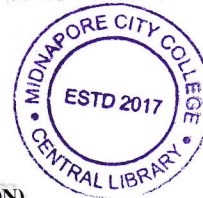


PG (CBCS)
M.Sc. Semester-I Examination, 2022
NUTRITION AND DIETETICS
 PAPER: NUD 102
(BIOPHYSICAL AND BIOCHEMICAL ASPECT OF NUTRITION)



Full Marks: 40

Time: 2 Hours

Write the answer for each unit in separate sheet

The figures in the right-hand margin indicate full marks.
 Candidates are required to give their answers in their own words as far as practicable.

UNIT-3

BIOPHYSICAL ASPECT OF NUTRITION

GROUP-A

Answer any **TWO** questions from the following: 2×2 = 4

1. Define dynamic viscosity.
2. What is centrifugal force?
3. What is enthalpy?
4. Write two applications of HPLC.

GROUP-B

Answer any **TWO** questions from the following: 2×4 = 8

5. Make a short note on density gradient centrifugation with an example.
6. How do you calculate blood pH?
7. According to the laws of thermodynamics, discuss the characteristics of living organism.
8. What is R_f value in a TLC? State the importance of isoelectric focusing. 2+2=4

GROUP-C

Answer any **ONE** question from the following: 1×8 = 8

9. How do you explain proteolysis of water? Discuss the 1st law of thermodynamics.
 What is entropy? 3+3+2=8
10. Discuss the principle of electrophoretic separation. Write the application of SDS-PAGE. Write the comparison between GLC and FPLC. 3+2+3=8

P.T.O.

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UNIT - 4
BIOCHEMICAL ASPECT OF NUTRITION

**GROUP-A**Answer any **TWO** questions from the following:**2×2 = 4**

1. Define non-starch polysaccharide with example.
2. What is protein turnover?
3. Define storage lipid with example.
4. What are the structural components with examples of human body?

GROUP-BAnswer any **TWO** questions from the following:**2×4 = 8**

5. Describe the different types of simple sugar with examples.
6. Classify lipid with examples.
7. Write down the differences among A, B and Z DNA.
8. Write a short note on Lesch-Nyhan syndrome.

GROUP-CAnswer any **ONE** question from the following:**1×8 = 8**

9. Classify protein with examples. What is Ramachandran plot? Give two examples of super-secondary structure of protein. **3+2+3=8**
10. Differentiate between nucleoside and nucleotide. Write about the storage and metabolic lipids. **4+4=8**
