

1905/103

**FOOD SCIENCE, FOOD SAFETY AND
HYGIENE, MEAL PLANNING MANAGEMENT
AND SERVICE PRACTICE**

June/July 2020

Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

CRAFT CERTIFICATE IN NUTRITION AND DIETETICS

MODULE I

**FOOD SCIENCE, FOOD SAFETY AND HYGIENE, MEAL PLANNING MANAGEMENT
AND SERVICE PRACTICE**

3 hours

INSTRUCTIONS TO CANDIDATES

This paper consists of TWO sections; A and B.

Answer ALL the questions in section A and any TWO questions from section B in the answer booklet provided.

Question 1 carries 40 marks while questions 2, 3, 4 and 5 carry 20 marks each.

Maximum marks for each part of a question are indicated.

Candidates should answer the questions in English.



This paper consists of 4 printed pages.

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

SECTION A (60 marks)

Answer ALL the questions in this section.

1. *Read the case study below and then answer the questions that follow.*

CASE STUDY ONE

Mayo was hired as the new director of Food and Nutrition for Pleavy School. She has been raised in a family of restaurateurs and appreciates good food and its social aspects. She is a registered dietitian with ten years of experience in school feeding programs and she is committed to improving the health and well being of the school children.

Before Mayo can estimate the quantity of products she needs to purchase from the distributors, she first needs to have a firm idea of the menu plan. She also needs to investigate the availability of the products from the suppliers.

Mayo would like to incorporate fresh and canned fruits and vegetables to increase her selection. She is concerned whether she will satisfy the school fraternity.

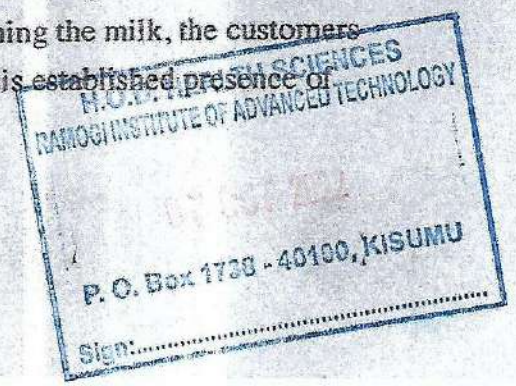
- (a) Describe the term menu planning. (3 marks)
- (b) Mention five factors Mayo will put into consideration when making the meal plan. (5 marks)
- (c) Highlight six social aspects that can affect individual food choices. (6 marks)
- (d) Indicate six points Mayo would have in mind when purchasing fresh fruits and vegetables. (6 marks)
- (e) Describe four benefits of providing school meals for students at Pleavy school. (8 marks)
- (f) Outline six steps involved in the purchasing cycle. (12 marks)

2. *Read the case study below and then answer the questions that follow.*

CASE STUDY TWO

Koros has been vending milk for two years now. He is facing a court case where he is accused of selling poisonous milk that nearly costed the lives of people in his neighbourhood.

One early Saturday morning, he had dispensed the remaining milk from the previous day's supply as he awaited the supply of the day. On consuming the milk, the customers experienced bouts of diarrhoea and vomiting. Further analysis established presence of *Staphylococcus aureus* in the sample of milk tested.



- (a) Differentiate between contaminated and adulterated milk. (4 marks)
- (b) Explain four other consequences of food spoilage. (8 marks)
- (c) Suggest four ways of controlling *Staphylococcus aureus* in food. (8 marks)

SECTION B (40 marks)

Answer any TWO questions from this section.

3. *Read the case study below and then answer the questions that follow.*

CASE STUDY THREE

Pito is the Store Keeper in charge of Bika High School. Lately, she has had problems for procuring food as a result of economic changes and high food prices. The administration has ignored all her pleas on adjusting the food procurement budget.

- (a) Indicate six ways in which Pito can reduce on food procurement cost. (6 marks)
- (b) Explain three measures Pito can take to ensure safe transport of food items from the market to the school kitchen. (6 marks)
- (c) Outline four detectable parameters associated with spoilt food. (8 marks)

4. *Read the case study below and then answer the questions that follow.*

CASE STUDY FOUR

Mula's grandfather has always loved roasting meat. He sprinkles herbs to enhance the taste of the meat.

On this particular day, he roasted lots of beef and sent Mula to take to her sister, Kala, who lives nearby. Mula packed the meat carefully in a plastic container for ease of transportation and storage.

Kala decided to keep the meat and consume it the following day. When Kala opened the container to serve the meat, she encountered a foul smell.

- (a) Highlight four advantages of using plastic as a packaging material. (4 marks)
- (b) Outline three requirements that the herb as an additive should meet to qualify for use in foods. (6 marks)

(c) State **six** possible causes of deterioration in Kala's meat. (6 marks)

(d) Describe **four** practices Mula's grandfather should employ to ensure safety when handling food. (4 marks)

5. Read the case study below and then answer the questions that follow.

CASE STUDY FIVE

You have been invited as a Guest Speaker in a food science and food safety seminar for food manufacturers and distributors.

Address the following concerns raised by the participants.

(a) Highlight **six** causes of post harvest losses in root vegetables. (6 marks)

(b) Describe **five** characteristics of food quality. (10 marks)

(c) Indicate **four** methods of drying food. (4 marks)

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