



2ND SEM. 2008/2009

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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

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

COURSE CODE : FSNT 408

**TITLE OF PAPER : FOOD PACKAGING &
TRANSPORTATION**

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

- a) Discuss **five** functions of packaging in food products. [10 marks]
- b) Discuss the **two** manufacturing processes of two piece cans. [15 marks]
- c) Discuss the process of making glass containers for food packaging. [15 marks]

[TOTAL = 40 MARKS]

QUESTION 2

- a) Describe the properties of the following materials;
- i. Polyethylene terephthalate (PET)
 - ii. Low-density polyethylene (LDPE)
 - iii. High-density polyethylene (HDPE) [15 marks]
- b) Describe the construction of a laminated paperboard carton and give **five** advantages of laminated paperboard cartons. [15 marks]

[TOTAL = 30 MARKS]

QUESTION 3

- a) Explain the following preservation techniques and give an example of a food product utilizing each technique:-
- i. Modified atmosphere packaging
 - ii. Controlled atmosphere storage [10 marks]
- b) Explain how the following product characteristics affect logistic cost.
- i. Volume-to-weight ratio
 - ii. Value-to-weight ratio [10 marks]
- c) Describe the following containers
- i. Insulated container
 - ii. Refrigerated container [10 marks]

[TOTAL = 30 MARKS]

QUESTION 4

- a) Describe the significance of the 'e-mark' that may be printed on some food packages.
[10 marks]
- b) Describe the main TEN requirements of the food labeling regulations.
[20 marks]

[TOTAL = 30 MARKS]