

2819/102
FOOD AND BEVERAGE PRODUCTION,
NUTRITION AND MATHEMATICS
June/July 2020
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** 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.

SECTION A: MATHEMATICS (30 marks)

Answer ALL questions in this section.

1. Without using a calculator or mathematical tables, evaluate:

$$(-12) \div 6 + 8 \times 3 + (-4) - (-2).$$

(3 marks)

2. The cost of one packet of baking powder is Ksh X and the cost of one packet of flour is Ksh 50 more than that of baking powder. The total cost of 4 packets of baking powder and 8 packets of flour is Ksh 1600. Determine the cost of one packet of baking powder.

(3 marks)

3. Table 1 shows the number of memos received by workers in a tea factory.

Table 1

No of Memos Received	No. of Workers Frequency
0 - 2	10
3 - 5	9
6 - 8	6
9 - 11	4
12 - 14	1

Calculate the mean number of memos received.

(3 marks)

4. Without using a calculator, evaluate:

$$7P_4 + 6P_4.$$

(3 marks)

5. A student leaving Kenya for U.S.A changed Ksh 1,000,000 to US dollars at the bank when the exchange rate was Ksh 98.6406 to the US dollar. Determine the total amount of dollars he received to the nearest whole number.

(3 marks)

6. In a bakery plant, 12 workers working at a constant rate bake 300 loaves of bread in 50 hours. Determine the number of loaves 18 workers working at the same rate will bake in 75 hours.

(3 marks)

7. Determine the area of figure 1.

(3 marks)

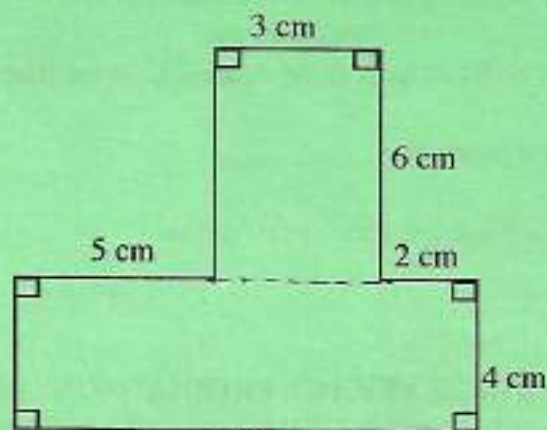


Fig. 1

8. A factory carried out a survey on soft drinks where 1800 people were asked to state their preferred brand. Their preference were as follows: 350 chose brand A, 300 brand B, 1000 brand C and 150 brand D. Represent this information on a pie-chart. (3 marks)

9. (a) Fill the missing values in table 2 for the function $y = x^2 - 2x - 8$. (1 mark)

Table 2

X	-3	-2	-1	0	1	2	3	4	5
Y	0	0	-5	-8	—	-8	-	0	7

- (b) Hence plot the graph of $y = x^2 - 2x - 8$ in the range $-3 \leq x \leq 5$. (2 marks)
10. State **three** advantages of sampling as used in data collection. (3 marks)

SECTION B: FOOD SCIENCE AND NUTRITION (30 marks)

Answer **ALL** the questions in this section.

11. State **three** functions of protein in the body. (3 marks)
12. Highlight **three** properties of fat. (3 marks)
13. Identify **three** symptoms of kwashiorkor. (3 marks)
14. State **three** functions of water in the body. (3 marks)
15. Highlight **three** factors known to assist in the absorption of calcium. (3 marks)
16. Identify **three** examples of monosaccharides. (3 marks)

17. State **three** rules to consider in the maintenance of kitchen hygiene. (3 marks)
18. Identify **three** reasons why it is difficult to provide vitamin C in the diet. (3 marks)
19. Identify **three** symptoms of food poisoning. (3 marks)
20. Highlight **three** processes that are used in food preservation. (3 marks)

SECTION C: FOOD AND BEVERAGE PRODUCTION (40 marks)

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

21. Describe the following types of menus:
- (i) table d'hot à menu; (2 marks)
 - (ii) a la carte menu; (2 marks)
 - (iii) buffet; (2 marks)
 - (iv) banquet; (2 marks)
 - (v) cyclical menu. (2 marks)
22. (a) State **four** essential duties of a chef de cuisine. (4 marks)
- (b) (i) Define the term 'stock'. (2 marks)
- (ii) Explain the **two** types of stocks used in food preparation. (4 marks)
- (c) Identify **five** causes of heavy and close texture in creamed cakes. (5 marks)
23. (a) (i) Differentiate between 'dripping' and 'suet' in relation to food production. (2 marks)
- (ii) Identify **five** uses of fat in cooking. (5 marks)
- (b) Describe **four** effects of heat on meat. (4 marks)
- (c) Explain **two** disadvantages of using gas for cooking. (4 marks)
24. (a) Identify **four** basic ingredients used in the preparation of bread sauce. (2 marks)
- (b) Outline the procedure of making mayonnaise. (6 marks)
- (c) Explain **two** major ingredients in bread-making giving **three** functions of each. (7 marks)

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