

1903/105  
FOOD PROCESSING AND  
PRESERVATION I  
Oct./Nov. 2022  
Time: 3 hours



**THE KENYA NATIONAL EXAMINATIONS COUNCIL**

**CRAFT CERTIFICATE IN FOOD PROCESSING AND PRESERVATION  
TECHNOLOGY**

**MODULE I**

**FOOD PROCESSING AND PRESERVATION I**

**3 hours**

**INSTRUCTIONS TO CANDIDATES**

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

*Answer ALL the questions in section A and any TWO questions from section B in the answer booklet provided.*

*Each question in section A carries 4 marks while each question in section B carries 20 marks.*

*Maximum marks for each part of a question are as shown.*

*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 (60 marks)**

*Answer ALL the questions in this section.*

1. Name **four** methods of exhausting cans during a canning process . (4 marks)
2. Explain the significance of **stunning** animals before slaughter. (4 marks)
3. With the aid of a diagram, describe the operation of screw press in fats and oils processing. (4 marks)
4. Determine the volume of ice cream mixture used to make 2800 litres of ice cream of 80% overrun. (4 marks)
5. State **four** ways through which NaCl effects food preservation. (4 marks)
6. State **four** types of faults committed during the production of cooked sausages. (4 marks)
7. Explain the significance of peroxide value in the processing of fats and oils. (4 marks)
8. With the aid of a diagram, describe the operation of a cabinet dryer in food preservation. (4 marks)
9. Name **four** ingredients used in the manufacture of ripened cheese. (4 marks)
10. State **four** advantages of aluminium foils as materials used in food packaging. (4 marks)
11. Differentiate between monounsaturated and polyunsaturated fatty acids. (4 marks)
12. State **four** functions of meat extenders in the meat processing industry. (4 marks)
13. Explain each of the following:
  - (a) catalytic hardening as used in fats and oils processing; (2 marks)
  - (b) overrun as applied in ice cream processing. (2 marks)
14. State **four** factors which determine the amount of heat required to produce a commercially sterile canned food product. (4 marks)
15. Name **four** methods of increasing tenderness in meat during processing. (4 marks)

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**SECTION B (40 marks)**

*Answer any TWO questions from this section.*

16. (a) Mr. Amani, the quality control supervisor at mafuta edible oils refineries noticed that the free fatty acid content and the peroxide value of received oil are rising rapidly during storage. State **four** possible causes of this occurrence. (4 marks)
- (b) State **six** recommendation on remedial measures need to be taken by the supervisor to address the occurrence in (a) above. (6 marks)
- (c) Describe chemical bleaching as applied in the processing of fats and oils. (10 marks)
17. (a) Describe **five** qualities of a fresh fish. *should be red in colour* (5 marks)
- (b) State **six** factors which contribute to faster spoilage of fish. *Temperature, Humidity, Light, Air, Time, and Handling* (6 marks)
- (c) Outline the steps involved in the manufacture of coarsely chopped fresh sausages. (9 marks)
18. (a) Describe the procedure for processing of renneted cheddar cheese. (14 marks)
- (b) State six objectives of ripening in cheese processing. (6 marks)
19. (a) Explain **four** roles of starter cultures in the manufacture of yoghurt. (8 marks)
- (b) Discuss each of the following:
- (i) features of spoiled canned food; *Taste, Colour, Odour* (6 marks)
- (ii) causes of spoilage in canned food. *Temp, moisture* (6 marks)

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