# 2003000203020115
# EXAMINATION FEBRUARY-MARCH 2024
# BACHELOR OF SCIENCE (THIRD SEMESTER)
# BIO SCIENCE (MICROBIOLOGY) PAPER – III
# MICROBIAL CHEMISTRY

[**Time: As Per Schedule]** **[Max. Marks: 50]**

**Instructions:**
**1. Fill up strictly the following details on your answer book**
   a. Name of the Examination: **BACHELOR OF SCIENCE (THIRD SEMESTER)**
   b. Name of the Subject: **BIO SCIENCE (MICROBIOLOGY) PAPER – III MICROBIAL CHEMISTRY**
   c. Subject Code No: **2003000203020115**
2. Sketch neat and labelled diagram wherever necessary.
3. Figures to the right indicate full marks of the question.
4. All questions are compulsory.

Seat No:

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|---|---|---|---|---|---|
| | | | | | |

Student's Signature

**Q.1 Multiple choice questions (MCQs):** **8**

1. Which of the following is not a type of protein secondary structure?
   a. B-pleated sheet
   b. a-helix
   c. folding to form small globules
   d. Turns

2. Tertiary structure is maintained by _____.
   a. Peptide bond
   b. Hydrogen bond
   c. Di-sulphide bond
   d. All

3. Which of the following is an epimeric pair?
   a. Glucose and fructose.
   b. Glucose and galactose
   c. Galactose and mannose
   d. Lactose and maltose

4. A positive Benedict's test is not given by _____.
   a. Sucrose
   b. Lactose
   c. Maltose
   d. Glucose

5. A Holoenzyme is _____.
   a. Functional unit
   b. Apo enzyme
   c. Coenzyme
   d. All

6. In solution the size of ion is
   a. $10^{-7}$
   b. $10^{-5}$
   c. $10^{-3}$
   d. $10^{-10}$

7. In lock & key model of enzyme action;
   a. Active site is flexible
   b. Active site is complementary to substrate
   c. enzyme is not specific for substrate
   d. substrate bring about change in conformation to active site

8. Which of the following is an example of fatty acid?
   a. Pyruvic acid
   b. Phosphoric acid
   c. Palmitic acid
   d. None

**Q.2 (A) Short answer question** **4**

1. Give two example of saturated fatty acids.
2. State the non-reducing disaccharide.
3. Give any two examples of Hydrolases.
4. Define: Cataphoresis.

**(B) Write short notes. (Any Two)** **10**

1. Polysaccharides.
2. Types of enzymes.
3. Biological importance of proteins.

**Q.3 Answer any two of the following.** **14**

1. Describe linear & ring structure of hexoses
2. Describe in brief classification of proteins.
3. Write a note on disaccharides.

**Q.4** Explain in detail the saturated and unsaturated fatty acids with their structures and of Biological importance **14**

**OR**

**Answer the following.** **14**

1. Explain classification of lipid.
2. Describe in brief colloidal properties.
3. Biological roles of enzymes.

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