No. of Printed Pages : **2**

Sl. No.

21BTH1C3L

M.Sc. I Semester Degree Examination, April/May - 2023

BIOTECHNOLOGY

Principles of Biochemistry

Time : 3 Hours Maximum Marks : 70

Note : *(i) Answer **any five** of the following questions with Question No. **1 (Q.1) compulsory**, each question carries **equal** marks.*

(ii) Draw neat diagrams wherever necessary.

1. (a) Explain the physico-chemical properties of water. **7+7=14**

(b) Describe the classification and nomenclature of enzymes.

2. (a) Explain the structure of starch. **7+7=14**

(b) Describe the steps involved in glycolysis.

3. (a) How are aromatic amino acids biosynthesized ? **7+7=14**

(b) Explain the urea cycle.

4. (a) Describe the biosynthesis of palmitic acid. **7+7=14**

(b) Classify Vitamins. Explain their physiological roles.

5. (a) Explain the structure of RNA. **7+7=14**

(b) How are oligonucleotides chemically synthesized ?

6. (a) Explain the citric acid cycle. **7+7=14**

(b) Write an account on classification of amino acids.

P.T.O.

7. (a) Explain the beta-oxidation pathway of steric acid. **7+7=14**

(b) Describe the denaturation and hybridization with reference to nucleic acids.

8. Write notes on : **5+5+4=14**

(a) Glyoxylate cycle

(b) Ramachandran plot

(c) Nucleic acid structure stabilizing forces

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