

1802/102 ; 1819/102 ;  
1907/102  
FOOD SCIENCE AND NUTRITION  
June/July 2023  
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL  
CRAFT CERTIFICATE IN CATERING AND ACCOMMODATION  
CRAFT CERTIFICATE IN FOOD AND BEVERAGE PRODUCTION AND  
SERVICE  
CRAFT CERTIFICATE IN BAKING TECHNOLOGY

MODULE I

FOOD SCIENCE AND NUTRITION

3 hours

INSTRUCTIONS TO CANDIDATES

*You should have the following for this examination:*

*Answer booklet;*

*This paper consists of TWO sections; A and B.*

*Answer ALL the questions in section A and any THREE from section B 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 3 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 (55 marks)**

*Answer ALL the questions in this section.*

1. Explain the meaning of each of the following terms
  - (i) calorie; (2 marks)
  - (ii) hydrolysis. (2 marks)
  - (iii) deamination. (2 marks)
2. Highlight **three** symptoms of kwashiokor in children. (3 marks)
3. State **three** uses of fats in food production. (3 marks)
4. Highlight **four** effects of heat on vitamins. (4 marks)
5. Elaborate **four** benefits of dietary fibre in the body. (4 marks)
6. Highlight **three** types of information that a baker should include on a cake packaging. (3 marks)
7. Enumerate **four** uses of recommended dietary allowance (RDA) by pregnant mothers. (4 marks)
8. Highlight **three** negative effects of food additives to the human body. (3 marks)
9. Enumerate **three** types of foods with high risk of food poisoning. (3 marks)
10. Highlight **three** measures taken to prevent the presence of aflatoxins in foods. (3 marks)
11. State **four** hygiene precautions a pastry chef should observe when preparing cakes. (3 marks)
12. Highlight **three** reasons for measuring pH during food processing. (3 marks)
13. Identify **five** vitamins that make up vitamin B complex group. (5 marks)
14. State **four** problems an overweight person may suffer. (4 marks)
15. Highlight **four** indicators of good quality green vegetables. (4 marks)



**SECTION B (45 marks)**

*Answer any **THREE** questions from this section.*

11. (a) Differentiate between soluble and insoluble fibre. (4 marks)
- (b) Highlight the HACOP principles that must be implemented by bakers. (5 marks)
- (c) Describe **two** types of carbohydrates. (6 marks)
17. (a) Highlight **three** functions of proteins in the body. (3 marks)
- (b) Explain **three** benefits of good nutrition. (6 marks)
- (c) Explain **three** classification of food additives used in food production. (5 marks)
18. (a) Highlight four effects of vitamin A deficiency in the body. (4 marks)
- (b) Highlight **three** signs of food spoilage. (6 marks)
- (c) Outline **five** steps to take to handle a case of cholera outbreak in a catering establishment. (5 marks)
19. (a) Giving an example in each case, identify **three** types of sugars found in carbohydrates. (3 marks)
- (b) Highlight **four** functions of water in the body. (4 marks)
- (c) Explain **four** principles of food preservation. (8 marks)
20. (a) Highlight **six** signs of protein-calorie malnutrition in adults. (6 marks)
- (b) State **five** properties of monosachrides sugars. (5 marks)
- (c) Explain the following methods of food preservation;
- (i) Dehydration. (2 marks)
- (ii) Chilling. (2 marks)

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