



2ND SEM. 2014/15

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**UNIVERSITY OF SWAZILAND
SUPPLEMENTARY EXAMINATION PAPER**

**PROGRAM : BACHELOR OF SCIENCE IN FOOD
SCIENCE, NUTRITION AND 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 TWO (2) QUESTIONS. ILLUSTRATE
YOUR ANSWERS WITH DIAGRAMS
WHERE NEEDED**

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

QUESTION 1 (COMPULSORY)

- (a) Discuss the methods of initiating fermentation including the merits and demerits of each method. (20 Marks)
- (b) Discuss the different types of fermentation based on the end product and the micro-organisms used. (20 Marks)

[TOTAL MARKS = 40]

QUESTION 2

- (a) Explain the following:
- i. Kilning
 - ii. Bacteriophages
 - iii. Up stream processes
 - iv. Malolatic fermentation
- (4×4 = 16 Marks)
- (b) Before the use of starter culture, back sloping has been a common way to start meat fermentation. Explain reasons that make back-sloping work. (14 Marks)

[TOTAL MARKS = 30]

QUESTION 3

- (a) With the help of a sketch, describe the processing of Perry. (15 Marks)
- (b) Outline the steps in pickle fermentation. (15 Marks)

[TOTAL MARKS = 30]

QUESTION 4

With the help of a sketch discuss the Trickling generator processes and indicate its advantage over other processes to produce the same product. (30 Marks)

[TOTAL MARKS = 30]