



**JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF AGRICULTURAL AND FOOD SCIENCES**

**FIRST YEAR SEMESTER ONE EXAMINATION FOR THE DEGREE OF BACHELOR
OF SCIENCE IN FOOD SECURITY**

2023/2024 ACADEMIC YEAR

COURSE CODE: AAB 2103

COURSE TITLE: PRINCIPLES OF HUMAN NUTRITION

EXAM VENUE: **STREAM: (BSc Food Security)**

DATE: **EXAM SESSION:**

TIME: 2 HOURS

Instructions

- 1. Answer ALL questions in Section A and ANY TWO questions in Section B**
- 2. Candidates are advised not to write on the question paper**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**

SECTION A [30 MARKS]

Answer ALL questions in this section

1. Explain three characteristics of essential nutrients. (3 marks)
2. State three functional categories of nutrients. (3 marks)
3. List three functions of water in the body. (3 marks)
4. Distinguish between fats and oils, and name one health risk associated with increased fat intake. (3 marks)
5. Describe three disorders associated with protein deficiency in humans. (3 marks)
6. State any three basic characteristics of vitamins. (3 marks)
7. Phosphorus is said to have more functions than any other mineral in the body. State any three of these functions. (3 marks)
8. Explain why fructose and galactose are not found in blood circulation, even after the digestion of lactose and sucrose. (4 marks)
9. State two energy-generating pathways in the body. (2 marks)
10. State three disorders associated with excessive intake of alcohol. (3 marks)

SECTION B [40 MARKS]

Answer ANY TWO questions from this section

11. Discuss the digestive processes of starch and protein in the human body. (20 marks)
12. Describe the various methods of protein quality evaluation. (20 marks)
13. Discuss the factors influencing food choices in humans. (20 marks)
14. Discuss the role of food additives in human nutrition. (20 marks)