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PG CBCS
M.Sc. Semester-I Examination, 2020
FOOD SCIENCE & NUTRITION
 PAPER: FSN 102
FOOD CHEMISTRY & NUTRITIONAL BIOCHEMISTRY

Full Marks: 40**Time: 2 Hours****Answer any four questions:****10X4=40**

1. Describe the classification of amino acid. State the different functions of amino acid. What do you mean by peptide linkage? 5 +3+2
2. Describe the secondary structure of protein with suitable diagram. Why proline is called imino acid? Give example of two structural proteins. 6+2+2
3. Mention the different biological importance or protein. What is salting in and salting out properties of protein? What is anomeric carbon? 5+4+1
4. Mention the different dietary sources of vitamin A and C. Describe the importance of carbohydrate in living organism. What do you mean by chirality center? 4+4+2
5. What is glycogenolysis? Describe the pathway of glycolysis. 2+8
6. Why Krebs cycle is known as TCA cycle. Mention the different functions of vitamin C. Describe the classification of lipids. 2+3+5
7. Name one amino acid which does not show chirality. What do you mean by α -D glucose? Between "Lock and Key" model and "induced fit model" which one is better and why? Explain the structure of DNA 1+2+3+4
8. What is isoenzymes? Give example. Write the Michelis Menten equation with proper explanation of all parameters. What is the slope of Lineweaver Burk double reciprocal Plot in case of uninhibited condition? Derive the Eadie-Hofstee equation. 2+1+3+2+2
9. What is Gibbs free energy? Write a method by which nucleic acid can be separated? Explain the structure of tRNA. 2+4+4
10. What are the factors affecting the activity of enzyme? What is non-competitive inhibition? Explain with curve. What is a regulatory enzyme? Write about feedback inhibition and explain it with example. 3+3+2+2
