

KANYASHREE UNIVERSITY

M.Sc. 4th Semester Examination-2024

Subject: Food & Nutrition

Course-CC 18

Genetics, Nutrigenetics, Nutrigenomics

Full Marks-40

Time-2.00 Hours

GROUP - A

(Answer **any four** of the following)

(5×4=20)

1. Differentiate between gene and genome. Name any four databases that are used in molecular docking. [3+2]
2. Write a short note on genome sequencing. [5]
3. Write down the role of glucose and vitamin C concerning nutrient gene interaction. [5]
4. Drugs and nutrients compete for absorption-explain. [5]
5. What do you mean by metabolome and proteome? Define the terms: epigenetics, and Food omics. [2.5+2.5]
6. Metabolome represents the ingredient of life- explain. [5]
7. What do you know about the expression and the importance of the apolipoprotein A gene in the liver and G.I. tract? [5]

GROUP – B

(Answer **any two** of the following)

(10× 2=20)

1. What do you mean by nutraceuticals? Give examples. What is the difference between functional foods, food supplements, and nutraceuticals? Write down the role of papain and bromelain in the human body. [2+3+5]
2. What do you understand by food-drug interactions? Differentiate between pharmacodynamics and pharmacokinetics. Write down the role of any 2 nutrients on pharmacodynamics. [2+3+5]
3. What is LDL? Mention any four roles of LDL in the human body. Give a brief idea about the nutrient control of LDL gene expression. [2+4+4]
4. Briefly describe the role of bioinformatics in Food Science. What do you know about CRISPR technology? Name the two scientists who were awarded the Noble Prize for CRISPR technology. Write down the importance of CRISPR technology. [3+2+2+3]
