



2ND SEM. 2007

PAGE 1 OF 2

UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

**PROGRAMME : BACHELOR OF SCIENCE IN HOME
ECONOMICS [FOOD SCIENCE AND
TECHNOLOGY OPTION] YEAR V**

COURSE CODE : FST 508

TITLE OF PAPER : FOOD FERMENTATION

TIME ALLOWED : TWO (2) HOURS

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

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GRANTED BY THE CHIEF INVIGILATOR**

QUESTION 1 COMPULSORY

- a. Define the term 'starter culture' [5 marks]
- b. Give at least two ways in which probiotic bacteria are beneficial to the consumer of fermented products. [6 marks]
- c. Explain the reasons why lager beer is usually pasteurized and not sterilized [8 marks]
- d. Give the differences between 'tofu' manufacture and making of pickled cucumbers. [6 marks]
- e. What do you understand by a genetically engineered micro-organism? [5 marks]
- f. In sauerkraut manufacture, lactic acid fermentation bacteria are few at the start of the process yet they dominate the fermentation process. Explain. [10 marks]

[Total Marks = 40]

QUESTION 2

Oxygen is an important factor used in the control of fermentation processes. Discuss this statement citing at least three examples [30 marks]

QUESTION 3

Giving appropriate examples, explain the role of fermentation in the bioavailability of nutrients? [30 marks]

QUESTION 4

Discuss ways of minimising contamination of starter cultures in a dairy processing factory [30 marks]

QUESTION 5

Discuss the steps you would take in maximizing alcohol production from barley or any other grain. [30 marks]