

PG CBCS
M.Sc. Semester-I Examination, 2021
FOOD SCIENCE & NUTRITION
 PAPER: FSN 102
(FOOD CHEMISTRY & NUTRITIONAL BIOCHEMISTRY)

Full Marks: 40**Time: 2 Hours****Answer any FOUR questions:****4X10=40**

1. i. Mention two examples of sugar derivatives. Write three biomedical importance of sugar derivatives. What is amino sugar? 2+3+1
 ii) What is artificial sweetener? Give two examples of artificial sweetener. 2+2
2. i) Classify dietary fibre. Mention the sources of dietary fibre. Give two examples of dietary fibre. 3+2+2
 ii) Write the functions of dietary fibre. 3
3. i) Mention two chemical properties of amino acids. Classify amino acids according to their polarity. Give one example of aromatic amino acid. 2+3+1
 ii) What is Ramachandran plot? Give two examples of secondary structure of a protein. 2+2
4. Show the reaction of peptide bond formation. What is protein folding? Describe the α -helical structure of a protein. What is domain? 3+2+3+2
5. What is saponification number? Mention two chemical properties of fat. Give two examples of both derived lipid and compound lipid. Mention two derivatives of cholesterol. 2+4+2+2
6. i) Give two examples of glycerophospholipid. What is plasmalogen? Mention the types of glycolipid. 2+1+3
 ii) Mention two properties of a fatty acid. Give two examples of essential fatty acid. 2+2
8. i) What is wobble hypothesis? Mention the features of genetic code. What is codon bias? What is nonsense codon? 2+4+2+2
9. Describe the Watson-Crick model of DNA double helix. What are nucleoside and nucleotide? What is Z DNA ? 5+4+1
10. Classify vitamins with examples. Discuss the sources and RDA and functions of vitamin D. 4+6