

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**Pharm D – 1<sup>st</sup> Year • EXAMINATION – WINTER - 2022**

**Subject Code: 818803****Date: 27/01/2023****Subject Name: Medicinal Biochemistry****Time: 10:30am to 01:30pm****Total Marks: 70****Instructions:**

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

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|-------------|--|-----------|
| <b>Q.1</b>  | (a) Define enzymes. Give its nomenclature and IUB classification.  | <b>06</b> |
|             | (b) Explain ELISA test and its importance.   | <b>04</b> |
|             | (c) Justify the sentence: DNA replication is semiconservative in nature.   | <b>04</b> |
| <b>Q.2</b>  | (a) Describe the de-novo biosynthesis of fatty acids.  | <b>06</b> |
|             | (b) Explain the distribution of water in the body. Describe the test for determination of potassium and bicarbonates in body fluids. | <b>04</b> |
|             | (c) Enlist the various liver function tests. Discuss about dye test of excretory function.   | <b>04</b> |
| <b>Q.3</b>  | (a) Explain urea cycle and its metabolic disorders.  | <b>06</b> |
|             | (b) Write a short note NPN constituents.   | <b>04</b> |
|             | (c) Differentiate between competitive and non-competitive enzyme inhibition.   | <b>04</b> |
| <b>Q.4</b>  | (a) Define isoenzyme. Give its therapeutic and diagnostic applications.  | <b>06</b> |
|             | (b) What are lipoproteins? Explain the functions of cholesterol.   | <b>04</b> |
|             | (c) Write a note on oxidative phosphorylation.   | <b>04</b> |
| <b>Q.5</b>  | (a) Explain citric acid cycle along with its energetics.   | <b>06</b> |
|             | (b) Describe the regulation and inhibition of ETC.   | <b>04</b> |
|             | (c) Define the following terms: atherosclerosis, ketosis, mutation and porphoria.  | <b>04</b> |
| <b>Q. 6</b> | (a) Give the biological significances of ATP and Cyclic AMP.   | <b>06</b> |
|             | (b) Describe $\beta$ -oxidation of fatty acids.  | <b>04</b> |
|             | (c) Define the following term: genetic codes, clinical chemistry, transamination, jaundice.  | <b>04</b> |
| <b>Q.7</b>  | (a) Describe the synthesis of purine nucleotides.  | <b>06</b> |
|             | (b) Describe HMP shunt pathway.  | <b>04</b> |
|             | (c) Explain transport processes across the cell membrane.  | <b>04</b> |

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