

2005/2006



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UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER

**PROGRAMME : DIPLOMA IN HOME ECONOMICS &
HOME ECONOMICS EDUCATION
YEAR III**

COURSE CODE : FN 302

TITLE OF PAPER : EXPERIMENTAL FOODS

TIME ALLOWED : TWO (2) HOURS

INSTRUCTIONS : ANSWER ALL QUESTIONS

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

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Question 1

- a. Food spoilage is the adverse effects or changes in the quality of food which is due to the action of mainly biological factors. Explain food spoilage in relation to;
- i. enzymatic action [10]
 - ii. microbial action [10]
- [Use appropriate examples]
- b. How do the following factors influence the growth of microorganisms in or on food?
- i. temperature [6]
 - ii. oxygen [5]
 - iii. moisture [5]
- c. Why is the knowledge in acidity value of the food important in food canning?

[4]

[Total marks 40]**Question 2**

- a. Using appropriate examples explain how the following chemicals preserve food
- i. curing salts [10]
 - ii. sugar [5]
- b. How does dehydration differ from low temperature as a method of food preservation? [10]
- c. Explain the types of spoilage which are likely to be observed in improperly canned or bottled products. [5]

[Total marks 30]**Question 3**

- a. Explain why the following food products are said to be shelf stable?
- i. tomato chutney [4]
 - ii. pickled onion [4]
 - iii. marmalade jam [5]
- b. How would you test for the setting point in jam making using the flake test? [3]

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- c. How does food packaging protect food quality? [5]
- d. Why is freezing not recommended for these products, oranges, and banana? [4]
- e. 'Smoked fish' this label is seen on a packaged fish. How was this food product preserved? [5]

[Total marks 30]**Question 4**

- a. Why is sodium benzoate added in salad dressing since the pH is low enough to take care of microorganism? [3]
- b. Vegetables and fruits are required to be blanched before preservation, why is that so? [5]
- c. What is food irradiation? [5]
- d. What is headspace and why is it important in canning and bottling operation? [4]
- e. How is freezing different from refrigeration in food preservation? [5]
- f. What is the function of pectin in sugar preserves? [3]
- g. In the manufacture of jams, jellies and marmalades, what is the role of the acid? [5]

[Total marks 30]