



# MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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## University Examinations 2013/2014

SECOND YEAR, SECOND SEMESTER EXAMINATION FOR THE DEGREE OF  
BACHELOR OF SCIENCE IN FOOD SCIENCE AND TECHNOLOGY AND BACHELOR  
OF SCIENCE IN FOOD SCIENCE & NUTRITION

**AFS 2202: PRINCIPLES OF HUMAN NUTRITION**

**DATE: DECEMBER 2013**

**TIME: 2 HOURS**

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**INSTRUCTIONS:** Answer questions *one* and any other *two* questions.

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### QUESTION ONE (30 MARKS)

- a) State 5 roles of fat in human nutrition (5 Marks)
- b) What are the main functions of selenium (5 Marks)
- c) Name three enzymes involved in lipolysis (3 Marks)
- d) Explain role of liver in glucose metabolism in fed state (4 Marks)
- e) Briefly explain three physiological benefits of protein synthesis (6 Marks)
- f) Explain the danger of prolonged use of antibiotics and dietary deprivation of phyloquinone (Vitamin K1) (3 Marks)
- g) State four disorders and health risks associated with carbohydrate metabolism. (4 Marks)

### QUESTION TWO (20 MARKS)

Discuss role of zinc and iodine in human nutrition.

### QUESTION THREE (20 MARKS)

Discuss lipid digestion and absorption in human gut.

### QUESTION FOUR (20 MARKS)

Micronutrient deficiencies remain one of the major public health problems in Kenya today. Discuss interventions currently put in place in the country to address this problem.

### QUESTION FIVE (20 MARKS)

Protein – energy malnutrition is a major problem in Kenya. Discuss