UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

PROGRAMME	:	**BACHELOR OF SCIENCE IN FOOD SCIENCE, NUTRITION AND TECHNOLOGY YEAR IV**
COURSE CODE	:	**FSNT 402**
TITLE OF PAPER	:	**FOOD SAFETY AND PUBLIC HEALTH**
TIME ALLOWED	:	**TWO (2) HOURS**
INSTRUCTIONS	:	**ANSWER QUESTION ONE (1) AND ANY OTHER TWO (2) QUESTIONS**

DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN GRANTED BY THE CHIEF INVIGILATOR

Question 1

An average person consumes about 75,000 meals in his or her life span and no wonder foodborne illnesses contribute a high percentage. Most of the foodborne illnesses that occur are preventable if food safety and quality standards are adhered to.

a) What is foodborne disease? [3]
b) What do you understand by this term "food hygiene"? [4]
c) Explain the possible routes of Escherichia coli species in the transmission of foodborne diseases (show appropriate examples). [10]
d) Discuss the control strategies you would employ in the prevention of escherichia foodborne illness. [6]
e) Discuss the health implication and major foodborne risks associated with street vending of food in third world countries particularly Swaziland? [8]
f) Give **three (3)** bacteria that are likely to spoil food in the refrigerator and why? [5]
g) Using appropriate examples explain probiotics in food? [4]

[Total marks 40]

Question 2

a. What types of foods are risks to botulism foodborne illness and why are such foods likely to be incriminated? [6]
b. Using appropriate examples explain food infection and food intoxication [6]
c. Discuss the appropriate standards required in the design and construction of food premises. [12]
d. What importance does cleaning and disinfection has on food safety? [6]

[Total Marks 30]

Question 3

a. What types of foods are likely to be contaminated by *Staphylococcus aureus* and why is that so? [5]
b. How would you control or prevent Staphylococcal foodborne diseases? [5]
c. How do acidity and moisture affect the microbial load on food? Your answer should be supported by good examples. [20]

[Total Marks 30]

Question 4

a. In high acidic foods, such as fruit juices, we do not expect to find bacteria but such foods will still undergo spoilage. Why is that so? [4]

b. Many strains of gram positive bacteria will tolerate low and high temperature better than gram negative bacteria. Why and what risks are associated with food? [4]

c. Which foods are likely to transmit *Listeria monocytogenes* and how? [5]

d. Which two (2) strains of bacteria are likely to cause foodborne illness in sea foods and why? [4]

e. Give three (3) molds species that are likely to grow and spoil food kept in the refrigerator. [3]

f. World Health Organization (WHO) gives five (5) keys to food borne diseases prevention. Explain how these prevention keys ensure food safety. [10]

[Total marks 30]