

2802/102

CATERING PREMISES, EQUIPMENT
AND MATHEMATICS

March/April 2020

Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN FOOD AND BEVERAGE MANAGEMENT
MODULE I

CATERING PREMISES, EQUIPMENT AND MATHEMATICS

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

Answer booklet;

Mathematical tables;

Non-programmable scientific calculator.

This paper consists of TWO sections; A and B.

Answer question ONE (COMPULSORY) and any other THREE questions in section A.

Answer question SIX (COMPULSORY) and any other THREE questions from section B.

All workings must be clearly shown.

Maximum marks for each part of a question are as indicated.

Candidates should answer the questions in English.

This paper consists of 5 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: CATERING PREMISES (50 marks)

Answer question ONE (COMPULSORY) and any other THREE questions from this section.

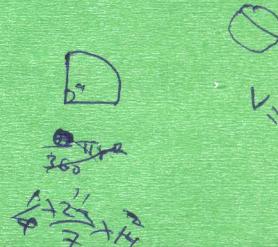
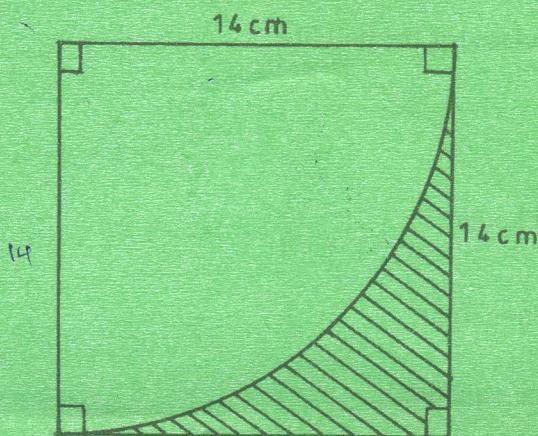
1. (a) Highlight **four** ways of preventing cuts and scratches that are from cutting blades on machines. (4 marks)
 - (b) Explain **two** advantages of using incinerations as a method of waste disposal. (4 marks)
 - (c) State **four** details found on tenancy agreement. *(Handwritten notes: - Fire extinguisher - Gas - Kitchen)* (4 marks)
 - (d) Differentiate between a stop cock and ball valve. *(Handwritten note: safety)* (4 marks)
 - (e) Outline the care of kitchen sink. (4 marks)
2. (a) Elaborate on **two** ways of preventing gas explosion. (4 marks)
 - (b) Outline first aid procedure given to a chef who nose bleeds in the kitchen. (6 marks)
3. As a supervisor, explain **five** ways to ensure staff have a safe working environment. *(Handwritten notes: - Fire extinguisher - Gas - Kitchen - Change room - Personal Protective Equipment)* (10 marks)
4. (a) Distinguish between hazard and safety. *(Handwritten note: Change room)* (4 marks)
- (b) As a supervisor, highlight **six** causes of hazards to kitchen staff. *(Handwritten notes: - Floods - Pollution - Poor storage - Poor handling - Poor cleaning - Poor personal hygiene)* (6 marks)
5. (a) Explain **three** factors that influence maintenance in a catering establishment. *(Handwritten notes: - Good - Clean - Cover)* (6 marks)
- (b) Differentiate between exclusion and sanitation pest control. *(Handwritten notes: - Exclusion - Sanitation)* (4 marks)

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SECTION B: MATHEMATICS (50 marks)

Answer question SIX (COMPULSORY) and any other THREE questions from this section.

6. (a) (i) Solve $x + x + 1 = 53$. (2 marks)
- (ii) Hence determine $(x+1)(x-2)$. (2 marks)
- (b) The level of water in a rectangular tank decreased by 20% in 4 days. If the initial level of water was 250 cm, determine the volume of the water in litres after 4 days given that the base area of the tank is 13.5 m^2 . (4 marks)
- (c) Determine the area of the shaded part in the figure 1. (4 marks)



- (d) A hawker packs oranges in two sizes of baskets. A small basket holds 3 dozen and a big basket holds 5 dozens of oranges. He packed a total of 25 baskets and $\frac{3}{5}$ of the baskets are small. Determine the total number of oranges packed. (4 marks)
- (e) A number is chosen at random from the numbers 2, 3, 4, 5, ... 30. Determine the probability that it is a multiple of 3. (4 marks)
7. (a) Without using a calculator, evaluate:
- $$\frac{22 \times 6! - 36 \times 5!}{8 \times 6!} \quad (4 \text{ marks})$$
- (b) The total school fees paid by Amos, Agot and Rufus in a term was Ksh. 105 420. Amos paid Ksh. $(6x + 120)$. This was a half the amount paid by Agot and twice the amount paid by Rufus. Determine the amount paid by each student. (6 marks)

$$\begin{aligned}
 & \text{Am} = 7 \\
 & \text{Ag} = 7 \\
 & R \\
 & \left. \begin{array}{l} \text{C} \\ \text{105420} \\ \hline \text{420} \end{array} \right\} 105420 \\
 & 6x + 120 + 3x + 60 + 12x + 240
 \end{aligned}$$

8. The heights of 100 seedlings in a research centre are as shown in table 1. Use it to answer the questions that follow.

Height (cm)	No. of Seedlings
152 - 157	5
158 - 163	15
164 - 169	40
170 - 175	24
176 - 181	10
182 - 187	6

- (a) State the modal class for the heights. (1 mark)
- (b) Determine:
- (i) the mean height; (5 marks)
- (ii) the median height. (4 marks)
9. (a) Solve for x in the equation:
- $$x - \frac{(x+1)}{4} = \frac{x-1}{3} \quad (3 \text{ marks})$$
- (b) Three business partners Peter, John and Rose contributed a total of Ksh. 4,800,000 in the ratio of 4:5:7 in order to buy 8 hectares piece of land. The partners set aside 0.25 of the land for social amenities and subdivided the rest in small plots measuring 15 m by 25 m.
- Calculate: $\frac{1}{2} \times 25 \times 15 = 375$ $\therefore 375 \times 8 = 3000$ $\therefore 3000 \times 0.25 = 750$ $\therefore 3000 - 750 = 2250$
- (i) the amount of money contributed by Rose; (3 marks)
- (ii) the number of small plots obtained.
(Take 1 ha = 10,000 m²) (4 marks)

$$\begin{aligned}
 & 4x - 3x - 4x = 4x - 4 \\
 & 2x - 3x - 4x = 4x - 4 \\
 & -5x = 4x - 4 \\
 & 5x = 4x - 4 \\
 & 5x - 4x = -4 \\
 & x = -4
 \end{aligned}$$

10. (a) A straight line with gradient $-\frac{1}{3}$ passes through the point Q whose coordinates is $(3, -4)$. Determine the equation of the line in the form $ax + by + c = 0$. (4 marks)
- (b) Table 2 shows the sizes of aprons worn by 40 second year students in catering department.

Table 2

Size	Small (S)	Medium (M)	Large (L)	Extra Large (XL)
No. of students	6	18	10	6

Represent the information on a pie chart.

(6 marks)

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