



2ND SEM. 2015/16

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**UNIVERSITY OF SWAZILAND
FINAL EXAMINATION PAPER**

**PROGRAMMES : BACHELOR OF SCIENCE IN FOOD SCIENCE,
NUTRITION AND TECHNOLOGY, YEAR III
CONSUMER SCIENCE EDUCATION, YEAR III
CONSUMER SCIENCE, YEAR III**

COURSE CODE : FSNT 308

TITLE OF PAPER : FOOD PRESERVATION

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) Discuss the relevance of studying a food preservation course to addressing the food security and sufficiency situation in Swaziland. (15 Marks)
- (b) Identify and discuss the factors that would guide you whether to or not to preserve food. (10 Marks)
- (c) Food Hunger or '*Indlala*' is an undesirable food situation that if left unchecked for a long time, can start an unpleasant vicious cycle. Depict and discuss the vicious cycle that can be started by a prolonged 'hunger' situation (15 Marks)
- [TOTAL MARKS = 40]

QUESTION 2

Explain the action, role and function(s) of the following ingredients in the preservation of foods. Give appropriate examples of foods where they are used as preservatives.

- (a) Nitrites/nitrates (5 Marks)
- (b) Sulfites (sulfur dioxide) (5 Marks)
- (c) Acetic acid (vinegar) (5 Marks)
- (d) Salt (5 Marks)
- (e) Sugar (Sucrose) (5 Marks)
- (f) Lactic acid bacteria (5 Marks)
- [TOTAL MARKS = 30]

QUESTION 3

You are required to make an orange and pineapple marmalade as a small business.

- (a) Identify and explain the role and function of the ingredients that are essential and used in the making of a safe and good quality marmalade. (12 Marks)
- (b) Make a process flow chart/diagram and indicate the critical stages that when properly controlled will assure you of good quality marmalade. (10 Marks)
- (c) How would you make sure that your marmalade is a safe, high quality and consistent product over the years? (8 Marks)

[TOTAL MARKS = 30]

QUESTION 4

- (a) Identify **three (3)** intrinsic factors and **three (3)** extrinsic factors that are involved and contribute to the spoilage of foods. (12 Marks)
 - (b) Explain the importance of washing and cleaning fresh produce with potable water as a step before preservation. (8 Marks)
 - (c) Discuss why chilling/freezing and the Hurdle concept are considered the best methods of preservation in modern days. (10 Marks)
- [TOTAL MARKS = 30]