

2802/102
CATERING PREMISES
EQUIPMENT AND MATHEMATICS
June/July 2022
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL
DIPLOMA IN FOOD AND BEVERAGE MANAGEMENT
MODULE 1

CATERING PREMISES, EQUIPMENT AND MATHEMATICS

3 hours

INSTRUCTIONS TO CANDIDATES

You should have a Non-programmable scientific calculator for this examination.
This paper consists of TWO Sections; A and B.
Answer question ONE and any other THREE questions from Section A.
Answer question SIX and any other THREE questions from Section B
Show all your working in Section B.
All answers must be written in the answer booklet provided
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 (50 marks)

CATERING PREMISES AND EQUIPMENT

Answer question **ONE** (compulsory) and any other **THREE** questions in this section.

1. (a) Enumerate **four** safety precautions to observe when operating a microwave oven. (4 marks)
 - (b) Highlight **four** benefits of performing equipment maintenance inspection. (4 marks)
 - (c) State **two** causes of each of the following faults in ventilation systems:
 - (i) air not cooling; (2 marks)
 - (ii) noise at air terminal devices. (2 marks)
 - (d) Differentiate between Island grouping and wall sitting kitchen layouts. (4 marks)
 - (e) Outline the procedure for unblocking a sink fitted with a bottle trap. (4 marks)
2. (a) State **four** ways of conserving water in a commercial kitchen. (4 marks)
 - (b) Explain **three** factors to consider when choosing floor coverings. (6 marks)
3. (a) Explain the meaning of each of the following terms:
 - (i) manhole; (2 marks)
 - (ii) garbage. (2 marks)
 - (b) Analyse **three** ways of reducing motion in the kitchen. (6 marks)
4. (a) Explain the uses of each of the following electric wires:
 - (i) live wire; (2 marks)
 - (ii) neutral wire. (2 marks)
 - (b) Explain **three** ways of boosting security for guests and employees in hotels. (6 marks)
5. (a) Distinguish between 'tenant' and 'tenancy'. (4 marks)
 - (b) Explain **three** ways of maintaining a hygienic catering environment. (6 marks)

SECTION B (50 marks)

MATHEMATICS

Answer question 6 (compulsory) and any other **THREE** question from section B.

6. (a) Two business partners Salim and Amos divided Ksh. 120,000 of the profit realised in the first year in the ratio of 3:5. In the second year they realised Ksh 240,00 profit which they divided such that Amos received the same amount as he had received the previous year. In what ratio did they divide the Ksh 240,000. (4 marks)
- (b) A square has an area of $3\frac{6}{25} m^2$. Determine its perimeter and express your answer in centimetres (cm). (4 marks)
- (c) Solve the equation:
 $3x + 34 - 8x = 11 - 9x - 13$ (4 marks)
- (d) A trader imported a heavy duty cooker worth 10,000 Japanese Yen. If the cooker was subjected to 25% import tax in Kenya, how much was it worth in Kenya shillings, if the exchange rate was Ksh 10.0268 to 100 Japanese Yen at that time. Express your answer to the nearest Kenyan shillings. (4 marks)
- (e) Given that $a = -2$; determine the value of x in the equation:
 $x = \frac{a^3 - 9a}{5a}$ (4 marks)
7. (a) Figure 1 shows a pie-chart that represent hospitality courses enrolled by 4,800 students in various colleges in first year.



Fig. 1

- (i) Determine the number of students who registered for Higher diploma. (4 marks)
- (ii) Using the graph paper provided, represent this information on a bar chart. (6 marks)
8. (a) The mean mark scored by six student in a quiz was 74. If the marks of five of them were 84, 70, 72, 68 and 66, determine:
- (i) the score of the sixth student; (3 marks)
- (ii) state the mode of the data; (1 marks)
- (b) A coin is tossed twice, determine the probability of getting.
- (i) a head followed by a tail. (3 marks)
- (ii) either two heads or two tails. (3 marks)
9. (a) Mary paid Ksh 27,000 for a food mixer after getting 10% discount. The retailer made a profit of 20% on the sale of the item.
- Determine:
- (i) the marked price of the food mixer. (3 marks)
- (ii) the percentage profit the retailer would have realised, if no discount was allowed. (3 marks)
- (b) Without using a calculator determine the number of ways in which a committee of 5 girls and 7 boys can be formed from a group 10 girls and 11 boys. (4 marks)
10. (a) Determine the equation of a straight line whose x -intercept is -4 and y -intercept is 6 , leaving your answer in the form.
- $$ax + by + c = 0$$
- (6 marks)
- (b) Without using a calculator, prove that $\frac{10! - 9!}{8!} = 81$ (4 marks)

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