



Shree H.N. Shukla College of Science Rajkot

B.Sc. (Sem. II) (CBCS)

[201]: BASICS OF BIOCHEMISTRY AND MICROBIAL CONTROL

Microbiology Unit Test Paper-1

[Time: 2:30 Hours]

[Total Marks: 50]

Date: 22/04/2021.

- Instructions:**
1. all questions are compulsory.
 2. The right-side figure indicates total marks of the question.
 3. Draw the figure wherever necessary.
 4. Write answers of all the questions in main answer sheets.

Question-1

[A] Objective type questions (5 question)

[05]

1. Definition of Biomolecule.
2. Which one is example of carbohydrate?
(A) Heparin (B) Dextran (C) Chitin (D) All of the above
3. What is peptide bond?
4. Which one is the source of unsaturated fatty acids?
(A) Animal fats (B) plant oils (C) steroids (D) All of the above
5. Mention types of RNA with abbreviation.

[B] Answer in brief. Write any [two out of three]

[04]

1. Difference between Homopolysaccharides vs Heteropolysaccharides.
2. Explain difference between glycogen and starch.
3. Explain types of biomolecules on the basis of size.

[C] Answer in detail. Write any [two out of three]

[06]

1. What are the essential fatty acids? Explain why they are essential.
2. Draw common structure of amino acid and explain D and L configuration.
3. Draw structure of Lysine, Tyrosine, Tryptophan, Glutamate, Asparagine and Aspartate.

[D] Answer in detail. Write any [two out of three]

[10]

1. Explain essential amino acids along with examples and their sources.
2. Give a detailed note on steroid with their examples and function.
3. Write a note on polysaccharide in detail.

Question-2

[A] Objective type questions (5 question)

[05]

1. Genetic material is made up of _____.
2. What are the biomolecules found in cell membrane?
(A) Cholesterol (B) Phospholipids (C) A, B & D (D) Glycoproteins
3. Main component of fungal cell wall is _____ which is a _____.
(A) Hemicellulose, Heteropolysaccharide (B) Chitin, Heteropolysaccharide
(C) Peptidoglycan, Homopolysaccharide (D) None of the above
4. What type of molecules are present in nucleus of eukaryotes?
(A) Proteins (B) Nucleic acid
(C) Co-factors (D) All of the above
5. Difference between fats and wax.

[B] Answer in brief. Write any [two out of three]

[04]

1. Write functions of lipids and carbohydrates.
2. Short note on types of structure of proteins.
3. Write brief note on Nucleoside and Nucleotide. (with diagram)

[C] Answer in detail. Write any [two out of three]

[06]

1. Write different types of DNA in detail.
2. Explain epimer, enantiomer and mutarotation.
3. Explain supramolecular assembly along with example.

[D] Answer in detail. Write any [two out of three]

[10]

1. Explain types of proteins on the basis of their function.
2. Draw flow chart for types of carbohydrates and types of lipids.
3. Detailed note on types of amino acids.