



1<sup>st</sup> SEM. 2019/20

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UNIVERSITY OF SWAZILAND

RE-SIT EXAMINATION PAPER

**PROGRAMME** : **FOOD SCIENCE, NUTRITION AND  
TECHNOLOGY, CONSUMER  
SCIENCE AND CONSUMER SCIENCE  
EDUCATION YEAR IV**

**COURSE CODE** : **FNS403**

**TITLE OF PAPER** : **FOOD SAFETY AND PUBLIC  
HEALTH**

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

**INSTRUCTIONS** : **ANSWER QUESTION ONE (1)  
AND ANY OTHER TWO (2)  
QUESTIONS.**

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GRANTED BY THE CHIEF INVIGILATOR**

**QUESTION 1 (COMPULSORY)**

a) Explain the following terms:

- i. Infection
- ii. Toxins
- iii. Foodborne outbreak
- iv. Food safety
- v. Product recall

**(20 Marks)**

b) HACCP, or the Hazard Analysis Critical Control Point system, is a process control system that identifies where hazards might occur in the food production process and puts into place stringent actions to take to prevent the hazards from occurring. By strictly monitoring and controlling each step of the process, there is less chance for hazards to occur.

- i) Explain the role that microbiological testing play in HACCP programs?

**(10 marks)**

- ii) Discuss how consumers can use HACCP?

**(10 marks)**

**[TOTAL MARKS = 40]**

**QUESTION 2**

a) Discuss why Eswatini is challenged on food safety issues.

**(10 Marks)**

b) In your opinion, is there a major difference between foodborne disease outbreaks in developed countries and developing countries? Support your answer citing examples where necessary.

**(10 Marks)**

c) Discuss in detail **two (2)** ways in which you can prevent the occurrence of foodborne illness.

**(10 Marks)**

**[TOTAL MARKS = 30]**

QUESTION 3

- a) Discuss the **three (3)** hazard types giving **two (2)** examples for each type.  
(15 Marks)
- b) You have been tasked to teach employees of a food establishment on personal hygiene. Describe using **two (2)** examples human illnesses that may be transmitted through food.  
(10 Marks)
- c) State the individuals that are at high risk of contracting food borne diseases associated with the following pathogens:  
i. *Listeria monocytogenes*  
ii. *Staphylococcus aureus*  
(5 Marks)

[TOTAL MARKS = 30]

QUESTION 4

- d) Explain the importance of investigating a foodborne disease outbreak. Also give **four (4)** sources for detecting outbreaks.  
(25 Marks)
- e) For each of the following pathogens, give **one (1)** example of possible sources of contamination.  
i. *Escherichia coli* O157:H7  
ii. Norovirus  
iii. *Toxoplasma gondii*  
iv. *Campylobacter*  
v. *Clostridium perfringens*  
(5 Marks)

[TOTAL MARKS = 30]