

**2<sup>ND</sup> SEM. 2011/2012**



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FSNT 306 (M)**

**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**

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

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

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

**QUESTION 1 [COMPULSORY]**

- a) Explain how food processing ensures that food is preserved in good quality.  
[10 Marks]
- b) Describe the following methods of testing for milk quality:
- i. 10 minute resazurin test.
  - ii. Sediment test. [6 Marks]
- c) Differentiate between unsweetened and sweetened condensed milk. [4 Marks]
- d) Give the composition of butter. [4 Marks]
- e) Explain the importance of blanching in fruit and vegetable processing. [6 Marks]
- f) Explain how the following colour takes place in meat:
- i. Myoglobin.
  - ii. Hemoglobin.
  - iii. Nitric oxide myoglobin.
  - iv. Metmyoglobin.
  - v. Nitrosohemochrome.

[10 Marks]

[Total marks = 40]

**QUESTION 2**

- a) Explain the following milk processing steps:
- i. Clarification.
  - ii. Standardisation.
  - iii. Homogenization. [12 Marks]
- b) Explain the following major sources of milk contamination:
- i. Milk handlers.
  - ii. Milk handling containers. [10 Marks]

Discuss **four** factors that may lead to milk variation.

[8 Marks]

[Total marks = 30]

**QUESTION 3**

- a) Explain the following milling processes:  
i. Wheat milling.  
ii. Wet milling. [20 Marks]
- b) Discuss two main ingredients used in bread and bakery products. [5 Marks]
- c) Explain the nutritional composition of fruits and vegetables. [5 Marks]
- [Total marks = 30]**

**QUESTION 4**

- a) Discuss Pasteurization and Ultra High Temperature (UHT) treatment. [10 Marks]
- b) Explain **three** types of meat inspection and certification. [12 Marks]
- c) Discuss **four** quality defects in yoghurt processing. [8 Marks]
- [Total marks = 30]**