

B.Sc. Sem.-1 Examination

DSC-C-111

Bio-Technology

January-2024

Time : 2-00 Hours]

[Max. Marks : 50

Q.1 What is nucleic acid? Elaborate structure and function of DNA in detail. (10)

Or

Q.1 A. Illustrate the structure of a nucleotide and write the types of nitrogenous bases. (5)

Q.1 B Discuss major divisions of Biotechnology with one example of each. (5)

Q.2 Write a detailed note on the classification of amino acids based on the "R" group. (10)

Or

Q. 2A Give a brief note on the secondary structure of protein. (5)

Q.2 B Describe the properties of amino acids. (5)

Q.3 Elaborate classification, structure, and functions of Lactose and sucrose. (10)

Or

Q.3A Write a note on any three chemical properties of carbohydrates. (5)

Q.3 B Discuss the structure and function of glycogen. (5)

Q.4 Write a note on the classification of lipids in detail. (10)

or

Q.4A Discuss the properties of Lipids. (5)

Q.4 B Explain the structure and function of phospholipids and steroids (5)

Q.5 Short Questions (Any Ten out of twelve) (10)

- 1) Give the name of any two products from ancient Biotechnology.
- 2) What is "Yellow Biotechnology"?
- 3) What is the difference between a nucleoside and a nucleotide?
- 4) Explain zwitterion.
- 5) What is the full form of MUFA and PUFA?
- 6) What is the function of rRNA?
- 7) What is the difference between reducing and non-reducing sugar?
- 8) write the general formula of monosaccharides.
- 9) Define Epimer.
- 10) What is rancidity?
- 11) Give two examples of derived lipids.
- 12) what is the biological function of lipoprotein?

