



UNIVERSITY

OF SWAZILAND

2ND SEM. 2009/2010

FINAL EXAMINATION PAPER

**PROGRAMME : BACHELOR OF SCIENCE IN FOOD
SCIENCE, NUTRITION &
TECHNOLOGY
YEAR IV**

COURSE CODE : FSNT 406

TITLE OF PAPER : FERMENTATION TECHNOLOGY

TIME ALLOWED : TWO (2) HOURS

**INSTRUCTIONS : ANSWER QUESTION ONE (1)
AND ANY OTHER (3) QUESTIONS**

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GRANTED BY THE CHIEF INVIGILATOR**

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QUESTION ONE (COMPULSORY)

- a) Discuss the difference between Tofu and Tempeh.
(8 marks)
- b) Why is it necessary to exclude air during fermentation of meat and vegetable products?
(8 Marks)
- c) Give the effects of heating the milk on product characteristics during the manufacture of yoghurt
(8 Marks)
- d) Discuss the mashing process in beer manufacture
((8 Marks)
- e) What is the difference between brine fermentation and pickling?
(8 Marks)

[TOTAL MARKS = 40]

QUESTION TWO

Genetic modification of organisms for use in food supply is a controversial subject. Discuss three ways in which this technology can be beneficial in improving food security and two causes of concern.

[TOTAL MARKS = 20]

QUESTION THREE

Define the terms; pre-biotic and pro-biotic as they are applied in food.

(4 Marks)

Citing appropriate examples, discuss the importance of pro-biotic organisms in food.

(16 marks)

[TOTAL MARKS = 20]

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QUESTION FOUR

On the same axis, draw graphs of lactic acid content against time during fermentation of (a) normal milk, (b) milk with antibiotic substances and (c) normal milk with phage infestation. All other conditions are the same.

Discuss the reasons for typical shape of the curves.

(TOTAL MARKS = 20)

QUESTION FIVE

Discuss practical ways of minimizing chances of contamination during manufacture and handling of dairy starter cultures

[TOTAL MARKS = 20]