benzimidazole class of anthelminitics. **03**
- OR**
- Q.3** (a) (i). Write a note on (1). Antiseptic agent, (2). Disinfectants **04**
 (ii). Write the Structure Activity Relationship of Sulphonamide anti bacterial agent **03**
 (b) (i). What are Co-enzymes ? **02**
 (ii). Write briefly on the role of vitamins as co-enzymes **05**
- Q.4** (a) Explain Michaelis-Menton's kinetics in detail **07**
 (b) (i). What do you mean by Mycoses?. Give one example in each class of Antibiotic antifungal agent, Imidazole anti fungal agent & Triazole antifungal agent. **04**
 (ii). Write a note on Anti HIV agents. What are the classifications of anti HIV agents. Give one example in each category. **03**
- OR**
- Q.4** (a) (i). Define the Drug. **02**
 (ii). Write about the classification of drugs with an example **05**
 (b) (i). What are DHE antagonists? Give one example. **02**
 (ii). Write the synthesis, metabolism & mode of action of any one Anti-tubercular drug **05**
- Q.5** (a) Describe the reactions in the synthesis of urea. **07**

- (b) (i).What are Antineoplastic drugs? Name any two limitations in the cancer therapy. Give any two examples of anticancer drug derived from plant. **03**
- (ii). Give one example each of First generation, Second generation, Third generation & Fourth generation Cephalosporins. **04**
- OR**
- Q.5 (a)** Explain the terms DNA, gene and chromosome? Draw a neat labeled diagram of DNA **07**
- (b)** (i). Write a note on GMP in Pharmaceutical industry. Mention its importance and applications. **05**
- (ii). What are Diagnostic agents? What are its classifications **02**
