

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

RESIT/SPECIAL EXAMINATION

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN
FOOD SCIENCE AND TECHNOLOGY**

FOST 221: PRINCIPLES OF HUMAN NUTRITION

STREAMS: BSC FOST

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 03/11/2021

11.30 A.M – 1.30 P.M.

INSTRUCTIONS:

- Answer all questions in section A and any two questions in section B

Section A: Answer all questions (30 Marks)

- 1) (a) Giving examples, differentiate between the following terms as applied in human nutrition:
 - a) Essential and Non- essential fatty acids (2Marks)
 - b) Over-nutrition and Under nutrition (2 Marks)
 - c) Micro-nutrients and Macro-nutrients. (2 Marks)
 - d) Essential fatty acid and Limiting amino acids. (2Marks)
- 2) Briefly explain the classification of fibers and their significance to human nutrition and disease management. (8 Marks)
- 3) Discuss the uses of iron in the body and the reasons why pregnant women are given supplements of folate and iron during their prenatal care. (6 Marks)
- 4) Discuss the role played by dietary standards and how they can be misused. (6 Marks)
- 5) Discuss the commonly used diet planning principles (6 Marks)

Section B: Answer any TWO questions (40 Marks)

4. (a) Discuss the causes of food and nutrition insecurity in Kenya and suggest viable solutions to these problems. (12 Marks)
- (b) Discuss the methods that can be used to determine the nutritional status of an individual (8 Marks)
5. (a) Dietary goals and guidelines were introduced to deal with nutritional problems of affluent countries. Explain why these dietary goals and guidelines still have a role in developing countries, outlining some of the information they relay and how it relates to developing countries. (10 Marks)
- (b) Discuss the metabolic processes that are used by the body to get energy from the carbohydrates. (12 Marks)
6. (a) Discuss the causes and manifestation of protein energy malnutrition and how it can be managed in Kenya. (12 Marks)
- (b) Excess intake of micronutrients especially through supplements can result in toxicity. Using specific examples, discuss toxic effects originating from excessive intake of vitamins (8 marks)
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