

# KANYASHREE UNIVERSITY

M.Sc. 1<sup>st</sup> Semester Examination-2023

Subject: Food & Nutrition

Course- CC 2

Food Chemistry

Full Marks-40

Time-2.00 Hours

## Group A

[Answer **any four** of the following] 5×4=20

1. Write the short notes on Zwitter ion and isoelectric point. [2.5×2]
2. Classify vitamin. Write the structure of Retinal and Calcitriol. Write a notes on Wald's visual cycle. [1+2+2]
3. What is hydrogenolysis? Classify compound lipids. [2+3]
4. Explain the term mutarotation. Write the structure of any two disaccharides. [3+2]
5. What do you mean by the dietary fibre? Write the functional property of any two dietary fibre. [1+4]
6. Write the structure of adenine and guanine. Write about the nature of the ring in sugar residue. [2+3]
7. Write a short note on phytoestrogen. [5]

## Group B

[Answer **any two** of the following] 10×2=20

1. How can you determine the ring size of glucose? Give two examples of conjugated proteins and explain their structural features. Draw the structures of purine and pyrimidines bases present in nucleic acid indicating the hydrogen bonds between the base pairs. [4+3+3]
2. Write the structural formulae and functions of Hyaluronic acid and Heparin. What happens when glyceryl trilaurate reacts with hydrogen in the presence of copper chromite? Write two functional properties of protein. [5+3+2]
3. Write the biological functions of Vitamin-E. Write the structure of Vitamin K1 and K2. Discuss briefly the folic acid metabolism. [3+2+5]
4. What is the solubility of proteins? Write down the biuret reaction. Write a short note on cis-trans isomers of fatty acid. Distinguish between fats and oils. [3+2+3+2]

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