

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR SCIENCE IN

FOST 221: PRINCIPLES OF HUMAN NUTRITION

STREAMS: FOST,BTOM

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 4/12/2019

8.30 A.M – 10.30 A.M

INSTRUCTIONS

Answer all questions in section A and two in section B

SECTION A : ANSWER ALL QUESTIONS (30 MARKS)

1. (a) Giving examples, differentiate between the following terms as applied un human nutrition;
 - (i) Essential and non-essential amino acids [2 marks]
 - (ii) Normal nutrition and under nutrition [2 marks]
 - (iii) Micro nutrients and macro nutrients. [2 marks]
 - (iv) Food group plan and food exchange system. [2 marks]
 - (v) Essential fatty acid and limiting amino acids. [2 marks]
- (b) Explain the effects of common food processes on food quality in relation to human health. [2 marks]
- (c) Briefly explain the classification of fibres and their significance to human nutrition and disease management. [2 marks]
2. (a) Describe the uses of iron in the body. [2 marks]
- (b) Explain the reasons why pregnant women are given supplements of folate and iron during their prenatal care. [2 marks]
- (c) Outline three dietary sources of complete proteins. [2 marks]
- (d) Explain the role played by dietary standards and how they can be misused. [2 marks]
3. (a) Outline the commonly used diet planning principles. [2 marks]

(b) Explain the functions and the forces that control water distribution in the body.

[2

marks]

(c) Highlight the dietary sources and functions of vitamin A [2marks]

(d) Outline the importance of proteins in the body. [2 marks]

SECTION B: ANSWER ANY TWO QUESTIONS (40 MARKS)

4. (a) Food and nutrition are common problems in developing countries and are hindered by many factors. Discuss. [12 marks]

(b) Discuss the methods that can be used as indicators of the adequacy of the balance between dietary intake and metabolic requirements of a young person. [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 food we eat . [10 marks]

6. (a) Discuss the health consequences of under or over nutrition and how they can be managed. [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]