

Food Science & Nutrition (P.G.)**[CBCS]****M.Sc. First Semester End Examination-2023****(Regular & Supplementary Paper)****PAPER- 103****Full Marks: 40****Time: 02 Hrs***The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.**Illustrate the answers wherever necessary.***Group A****Answer any five questions of the following: 5x2= 10**

1. What are fibrous protein and globular protein?
2. What are α -keratin & β -keratin?
3. What are the transporters related with carbohydrate metabolism?
4. Why trans form of peptide more stable than cis form?
5. What are LCFA and PUFA? Give examples.
6. Write the difference between 'Apoenzyme and co-enzyme'.
7. Write the glycogen storage disorder?
8. What are aminosugars with example?

Group B**Answer any four questions of the following: 5x4= 20**

9. What is Micelle? Write the importance of micelle. Describe process of palmitate synthesis. 1+1+3

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10. Schematically represent the synthesis of phospholipid. 5
11. Write the role of insulin and glucagon in carbohydrate metabolism. $2\frac{1}{2}+2\frac{1}{2}$
12. Write the application of enzyme in medical and industrial fields. $2\frac{1}{2}+2\frac{1}{2}$
13. What is gluconeogenesis? Schematically represent the process of gluconeogenesis. 1+4
14. Write the different oxidative and non-oxidative reactions of pentose-phosphate pathway. 5

Group C

Answer any one question of the following: 10x1=10

15. What are Ribozyme and Isozyme? Give example. Define the 'Michaelis-Menten equation' for enzyme substrate reaction. $2+2+6$
16. Briefly describe the α - helix and β - pleated sheet of protein. Write the inhibitors of TCA cycle. State about the regulation of glycolysis pathway. $4+3+3$

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