2819/102
FOOD AND BEVERAGE PRODUCTION,
NUTRITION AND MATHEMATICS
June/July 2023
Time: 3 hours

THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN CATERING AND ACCOMMODATION MANAGEMENT

MODULE I

FOOD AND BEVERAGE PRODUCTION, NUTRITION AND MATHEMATICS

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:
*   Answer booklet;*
*   Mathematical tables/non-programmable silent electronic calculator;*
*This paper consists of **THREE** sections; A, B and C.*
Answer ALL questions in sections A and B.
*Answer question 21(COMPULSORY) and any other **TWO** questions from section C.*
Answers to the questions must be written in the answer booklet provided.
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.

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SECTION A: MATHEMATICS (30 marks)
*Answer **ALL** questions in this section.*

1. Solve for x in the equation $2x + \dfrac{x+1}{3} = 5$. (3 marks)

2. Given that a = 3, b = 2 and c = 6; determine the value of $\dfrac{a(c+b)+bc}{ab}$. (3 marks)

3. If Mary spent Ksh 1200 a day, her money would last for 36 days. Determine the number of days it would take if the expenditure is increased by Ksh 300 per day.

(3 marks)

4. A tray of eggs contains 30 eggs. A kiosk owner bought 100 trays at Ksh 280 per tray. On the way to the kiosk 120 eggs broke. The remaining were sold for Ksh 15 each. Determine the amount of money made from the sale.

(3 marks)

5. A milk storage tank is in the form of a cuboid of length 201 m, width 150 cm and height 170 cm. Determine the amount of milk in litres it would hold when full.

(3 marks)

6. Given the equation of a straight line is $x = \dfrac{-3}{4}y + 2$, express it in the form $y = mx + c$, where m and c are constant.

(3 marks)

7. Evaluate $6p_3 - 4c_2$. (3 marks)

8. John bought a baking machine for Ksh 2,500,000 and later sold it for Ksh 2,167,500. Determine the percentage loss in this transaction.

(3 marks)

9. The following is a set of scores of points earned by different teams in a tournament. 2, 3, 4, 5, 3, 6, 3, 9, 6, 8, 7, 6, 10, 6, 6.
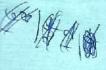
   (i) state the mode; (1 mark)

   (ii) determine the mean score. (2 marks)

10. Table 1 shows marks of a first year candidate in end of year examination

Table 1

Subject	Score out of 100
Mathematics	50
Communication skills	70
Baking	80
Computer application	40
Catering	60

If a pie-chart was to be drawn, what angle would represent baking. (3 marks)

SECTION B: FOOD SCIENCE AND NUTRITION (30 marks)

Answer ALL questions in this section.

11. Identify **three** fat soluble vitamins. (3 marks)

12. Highlight **three** signs of spoilt fish. (3 marks)

13. State **three** functions of dietary fibre in the human body. (3 marks)

14. Highlight **three** conditions that facilitate food spoilage. (3 marks)

15. Identify **three** uses of fat in food production. (3 marks)

16. Outline **three** reasons for using antioxidants in food. (3 marks)

17. Identify the **three** classes of food contaminants. (3 marks)

18. Suggest **three** reasons for food preservation. (3 marks)

19. Enumerate **three** digestive enzymes involved in breakdown of carbohydrates. (3 marks)

20. Identify **three** types of anaemia. (3 marks)

SECTION C: FOOD AND BEVERAGE PRODUCTION (40 marks)

*Answer **Question 21** and any other **TWO** questions from this section.*

21. Discuss **five** factors influencing the choice of cooking methods in a catering establishment.
(10 marks)

22. (a) Highlight **two** duties of the following kitchen staff:

      (i)   chef de cuisine;   (2 marks)

      (ii)   chef de partie.   (2 marks)

    (b) Explain the meaning of the term 'cross contamination'.   (2 marks)

    (c) State **five** reasons for cooking food.   (5 marks)

    (d) Differentiate between liquidiser and food mixer.   (4 marks)

23. (a) Identify **four** types of soup, giving an example in each case.   (4 marks)

    (b) Highlight **five** methods of making cakes.   (5 marks)

    (c) Describe **three** types of sandwiches.   (6 marks)

24. (a) Giving an example in each case, identify **five** types of vegetables.   (5 marks)

    (b) Explain **five** uses of eggs in food preparation.   (10 marks)

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