

RAN-2503000502028003
F.Y.B.Sc. (NEP) (Sem.-II) Examination April - 2026
Bioscience (Microbiology) - Microbial Biochemistry (Major : BM-MJ-202)
Time: 1.30 Hours]
[Total Marks: 38
સૂચના : / Instructions

- (1) ઉપરોક્ત દર્શાવેલ વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fill up strictly the above details on your answer book
- (2) Draw neat and labelled diagrams wherever necessary.
- (3) Figures to the right indicate full marks of the question.

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Student's Signature
Q.1. Multiple choice questions. (Any eight)
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1. Carbohydrates are chemically defined as:
 - a. Polyhydroxy ketones only
 - b. Polyhydroxy aldehydes or ketones
 - c. Fatty acids
 - d. Amino acids
2. Which of the following is a reducing sugar?
 - a. Sucrose
 - b. Starch
 - c. Lactose
 - d. Cellulose
3. Mutarotation refers to change in
 - a. pH
 - b. Optical rotation
 - c. Conductance
 - d. Chemical properties
4. Essential amino acids are those:
 - a. Synthesized in body
 - b. Not required by body
 - c. Not synthesized in body
 - d. Found only in plants
5. Each turn of α -helix contains the amino acid residues (number) :
 - a. 3.6
 - b. 3.0
 - c. 4.2
 - d. 4.5
6. Saturated fatty acids contain :
 - a. Double bonds
 - b. Triple bonds
 - c. No double bonds
 - d. Peptide bonds
7. Which nitrogen base is present only in DNA?
 - a. Adenine
 - b. Guanine
 - c. Thymine
 - d. Uracil
8. The genetic material in most organisms is:
 - a. RNA
 - b. Protein
 - c. DNA
 - d. Lipid

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9. Choose the incorrect statement about an RNA:
- Has a single stranded structure
 - Instead of Uracil contains the ribonucleotides of thymine
 - Does not obey Chargaff's rule
 - Does not exhibit Watson and crick's base pairing

Q.2. Answer the following questions. (Any two) 10

- Write a note on mucopolysaccharides.
- Explain reducing and non-reducing disaccharides with examples
- Define Carbohydrates. Classify them with suitable examples.

Q.3. Answer the following questions. (Any two) 10

- Define lipids & describe classification of lipids.
- Describe secondary structure of proteins.
- Write a note on essential amino acids and their importance.

Q.4. Answer the following questions. (Any two) 10

- Define nucleic acids. Explain their components and organization in detail.
 - Differentiate between DNA and RNA in detail.
 - Write a note on t - RNA.
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