2819/102
FOOD AND BEVERAGE PRODUCTION,
NUTRITION AND MATHEMATICS
June/July 2017
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:
  Non-programmable silent electronic calculator;
  KNEC mathematical tables.
This paper consists of THREE sections; A, B and C.
Answer ALL questions in sections A and B and THREE questions from section C.
Answers to ALL the questions must be written in the answer booklet provided.
Maximum marks for each part of a question are as 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.**

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SECTION A: MATHEMATICS (30 marks)

Answer ALL questions in this section.

1. A cereal shop had 3469 bags of maize each weighing 90 kg. In one week a total of 2654 bags were sold. Determine the number of kilograms of maize that was left in the store.

   (3 marks)

2. The price of an article is adjusted in the ratio 6:5. If the final price is Ksh 50,000, calculate its original price to the nearest whole number. (3 marks)

3. A circular pond of diameter 700 cm is surrounded by a path 2.8 m wide. Determine the area of the path to 2 decimal places. (3 marks)

4. Solve for x in the given equation

   $$\frac{2}{x} + 1 = \frac{3}{4}$$

   (3 marks)

5. Without using a calculator, evaluate $6P_6 \times 5C_3$. (3 marks)

6. The price of a cooker is marked at Ksh 36,000. When a discount is allowed, it is sold at Ksh 28,800. Calculate the percentage discount. (3 marks)

7. The results obtained by 40 students in a test were recorded as follows:

68	84	75	93	82	68	90	62	88	76
73	79	88	73	60	93	71	59	85	75
61	65	75	87	74	62	95	78	63	72
66	78	82	75	94	77	53	69	55	51

   Starting from 50 and using equal class widths of 10, construct a grouped frequency distribution table. (3 marks)

8. Table 1 shows the mean mass of three groups of students.

Groups	A	B	C
Number of students	15	20	10
Mean mass (kg)	72	66.5	68.5

   Calculate the total mass of all the students. (3 marks)

9. Calculate the variance of the following set of values:

    10, 12, 14, 16 (3 marks)

10. Outline **three** factors to consider when sampling in data collection. (3 marks)

SECTION B: FOOD AND BEVERAGE AND NUTRITION (30 marks)

Answer ALL the questions in this section.

11. Highlight **three** reasons why milk is referred to as a near perfect food. (3 marks)

12. Identify **three** roles that phosphorous plays in the body. (3 marks)

13. State **three** examples of monosaccharides. (3 marks)

14. State **three** types of fatty acids. (3 marks)

15. Identify **six** types of nutrients in foods. (3 marks)

16. Enumerate **three** functions of vitamin C in the body. (3 marks)

17. Identify the number of calories provided by the following nutrients:

    (i) 1 g carbohydrate;

    (ii) 1 g protein;

    (ii) 1 g fat.

    (3 marks)

18. State **three** symptoms of a person suffering from pellagra. (3 marks)

19. Indicate the correct chemical symbols for the following vitamins:

    (i) retiriol;

    (ii) niacur;

    (iii) cyanocobalamin;

    (iv) cholecalciferol;

    (v) tocopherals;

    (vi) ascorbic acid.

    (3 marks)

20. Highlight **three** measures to observe in the management of obesity. (3 marks)

SECTION C: FOOD AND BEVERAGE PRODUCTION (40 marks)

*Answer **THREE** questions from this section.* **Question 21 is compulsory.**

21. (a) State **three** characteristics of quality lambs and mutton. (3 marks)

    (b) Identify **three** points to consider when choosing vegetables. (3 marks)

    (c) Highlight **four** advantages of steaming. (4 marks)

22. (a) State **three** points to consider when selecting kitchen equipment. (3 marks)

    (b) Identify **two** causes of each of the following faults in creamed cake mixture:

        (i) cake that has sunk in the middle; (2 marks)

        (ii) heavy and close texture. (2 marks)

    (c) Explain **four** safety points to observe when deep frying. (8 marks)

23. (a) Identify **three** condiments used in food preparation. (3 marks)

    (b) State **three** kitchen guidelines for the prevention of food poisoning. (3 marks)

    (c) (i) Identify **three** mechanical ways in which air is introduced into flour mixtures. (3 marks)

        (ii) Explain **three** conditions suitable for the growth of yeast. (6 marks)

24. (a) State **four** general rules to observe when preparing cold foods. (4 marks)

    (b) Enumerate **five** points in the prevention of bacterial transfer through cross contamination. (5 marks)

    (c) Explain **three** considerations in the preparation of stocks. (6 marks)

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