

2ND SEM. 2012/13



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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

PROGRAMME : **BACHELOR OF SCIENCE IN FOOD SCIENCE,
NUTRITION AND TECHNOLOGY YEAR III**

COURSE CODE : **FSNT 306**

TITLE OF PAPER : **FOOD PROCESSING I**

TIME ALLOWED : **TWO (2) HOURS**

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

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THE CHIEF INVIGILATOR**

QUESTION 1(COMPULSORY)

- (a) Food Processing is an ancient skill and practice. However, since it was organized into a formal industry, it has continued to grow, develop and expand in sophistication, diversity of processors, range of products and distribution channels and marketing outlets. Identify and discuss **four (4)** elements or factors that have contributed to the global growth and development and/or current trends and/or practices observed in the modern day food processing industry. **(20 Marks)**
- (b) Identify and explain the processing challenges that have to be considered and overcome in the processing of safe and high quality underground/earth starchy (cassava, taro, sweet potatoes or Irish potatoes) products. **(12 Marks)**
- (c) Processing can enable expanded utilization/application of food materials that are not currently widely used commercially. Identify **two (2)** such types of foods found in abundance in Swaziland. Discuss how their current utilization/application can be expanded via processing. **(8 Marks)**

[TOTAL MARKS = 40]

QUESTION 2

Define the following terms and explain their significance/importance in Food Processing applications. Illustrate with appropriate examples:

- (i) Process Flow Chart/Diagram **(10 Marks)**
- (ii) An Asset Register or Inventory **(6 Marks)**
- (iii) Standard Operating Procedures **(6 Marks)**
- (iv) Specification Sheet **(8 Marks)**

[TOTAL MARKS = 30]

QUESTION 3

- (a) Identify and explain the different types of storage used to extend the shelf life of **fresh produce**. **(12 Marks)**
- (b) Identify and describe only **two (2)** methods commonly used to process milk into consumer products. **(18 Marks)**

[TOTAL MARKS = 30]

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QUESTION 4

- (a) Explain the 'Hurdle concept', its value or importance in modern day food processing. What brought it about? **(15 Marks)**
- (b) Identify and explain the key features that must be present in a small-scale food processing plant to ensure the production of safe and quality food products. **(15 Marks)**

[TOTAL MARKS = 30]