



1st SEM. 2020/21

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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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QUESTION 1 (COMPULSORY)

- a) Explain the following terms:
 - i. Food safety
 - ii. Pathogen
 - iii. Foodborne outbreak
 - iv. Immuno-compromised
 - v. HACCP

(20 Marks)
- b) Explain how *Listeria monocytogenes* is a unique bacterium and very difficult to control

(6 Marks)
- c) Describe the symptoms associated with listeriosis

(6 Marks)
- d) State the individuals that are at high risk of contracting food borne diseases associated with the following pathogens:
 - i. *Listeria monocytogenes*
 - ii. *Staphylococcus aureus*

(8 Marks)

[TOTAL MARKS = 40]

QUESTION 2

- a) 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)
- b) Discuss why Eswatini is challenged on food safety issues.
(10 Marks)

[TOTAL MARKS = 30]

QUESTION 3

- a) Discuss the **three (3)** hazard types giving **two (2)** examples for each type.
(15 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.
(15 Marks)

[TOTAL MARKS = 30]

QUESTION 4

- c) Give **four (4)** sources for detecting outbreaks. Also, state the composition of a foodborne outbreak response team.
(9 Marks)
- d) For each of the following pathogens, give **two (2)** examples of possible food sources of contamination.
 - i. *Escherichia coli* O157:H7
 - ii. Norovirus
 - iii. *Toxoplasma gondii*
 - iv. *Campylobacter*
 - v. *Clostridium perfringens*
 - vi. *Salmonella*
 - vii. *Listeria monocytogenes*

(21 Marks)

[TOTAL MARKS = 30]