

2nd SEM. 2009



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UNIVERSITY OF SWAZILAND

SUPPLEMENTARY 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 TWO (2)
QUESTIONS**

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

QUESTION 1

a) Discuss **five** requirements of shipping containers [10 marks]

b) Discuss the manufacturing process of three piece cans [15 marks]

c) Discuss **five** advantages of using glass [15 marks]

[TOTAL = 40 MARKS]

QUESTION 2

a) Describe five properties of flexible films [10 marks]

b) Describe the following processes for making plastic containers

i. Injection moulding

ii. Stretch blow moulding [10 marks]

c) Describe five applications of active packaging technology. [15 marks]

[TOTAL = 30 MARKS]

QUESTION 3

a) Explain the terms:-

i. Modified atmosphere packaging (MAP)

ii. Controlled atmosphere storage (CAS)

[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 general arrangement in a conventional cargo ship

[10 marks]

[TOTAL = 30 MARKS]

QUESTION 4

- a) Describe the following methods of cleaning a container or carrier.
- i. Dry cleaning
 - ii. Wet cleaning
- [10 marks]
- b) Describe the main requirements of the food labeling regulations. [20 marks]

[TOTAL = 30 MARKS]