



UNIVERSITY OF SWAZILAND
Faculty of Health Science
Department of Environmental Health Science

DEGREE IN ENVIRONMENTAL HEALTH WITH FOOD
SCIENCE

FINAL EXAMINATION PAPER JUNE 2019

TITLE OF PAPER : NUTRITION

COURSE CODE : EHS 360

DURATION : 2 HOURS

MARKS : 100

INSTRUCTIONS :

- : READ THE QUESTIONS & INSTRUCTIONS CAREFULLY
- : ANSWER **ANY FOUR** QUESTIONS.
- : EACH QUESTION **CARRIES 25** MARKS.
- : WRITE NEATLY & CLEARLY
- :
- : BEGIN EACH QUESTION ON A SEPARATE SHEET OF PAPER.

**DO NOT OPEN THIS QUESTION PAPER UNTIL PERMISSION IS GRANTED
BY THE INVIGILATOR.**

QUESTION ONE

- (a) Define the following terms;
- | | |
|-----------------------------|----------|
| (i) Steatorrhea, | [1 mark] |
| (ii) Chylomicrons, | [1 Mark] |
| (iii) Nutrition, | [1 mark] |
| (iv) Osteoarthritis, | [1 mark] |
| (v) Contaminants, | [1 mark] |
| (vi) Food additives, | [1 mark] |
| (vii) Nutrients, | [1 mark] |
| (viii) Essential nutrients, | [1 mark] |
| (ix) Nucleotides, | [1 mark] |
| (x) Nucleoside. | [1 mark] |
- (b) What is malnutrition? 1 Mark]
- (c) What are the four (4) forms of malnutrition? [4 Marks]
- (d) Discuss the causes of severe childhood protein-energy malnutrition. [10 marks]

Total [25 marks]

QUESTION TWO

- (a) Which of the following fatty acids is good for human health?
- | | |
|---------------------------------------|----------|
| - Stearic or Oleic fatty acids. | [1 Mark] |
| - Give reason to support your answer. | [1 Mark] |
- (b) Which of the following fatty acid is better than the other for human health?
- | | |
|---|----------|
| - <i>Cis</i> fatty acids or <i>trans</i> fatty acids. | [1 mark] |
| - Give reason to support your answer. | [1 Mark] |
- (c) Briefly elaborate how cholesterol is lost from the body. [7 Marks]
- (d) Write short notes on any two (2) amino acids. [8 Marks]
- (e) What recommendations can you give when advising a client on how to improve calcium absorption? [6 Marks]

Total [25 Marks]

QUESTION THREE

- (a) Give examples of twelve (12) microorganisms that are used as probiotics. [12 Marks]
- (b) Briefly discuss the benefits of probiotics. [10 Marks]
- (c) What are prebiotic properties of garlic? [3 Marks]
- Total [25 Marks]**

QUESTION FOUR

- (a) What is marasmus? [1 Mark]
- (b) What is Kwashiorkor? [1 mark]
- (c) Outline the symptoms of Kwashiorkor. [10 marks]
- (d) Discuss the role of 3 main types (categories) of fats on blood cholesterol levels. [13 Marks]
- Total [25 Marks]**

QUESTION FIVE

- (a) Compare and contrast Substrate level phosphorylation from Oxidative phosphorylation. [5 Mark]
- (b) What are role of vitamins in metabolism? [6 marks]
- (c) What is diabetes mellitus Type II [1 Mark]
- (d) What are the nutritional major causes of diabetes? [6 Marks]
- (e) What is cancer? [1 mark]
- (f) What are the nutritional major causes of cancer [6 Marks]
- Total [25 Marks]**