



# **KISII UNIVERSITY**

## **UNIVERSITY EXAMINATIONS**

**FIRST YEAR EXAMINATION FOR THE AWARD OF THE  
DEGREE OF BACHELOR OF SCIENCE IN NUTRITION AND DIETETICS  
SECOND SEMESTER, 2021/2022  
(FEBRUARY - JUNE, 2022)**

### **FOND 123: MACRONUTRIENTS**

**STREAM: Y1 S2**

**TIME: 3 HOURS**

**DAY: FRIDAY, 2:00 – 5:00 P.M.**

**DATE: 13/05/2022**

---

#### **INSTRUCTIONS**

- 1. Do not write anything on this question paper.***
- 2. Answer Question ONE [Compulsory] and any other TWO Questions.***

#### **SECTION A IS COMPULSARY AND IS 40 MARKS**

#### **QUESTION ONE**

a. Differentiate the following terminologies giving any relevant examples

[5 marks]

- 1. Parathormone and calcitonin**
- 2. Essential nutrients and non essential nutrients**
- 3. Nutrients and nutrition**
- 4. .enrichment and fortification**
- 5. Major minerals and Trace Minerals**

b . Discuss and Relate foods with specific micronutrients in nutrition [5 marks]

c. Elaborate on the Biochemical and Physiological needs of nutrients in the body [5marks]

d. Discuss the metabolic processes of vitamins in the body [5marks]

**e. Elaborate On The** Factor affecting zinc absorption [5 marks]

F. Discuss on the Nutrient Deficiency Stages with an aid of a diagram [5 marks]

G. Discuss on the Interferences of phosphorus levels in the body [5 marks]

H. Discuss the five factors that affect how much of a vitamin is available to the body. [5 marks]

## **SECTION B IS 30 MARKS**

### **QUESTION TWO**

a) Differentiate between water soluble vs fat soluble vitamins giving relevant examples (7 marks)

b) Discuss on the Metabolic Pathways Involving B Vitamins [8 marks]

### **QUESTION THREE**

a) With examples, differentiate between vitamins vs minerals [7marks]

b) Discuss on the Factors that influence calcium absorption [8marks]

### **QUESTION FOUR**

a). Discuss on the various Trace minerals ,their RDAS ,functions in the human body [7marks]

b). Explain the consequences of inadequate and excessive vitamin intake giving relevant examples [8 marks]