USN | | | | | | | | | | **18BT34**

Third Semester B.E. Degree Examination, Aug./Sept.2020
Introduction to Biomolecules

Time: 3 hrs.   Max. Marks: 100

Note: *Answer any FIVE full questions, choosing ONE full question from each module.*

Module-1

1 a. What are Carbohydrates? Discuss about classification of Carbohydrates. **(10 Marks)**
   b. Write a note on Isomerism of Carbohydrates.   **(10 Marks)**

OR

2 a. What are Lipids? Write about properties and functions of Lipids.   **(10 Marks)**
   b. What are Steroids? Explain biological role of cholesterol.   **(10 Marks)**

Module-2

3 a. What are Proteins? Write a note on i) Zwitton ions   ii) P^I.   **(10 Marks)**
   b. Write an account on Ramachandran plot.   **(10 Marks)**

OR

4 a. Give detailed account on secondary proteins.   **(10 Marks)**
   b. Explain the structures of fibrous proteins : i) Collagen   ii) Keratin. **(10 Marks)**

Module-3

5 a. Write in detail about structure of DNA and functions.   **(10 Marks)**
   b. Write an account on Hyperchromicity of DNA.   **(10 Marks)**

OR

6 a. Write a note on : i) Types of RNA and   ii) Ribose puckering.   **(10 Marks)**
   b. Give an account on Clover leaf model of t - RNA.   **(10 Marks)**

Module-4

7 a. Write an account on Energy flow cycle in Bioenergetics.   **(10 Marks)**
   b. Explain the structure and properties of ATP.   **(10 Marks)**

OR

8 a. What is Photosynthesis? Explain in detail about light reaction.   **(10 Marks)**
   b. What is Coupled reaction? Discuss its importance in the flow of energy. **(10 Marks)**

Module-5

9 a. Write an account on structure and functions of Plasma membrane.   **(10 Marks)**
   b. Write a note on :
       i) Active transport   ii) Passive transport   iii) Facilitated transport. **(10 Marks)**

OR

10 a. What is Signal transduction? Explain different modes of signal transduction mechanisms.
                                                                             (10 Marks)
   b. Write an account on Action potential in the cell.   **(10 Marks)**

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