



**TECHNICAL UNIVERSITY OF MOMBASA ( A)**

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FACULTY OF APPLIED AND HEALTH SCIENCES  
DEPARTMENT OF ENVIRONMENT & HEALTH SCIENCES

**UNIVERSITY EXAMINATION FOR:  
BACHELOR OF MEDICAL LABORATORY SCIENCES**

**BMLS17S/YEAR 4/SEMESTER 2**

**AFS: 4401 PRINCIPLES OF HUMAN NUTRITION**

**END OF SEMESTER EXAMINATION**

**SERIES: AUGUST 2019**

**TIME: 2 HOURS**

**Instructions to Candidates**

This paper consists of FIVE questions

Answer question ONE (COMPULSORY) and any other TWO questions.

**This paper consists of two printed pages.**

**Mobile phones are NOT allowed in the examination room**

**QUESTION ONE**

a) Define the following terms:

- i) Recommended Dietary Allowance 2marks
- ii) Nutrition surveillance 2 marks
- b) Outline four factors that affect iron absorption 4 marks
- c) Differentiate essential amino acids from non-essential amino acids 4 marks
- d) State four anthropometric methods used in nutritional surveys for children. 4 marks
- e) State five nutritional functions of Ascorbic acid in human nutrition. 5 marks
- f) Outline five nutritional characteristics experienced in deficiency of essential fatty acids. 5 marks
- g) Outline the relationship between energy balance and energy deficiency. 4 marks

**QUESTION TWO**

Malnutrition has been a problem in sub-Saharan Africa especially with children, lactating and pregnant women. Discuss five factors how this problem can be prevented. 20 marks

**QUESTION THREE**

- a) Discuss Obesity as a nutritional disorder and nutritional management 10 marks
- b) Discuss vitamin A as a public health problem in communities 10 marks

**QUESTION FOUR**

- a) Discuss nitrogen balance in man. 15 marks
- b) Explain the reasons why nutrition is a problem in the elderly. 5 marks

**QUESTION FIVE**

- a) Explain four nutritional functions and two adverse effects of fiber. 6 marks
- b) i) Explain four biochemical functions of calcium. 8 marks
- ii) Explain effects of nutrition in HIV/AIDS 6 marks

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