UNIVERSITY OF ESWATINI
Faculty of Health Sciences
Department of Environmental Health Science

BSc IN ENVIRONMENTAL HEALTH SCIENCE
SUPPLEMENTARY EXAMINATION PAPER JULY 2019

TITLE OF PAPER:	FOOD SAFETY
COURSE CODE:	EHS 324
DURATION:	2 HOURS
MARKS:	100
INSTRUCTIONS:	READ THE QUESTIONS & INSTRUCTIONS CAREFULLY
	ANSWER **QUESTION ONE** AND **ANY OTHER THREE** QUESTIONS
	EACH QUESTION **CARRIES 25 MARKS**
	BEGIN EACH QUESTION ON A SEPARATE SHEET OF PAPER
	WRITE NEATLY AND CLEARLY

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

QUESTION ONE

a) Discuss the food poisoning chain using an example of cross-contamination. **(6 Marks)**

b) What are the two main varieties of wheat? Which one is important for making bread and why? **(5 Marks)**

c) What do you understand by 'Essential amino acids'? Give two examples of essential amino acids. **(5 Marks)**

d) Briefly discuss staling of bread. **(5 Marks)**

e) Cheese can be divided into many types. Name **three** conditions that determine the type of cheese? **(3 Mark)**

f) Swiss cheese has 'eyes'. The organism, ..., is responsible for the formation of the 'eyes' during processing. **(1 Mark)**

(25 Total Marks)

QUESTION TWO

a) What is the responsibility of the following in vegetables and fruits? **(6 Marks)**
   i) Chlorophyll
   ii) Carotenoids pigments
   iii) Anthocyanins

b) How does the diet of a hen affect the egg quality? **(10 Marks)**

c) Explain how egg staleness is detected using the candling method. **(4 Marks)**

d) What is 'soft' rot in vegetables and fruits? **(5 Marks)**

(25 Total Marks)

QUESTION THREE

a) What are the functions of the following constituents in tea leaves? **(3 Marks)**
   i) Caffeine
   ii) Tannins and related compounds
   iii) Essential oils

b) What are dietetics in beverages, and how is their taste improved? Give an example of such dietetics. **(6 Marks)**

c) What are the effects of the following on some nutrients in vegetables and fruits? **(8 Marks)**
   i) Time
   ii) Heat
   iii) Oxygen
   iv) Light

d) Beverages are divided into the following three categories, give **one** example for each category of beverages. **(3 Marks)**
   i) Carbonated none-alcoholic beverages
   ii) None-carbonated none-alcoholic stimulating beverages
   iii) Carbonated or none-carbonated alcoholic beverages

e) List **five** milk-borne diseases of animal origin. **(5 Marks)**

(25 Total Marks)

QUESTION FOUR

a) List **three** general conditions that cause spoilage and deterioration in vegetables and fruits. **(6 Marks)**

b) How does 'soft' rot develop? **(10 Marks)**

c) Besides sugar, list **three** other major ingredients for carbonated soft drinks. **(3 Mark)**

d) What makes bad eggs float in water? **(6 Marks)**

(25 Total Marks)

QUESTION FIVE

a) List **five** milk-borne diseases of human origin. **(5 Marks)**

b) What quality concerns do milk producers address during milk production? **(3 Marks)**

c) Discuss **three** of the egg conditions listed below giving examples of the possible causes. **(6 Marks)**

i) Sour eggs
ii) White rote
iii) Black rot
iv) Blood spots
v) Fishy taste
vi) Blue to green spots in the egg white
vii) Green, Pink, White rot
viii) Red rot
ix) White threads

d) List **six** milk tests that you know. **(6 Marks)**

e) Briefly discuss homofermentative and heterofermentative LAB in the fermentation of milk. **(5 Marks)**

(25 Total Marks)