

Name: \_\_\_\_\_

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1507/112

1907/102

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FOOD SCIENCE AND NUTRITION

June/July 2012

Time: 3 hours

Candidates Signature: \_\_\_\_\_

Date: \_\_\_\_\_



THE KENYA NATIONAL EXAMINATIONS COUNCIL

**CRAFT CERTIFICATE IN BAKING TECHNOLOGY**  
**CRAFT CERTIFICATE IN FOOD AND BEVERAGE PRODUCTION, SALES**  
**AND SERVICE**  
**CRAFT CERTIFICATE IN CATERING AND ACCOMMODATION**

**MODULE I**

FOOD SCIENCE AND NUTRITION

3 hours

**INSTRUCTIONS TO CANDIDATES**

*You should have the following for this examination:*

*Answer space provided from page 7 of this question paper;*

*Mathematical table/Scientific calculator (fx 82).*

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

*Answer ALL the questions in Section A and any THREE questions from section B in the spaces provided.*

*Marks for each question are as indicated.*

**For Examiner's Use Only**

Section	Questions	Maximum Score	Candidate's Score
A	1 - 15	55	
B		15	
		15	
		15	
Total Score			

**This paper consists of 12 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 on the spaces provided after each question.*

1. Explain **two** reasons for spoilage of canned food. (4 marks)

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2. (a) Identify **three** methods of freezing used in food preservation. (1½ marks)

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- (b) Identify **three** classes of digestive enzymes. (1½ marks)

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3. State **four** properties of sugar. (4 marks)

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4. Describe the following types of protein:

- (i) complete protein; (2 marks)

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- (ii) incomplete protein. (2 marks)

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5. Identify **six** classes of food commodities. (4½ marks)

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6. Explain the meaning of the following terms:

- (i) food additives. (2 marks)

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- (ii) food poisoning. (2 marks)

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7. Identify **five** critical points of food contamination at various stages. (5 marks)

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8. Explain the meaning of the following terms:

- (i) healthy carriers. (2 marks)

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(ii) convalescent carriers.

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9. (a) Explain the meaning of the term digestion.

(1 mark)

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(b) Identify four digestive glands.

(4 marks)

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10. (a) Describe goitre.

(3 marks)

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(b) State two causes of goitre.

(2 marks)

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11. Identify six good sources of *niacin* in the diet.

(4½ marks)

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12. State **four** properties of starch. (4 marks)

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13. State the **three** functions of fat stored in the adipose tissue. (3 marks)

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14. Identify **three** functions of water in the body. (3 marks)

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15. State **three** roles of dietary fibre in food digestion. (3 marks)

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**SECTION B (45 marks)**

*Answer any **THREE** questions from this section on the space lines provided after question 20.*

16. (a) Describe the following lipids and give **two** examples in each case.
- (i) compound lipids. (3 marks)
  - (ii) derived lipids. (3 marks)
- (b) Describe **three** undesirable effects of enzymes in food processing. (9 marks)
17. (a) (i) Explain the cause of rickets in children. (2 marks)
- (ii) State **seven** symptoms of rickets in children. (7 marks)
- (b) Describe **three** changes which take place in an egg during storage. (6 marks)
18. (a) Explain **two** means of ascertaining the energy needs of a person. (4 marks)
- (b) State **five** functions of vitamin A in the body. (5 marks)
  - (c) State **six** measures taken to control houseflies in a food workshop. (6 marks)
19. (a) State **four** effects of heating milk. (4 marks)
- (b) Highlight **five** measures taken to control air contamination in a food workshop. (5 marks)
  - (c) Explain **three** causes of chemical food poisoning. (6 marks)
20. (a) State **four** factors considered when buying bacon. (4 marks)
- (b) Illustrate and label the structure of a wheat grain. (5 marks)
  - (c) Explain **two** roles played by pH in food processing. (6 marks)