

2ND SEM. 2010/2011



PAGE 1 OF 3

UNIVERSITY OF SWAZILAND

SUPPLEMENTARY 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) Discuss the following reasons for processing food.
- i. Preservation [8 Marks]
 - ii. Destruction of toxins [6 Marks]
- b) Give the necessary ingredients required in jam making (Choose a Jam of your choice). Explain the necessary steps in jam making. [10 marks]
- c) Discuss the use of nitrites in meat under the following:
- i. Reaction of nitrites with myoglobin [3 Marks]
 - ii. Reaction of nitrites upon cooking in meat [3 Marks]
 - iii. Effects of nitrites on consumer's health [6 Marks]
- d) Draw a labeled structure of a cereal grain. [4 Marks]

[Total = 40 marks]

QUESTION 2

- a) Explain the formation of the following pigments in meat:
- i. Oxymyoglobin [2 Marks]
 - ii. Metmyoglobin [2 Marks]
- a) Explain the following processing methods of grains:-
- i. Maize milling
 - ii. Rice milling
- [12 marks]
- b) Explain the two major sources of milk contamination.
- [14 marks]

[Total = 30 marks]

QUESTION 3

- b) Differentiate between Pasteurization and UHT treatment in fluid milk processing
[10 marks]
- c) Describe the four main ingredients that are used in bread making. [12 Marks]
- d) Give 2 natural and 2 artificial ways in which meat can be tenderized
[8 Marks]

[Total = 30 marks]

QUESTION 4

- a) Discuss **four** quality defects that may occur during yoghurt manufacture and give possible reasons for the defects
[12 Marks]
- b) Discuss the following meat handling processes
 - i. Kosher Inspection
 - ii. Halal Certification
[12 Marks]
- c) Give three classifications of vegetables including two examples in each classification.
[6 Marks]

[Total = 30 marks]