

1409/315
TRADE PRACTICE
June/July 2019
Time: 6 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

CRAFT CERTIFICATE IN FISHERIES TECHNOLOGY

TRADE PRACTICE

INSTRUCTIONS TO CANDIDATES

1. *You should have the following for this examination:*
 - Answer booklet
 - Four pieces of Nile Perch fish
 - One (1 metre) rule
 - One (30 cm) rule
 - A fish scaler
 - A filleting board/tray
 - 10 labels
 - A stop watch
 - Filleting knife
 - Weighing balance
2. *This paper consists of FIVE sections, A to E.
Answer all the questions in each section.
Appropriate maximum time and marks for each section is indicated.
The whole practical carries 100 marks.*
3. *Candidates are advised to read the instructions given carefully to ensure that each step in the procedure is followed.*
4. *Candidates are advised to spend the first 15 minutes to read through the whole paper and organise themselves and ensure that all materials required are available.*

This paper consists of 4 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 (15 minutes)

1. Procedure on the set up of the experiment.
 - (a) Label the fish samples as A_1 , A_2 , A_3 and A_4 .
 - (b) Weigh each of the fish samples separately and record the weights in kilograms (kg).
 - (c) Measure the total length of each of the fish samples and record the measurement in centimetres (cm).

(10 marks)

SECTION B (2 hours 20 minutes)

2. Procedure on sample A_1 .
 - (a) Place A_1 flat on the filleting board.
 - (b) Place breadthwise, the blunt edge of the filleting knife against the anterior portion of the body of A_1 across the region of the pectoral fins.
 - (c) Measure and record in millimetres (mm) the section/portion of the blunt edge of the knife that is in contact with the skin of A_1 .
 - (d) Hold A_1 firmly (still on the filleting board) by the tail.
 - (e) Using the blunt edge of the knife, remove the scales firmly and gently from A_1 starting from the tail to the head, timing yourself. Record the time taken to scale A_1 .
 - (f) Collect all the scales.
 - (g) Weigh and record the weight of scales from A_1 in grams.
 - (h) Weigh A_1 after scaling and record its weight in kg.
3. Repeat procedure 2 above using sample A_2 .

(26 marks)

SECTION C (2 hours 20 minutes)

4. Procedure on sample A_3 .
- (a) Place A_3 flat on the filleting board.
 - (b) Place breadthwise, the fish scales against the anterior portion of the body of A_3 across the region of the pectoral fins.
 - (c) Measure and record in mm the section/portion of the fish scales that is in contact with the skin of A_3 .
 - (d) Hold A_3 firmly (still on the filleting board) by the tail.
 - (e) Using the fish scaler, remove the scales firmly and gently from A_3 starting from the tail to the head, timing yourself. Record the time taken to scale A_3 .
 - (f) Collect all the scales.
 - (g) Weigh and record the weight of the scales from A_3 in grams.
 - (h) Weigh A_3 after scaling and record its weight in kg.
5. Repeat procedure 4 above using sample A_4 .

(26 marks)

SECTION D (40 minutes)

6. Procedure for assessing performance of fish scaling tools.
- (a) Calculate the means of the results obtained in:
 - (i) 2c and 3c;
 - (ii) 4c and 5c.
 - (b) Calculate the difference between the two means in 6(a) above and comment on your answer.
 - (c) Calculate the means of the results obtained in:
 - (i) 2e and 3e;
 - (ii) 4e and 5e.

- (d) Calculate the difference between the two means in 6(c) above and comment on your answer.
- (e) Calculate the mean weights of
- (i) A_1 and A_2 before scaling;
 - (ii) A_3 and A_4 before scaling.
- (f) Calculate the mean weights of scales obtained from:
- (i) A_1 and A_2 ;
 - (ii) A_3 and A_4 .
- (g) Calculate the mean percentage scales yield obtained when using the knife and when using the fish scaler. Comment on your answer.

(30 marks)

SECTION E (10 minutes)

7. Interpretation and practical applications.

- (a) Explain the following:
- (i) reason why the blunt edge of the knife was used for scaling other than the sharp edge;
 - (ii) advantages of the fish scaler over the knife in scaling fish.
- (b) From the results, outline economic benefits of using the fish scaler in a fish processing establishment.

(8 marks)

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