

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-III • EXAMINATION – WINTER 2013****Subject Code: 133601****Date: 26-11-2013****Subject Name: Introduction to Medicinal Chemistry & 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 SAR and mode of action of Sulfonamides. **07**  
(b) What is cell? Explain different cell organelles and their function with diagram? **07**
- Q.2** (a) i. Discuss SAR of Penicillins. **05**  
ii. Define the terms: bacteriostatic activity and bactericidal activity **02**  
(b) Discuss TCA cycle with the formation of ATP molecules in detail. **07**
- OR**
- (b) What are hormones? Give the classification of hormones with their functions. **07**
- Q.3** (a) What is drug metabolism? Discuss Phase-1 transformations. **07**  
(b) i. Explain beta oxidation of fatty acids. **05**  
ii. What is holoenzyme? **02**
- OR**
- Q.3** (a) Define the term: Transamination. Discuss Urea cycle in detail. **07**  
(b) i. What is drug? Discuss classification of drugs. **05**  
ii. What is benign and malignant tumour? **02**
- Q.4** (a) Give classification of anti-infective agents with two examples. **07**  
(b) Write a note on drug absorption and drug distribution. **07**
- OR**
- Q.4** (a) Discuss classification of antimalarial drugs with examples. **07**  
(b) i. Explain enzyme kinetics in detail. **04**  
ii. Draw the diagram of enzyme key and lock model. **03**
- Q.5** (a) What is Glycolysis? Explain Glycolysis in detail with ATP synthesis. **07**  
(b) i. Explain enzyme inhibition in detail. **05**  
ii. Define the terms: Gram negative bacteria and Gram positive bacteria. **02**
- OR**
- Q.5** (a) Give the classification of Sulfonamides on the basis of duration of action. **07**  
(b) i. Discuss integration between urea cycle and TCA cycle. **05**  
ii. Define the terms: in vivo and in vitro activity. **02**

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