

2nd SEM. 2006/2007



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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

**PROGRAMME : DIPLOMA IN HOME ECONOMICS AND
HOME ECONOMICS EDUCATION
YEAR 3**

COURSE CODE : FN 302

TITLE OF PAPER : FOOD PRESERVATION

TIME ALLOWED : TWO (2) HOURS

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

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GRANTED BY THE CHIEF INVIGILATOR**

Question 1

- a. Explain the main reasons for food preservation. [20 marks]
- b. Write notes on accelerated freeze drying of foods. [10 marks]
- c. The concept of 'hurdle technology' may be applied to the preservation of food by drying. List 5 'hurdles' that must be overcome by spoilage organisms in the production of milk powder by spray-drying. [5 marks]
- d. Indicate 5 applications (uses) of food irradiation. [5 marks]

[Total marks = 30]

Question 2

Explain the following physical methods of preservation.

- a. Controlled atmospheres [20 marks]
- b. Smoking [10 marks]

[Total marks = 30]

Question 3

- a. Compare and contrast the use of pasteurization and sterilization in food preservation. [10 marks]
- b. Explain how the preservation of food may be achieved by fermentation. [10 marks]
- c. Explain how the preservation of food may be achieved by use of chemicals. [10 marks]

[Total marks = 30]

Question 4

- a. The preservation of food allows us to live a more 'convenient' life; however even preserved food must be treated with care.
From the preservation techniques listed Table 1, match the food types listed in Table 2 with techniques (Table 1) commonly used to preserve the food.

Table 1. Preservation Techniques

Blanching and freezing
Salting and Pasteurisation
Freeze-drying
'Botulinum cook'
Added sugar
Addition of nitrate/nitrite chemicals

Table 2. Food Types

Food Type	Preservation technique
Canned cured ham	
Packaged fresh peas	
Canned salmon	
Marmalade	
Meat preservation	
Instant coffee	

Note: Copy Table 2 into your answer book and fill the preservation technique

[6 marks]

- b. Give four good practice actions that may be used when storing frozen food for long periods. [4 marks]
- c. Give an overview of the indigenous (traditional) methods used to preserve food in Swaziland or Botswana. [20 marks]

[Total marks = 30]