Name: _____     Index No:_____ /_____

**2802/102**     Candidate's Signature: _____
**CATERING PREMISES,**
**EQUIPMENT AND MATHEMATICS**     Date:_____
**June/July 2015**
**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

*Write your name and index number in the spaces provided above.*
*Sign and write the date of the examination in the spaces provided above.*
*You should have a Non-programmable scientific calculator for this examination.*
*This paper consist of TWO sections; A and B.*
*Answer question ONE and any other THREE questions in Section A.*
*Answer question SIX and any other THREE questions from Section B in the spaces provided.*
*Show all your workings in section B.*
*Maximum marks for each part of a question are indicated.*
**Candidates should answer the questions in English.**

### For Examiner's Use Only

**SECTION A**

| Question | 1 | 2 | 3 | 4 | 5 | TOTAL SCORE |
|---|---|---|---|---|---|---|
| Candidate's Score | | | | | | |

**SECTION B**

| Question | 6 | 7 | 8 | 9 | 10 | TOTAL SCORE |
|---|---|---|---|---|---|---|
| Candidate's Score | | | | | | |

Grand Total

**This paper consists of 20 printed pages.**
**Candidates should check the question paper to ascertain that**
**all the pages are printed as indicated and that no questions are missing.**

**Turn over**

**SECTION A: CATERING PREMISES** (50 marks)

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

1.  (a)  State **four** qualities of a first aider. (4 marks)

    (b)  Differentiate between stop cock and ball valves. (4 marks)

    (c)  Highlight **four** advantages of using a microwave oven in a catering outlet. (4 marks)

    (d)  State **four** points to consider when choosing fuel. (4 marks)

    (e)  Explain the following types of waste (4 marks)

        (i)  Food waste

        (ii)  Hazardous waste

2.  Explain the uses of the following fire extinguishers:

        (i)  Red (water);

        (ii)  Foam (cream);

        (iii)  Black ($CO_2$);

        (iv)  Blue (dry powder);

        (v)  Water sprinkler. (10 marks)

3.  Outline the procedure of replacing a plug fuse which is not working. (10 marks)

4.  (a)  Explain the meaning of the following terms: (4 marks)

        (i)  hazard;

        (ii)  safety.

    (b)  Explain **three** causes of accidents in a production kitchen. (6 marks)

5.  (a)  Explain the **two** advantages of preventive maintenance plan for a first class establishment. (4 marks)

    (b)  Explain **three** factors influencing types of maintenance in a catering premises. (6 marks)

## SECTION B: EQUIPMENT AND MATHEMATICS (50 marks)

*Answer question **SIX** and any other **THREE** questions in this section.*

6.   (a)    **COMPULSORY**

        (i)      Without using a calculator, evaluate $(-8) + (-5) - (-3) - (+6)$.     (2 marks)

        (ii)     Simplify       $2x - 3y + 4x - 7y$.     (2 marks)

  (b)   Figure 1 shows a square inscribed in a circle. Given that the circle has an area of 153.958 cm², determine the length of the diagonal. (take $\pi = 3.142$)     (4 marks)
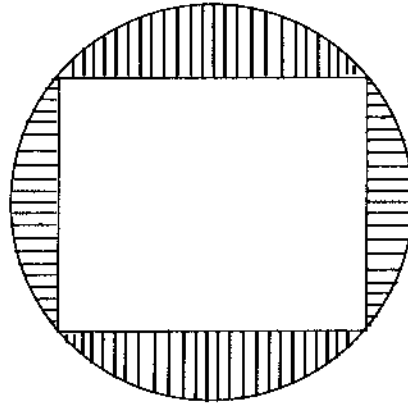


Figure 1

  (c)   A tourist travelled from Entebbe to Nairobi with USh 60,000 in bank notes and Ush 480,000 in form of six travellers cheques of Ush 80,000 each. How much did he receive from the bank in Nairobi if the exchange rate for bank notes is Ush 1 = Ksh 0.08 and travellers' cheque Ush 1 = 0.06?     (4 marks)

  (d)   An employee's annual salary is Ksh 1,280,000. Given that income tax is annually calculated as follows:

| | Income | Rate |
|---|---|---|
| First | 360,000 | 0% |
| Next | 200,000 | 25% |
| the remainder | | 33% |

Calculate the employee's salary after the payment of tax.     (4 marks)

  (e)   In a particular day in a town in Europe, the temperature dropped by 10°C in the morning, increased by 15°C at noon and dropped by 11°C in the evening. If the initial temperature was 4°C in the morning, determine the temperature of the town by the end of the day.     (4 marks)

7. (a) A trader deals in two types of rice, type A and type B. The trader buys type A at Ksh 4000 per bag and type B at Ksh 3500 per bag. The trader mixes 30 bags of type A with 50 bags of type B. He sells the mixture at a profit of 20%. Calculate the selling price of one bag of the mixture. (6 marks)

(b) A research done on household shows that consumption of wheat flour per month varies inversely as their prices and directly as the size of the household. In a family of four, 40 kg of wheat flour were consumed when the price was Ksh 105. Determine the amount of flour that a family of six would consume given that the price is Ksh 120. (4 marks)

8. Table 1, shows the ages in years of 60 people who attended a conference.

| Age in years | 30-39 | 40-49 | 50-59 | 60-69 | 70-79 |
|---|---|---|---|---|---|
| Number of people | 10 | 12 | 18 | 17 | 3 |

Table 1

Calculate:

(a) the mean age, (5 marks)

(b) the standard deviation. (5 marks)

9. A class is to nominate one girl and one boy to be their representative. The girl is choosen from Nafula, Nekesa, Aluma and Wairimu and the boy from Omagi, Ondieki, Omari and Nyakundi. Use a tree diagram to determine:

(a) the probability that Nafula and Nyakundi will be chosen; (8 marks)

(b) the probability that neither Aluma nor Nyakundi will be chosen. (2 marks)

10. (a) Outline **four** sources of errors in sampling. (4 marks)

(b) State **two** circumstances under which each of the following sampling methods are used:

(i) simple; (2 marks)

(ii) stratified; (2 marks)

(iii) Cluster. (2 marks)