



**1<sup>ST</sup> SEM. 2020/21**

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**UNIVERSITY OF ESWATINI**

**DEPARTMENT OF FOOD AND NUTRITION SCIENCES**

**SPECIAL ASSESSMENT PAPER**

**PROGRAMME : BACHELOR OF SCIENCE IN FOOD  
SCIENCE, NUTRITION AND  
TECHNOLOGY, CONSUMER  
SCIENCE AND  
CONSUMER SCIENCE EDUCATION  
YEAR II**

**COURSE CODE : FNS203**

**TITLE OF PAPER : HUMAN NUTRITION**

**TIME ALLOWED : TWO (2) HOURS**

**INSTRUCTIONS : ANSWER QUESTION 1  
AND ANY OTHER 2**

**DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN  
GRANTED**

**QUESTION 1 (COMPULSORY)**

Discuss factors which affect the body needs for different nutrients requirement.

[TOTAL MARKS = 40]

**QUESTION 2**

- (a) Discuss the effect high intake of plant based iron and low intake of vitamin C and state the resultant deficiency disease that might occur (5 marks)
- (b) Explain the effects of copper, zinc and cobalt interactions on the amount of iron in the body and state the resultant deficiency disease that might occur. (5 marks)
- (c)
- i. Explain the two forms of Vitamin A and discuss which form is utilized by the body. (5 marks)
  - ii. Give three sources of vitamin A and three functions of vitamin A (9 marks)
  - iii. Explain how vitamin A is stored and transported in the body (3 marks)
- iv. Explain the deficiency effects of Vitamin A (3 marks)

[TOTAL MARKS = 30]

**QUESTION 3**

- (a) Discuss the 3 developmental stages of pregnancy and the implications associated with each stage if the nutrient needs are not met.

(20 marks)

- (b) Discuss energy balance and explain reasons why is it be maintained. (10 marks)

[TOTAL MARKS = 30]

**QUESTION 4**

- (a) Discuss the following conditions and their health outcomes:
  - i. Undernutrition (10 marks)
  - ii. Overnutrition (10 marks)
- (b) What are macronutrients? Explain. (2 marks)
- (c) List the examples of macronutrients, and give two sources for each (5 marks)
- (d) Discuss at least two functions for each macronutrient (3 marks)