



2ND SEM. 2013/14

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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

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

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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 **five (5)** 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) What is the goal of the Food Industry or Commercial Food Processing/manufacturing? Discuss. **(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 technologies and practices that can be used to optimize the 'fresh- state' keeping qualities of fresh produce (both fruits and vegetables).
(10 Marks)
- (b) 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.
(10 Marks)
- (c) Fish and Poultry are commonly processed into different types of consumer products. For each, identify and explain the process steps and critical points where caution or control must be exercised to ensure a safe and a gastronomically high quality product.
(10 Marks)

[TOTAL MARKS = 30]

QUESTION 4

- (a) Explain the 'Hurdle technology/concept', its value or importance in modern day food processing. What contributed to its development?
(15 Marks)
- (b) In Swaziland and throughout the SADC region how can small scale food/agro-processing be promoted or upgraded? Discuss.
(15 Marks)

[TOTAL MARKS = 30]