



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF AGRICULTURAL AND FOOD SCIENCES
UNIVERSITY EXAMINATION FOR DEGREE OF BACHELOR OF SCIENCE
IN FOOD SECURITY
SECOND YEAR SECOND SEMESTER 2013/2014 ACADEMIC YEAR
REGULAR

COURSE CODE: AFB 3221

COURSE TITLE: Nutritional Deficiencies and Related Diseases

EXAM VENUE:LR 3

STREAM: BSc (Food Security)

DATE:8/12/14

EXAM SESSION: 9.00 -11.00 AM

TIME: 2.00 HOURS

Instructions:

- 1. Answer ALL question in Section A (compulsory) 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]

Question 1

- a) Define the following:
- i) Malnutrition. [1 mark]
 - ii) In somatic protein depletion. [1 mark]
 - iii) Eating disorder not otherwise specified. (EDNOS) [1 mark]
- b) Briefly elaborate the three sequential events associated with the progression from adequate iron status to iron deficiency anemia. [3 marks]
- c) Iodine deficiency disorder (IDD) is a common deficiency disease in developing countries. Discuss highlighting the various forms of IDD and strategies being used to combat it. [4 marks]

Question 2

- a) Differentiate the following:
- i) Anorexia nervosa and bulimia nervosa. [2 marks]
 - ii) Beriberi and pellagra. [2 marks]
 - iii) Iron-deficiency anemia and sickle cell anemia. [2 marks]
- b) State and explain four (4) different lifestyle and environmental factors that are important determinants of the current obesity and overweight epidemic worldwide. [4 marks]

Question 3

- a) Vitamin D and calcium deficiency is interrelated. Describe briefly the health consequences of vitamin D and calcium deficiency in the diet. [7 marks]
- b) Elaborate on the various forms of iodine deficiency disorders. [3 marks]

SECTION B [40 MARKS]

Question 4

Nutrition-related diseases in the developing world are a manifestation of the intergenerational vicious cycle between under nutrition and poverty.

- a) State and discuss in detail the five major nutrient deficiencies prevalent in developing countries. [10 marks]
- b) Discuss giving articulate arguments the mechanisms responsible for perpetuating the relationships over generations. [10 marks]

Question 5

For several decades Vitamin A Deficiency (VAD) has been recognized as a leading cause of preventable pediatric blindness in developing countries. Comprehensively discuss the sources, metabolic functions, symptoms and diseases associated with VAD and the current interventions to eradicate VAD across the world. [20 marks]

Question 6

Discuss nutritional marasmus, marasmic-kwashiorkor and kwashiorkor as forms of protein-energy malnutrition and their management in children. [20 marks]