

CBCS SCHEME

18BT34

USN

--	--	--	--	--	--	--	--	--	--

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) Zwitterion 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 pucker. (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)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg, 42+8 = 50, will be treated as malpractice.

