



UNIVERSITY EXAMINATIONS

**FIRST YEAR EXAMINATION FOR THE AWARD OF THE DEGREE OF
BACHELOR OF SCIENCE IN FOOD, NUTRITION AND DIETETICS
SECOND SEMESTER 2022/2023
[JANUARY-APRIL, 2023]**

FOND 123: MICRONUTRIENTS

STREAM: Y1S2

TIME: 2 HOURS

DAY: TUESDAY, 2:00 – 5:00 PM

DATE: 04/04/2023

INSTRUCTIONS

- 1. Do not write anything on this question paper.**
- 2. Answer question ONE and any other TWO questions in Section B.**

SECTION A IS COMPULSARY AND IS 40 MARKS

QUESTION ONE

- A. Differentiate the following terminologies giving any relevant examples. (5marks)
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 specific micronutrients in nutrition and their food sources. (5marks)
- 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 in the body. (5marks)

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

G. Discuss on the factors Interferencing phosphorus absorption in the body.
(5marks)

H. Discuss the five factors that affect the availability of vitamin in the human body.
(5marks)

SECTION B IS 30 MARKS

QUESTION TWO

A. Differentiate between water soluble versus fat soluble vitamins giving relevant examples.
(7marks)

B. Discuss on the **Metabolic** Pathways of B Vitamins giving examples.
(8marks)

QUESTION THREE

A. With examples, differentiate between vitamins versus 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 Micronutrient deficiency problems in the world, their causes and prevention at the household.
(8marks)