

1409/315
TRADE PRACTICE
Oct./Nov. 2021
Time: 6 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

CRAFT CERTIFICATE IN FISHERIES TECHNOLOGY

TRADE PRACTICE

6 hours

INSTRUCTIONS TO CANDIDATES

- You should have the following for this practical examination:*
 - Answer booklet
 - Five fish specimens labelled Group A specimens
 - Five fish specimens labelled Group B specimens
 - Measuring board
 - Dissecting board
 - Dissecting kit
 - Weighing scale of 0.1 g sensitivity
 - Non-programmable scientific calculator
 - 30 cm long thread
 - 2 marker pens
 - 20 labels
 - Clock/watch
 - Ruler
 - Aluminium foil
 - Hand towel
- This paper consists of TWO sections: A and B.
Answer all the questions.
Indicate all your calculations and answers in the answer booklet provided.
Total marks for the whole practical is 100 marks.*
- Candidates are advised to spend the first 20 minutes to read through the whole paper, 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 (73 marks)

This section should run for 4 hours.

PART I (36 marks)

1. Mark Group A specimens, distinguishing them as A_1, A_2, A_3, A_4 and A_5 .
2. Measure and record the following parameters from Group A specimens. Record your results in the format shown in table I.
 - ✓(a) Standard length (SL) in mm
 - ✓(b) Depth (D) in mm
 - ✓(c) Whole body weight (W) in grams
 - ✓(d) Mouth gape (G) in mm
3. ✓(a) Carefully remove the gills from one side of specimen A_1 .
 - ✓(b) Count the number of gill arches and record your results in column GA of table I
 - ✓(c) Count the number of gill rakers on the first gill arch and record your results in column GR of table I
 - ✓(d) Measure and record gill aperture (in mm) of the first gill arch in column GAP of table I

Table I: Table format for recording observations on Group A specimens

Specimens	SL	D	W	G	GA	GR	GAP	GL	$\frac{GL}{SL} \%$	$\frac{G}{GR} \%$	$\frac{SL}{W}$	$\frac{GR}{GA} \%$
A_1												
A_2												
A_3												
A_4												
A_5												
Mean Value												

4. (a) ✓ Dissect specimen A_1 from the ventral side to obtain entire gut.
 210 (b) Stretch out the gut, measure the total gut length (in mm) and record your results in column GL of table I.
5. Repeat entire procedure 3 and 4 using specimens A_2 and A_3 .

PART II (37 marks)

6. Repeat the entire procedure in Part I above using Group B specimens and tabulate your results in the format shown in Table II.

Table II: Table format for recording observations on Group B specimens

Specimens	SL	D	W	G	GA	GR	GAP	GL	$\frac{GL}{LS}\%$	$\frac{G}{GR}\%$	$\frac{SL}{W}$	$\frac{GR}{GA}\%$
B_1												
B_2												
B_3												
B_4												
B_5												
Mean Value												

SECTION B (27 marks)

This section should run for 1 hour 40 minutes.

7. Using specimens A_1 , A_2 and A_3 , calculate and record the following in appropriate columns in Table I.
- (a) GL as a percentage of LS;
 - (b) G as a percentage of GR count;
 - (c) Quotient of SL and W;
 - (d) GR count as a percentage of GA;
 - (e) Calculate and record mean values for parts (a), (b), (c) and (d).

(10 marks)
 Turn over

8. Repeat entire procedure 7 using specimens B₁, B₂ and B₃ and record your results in Table II format. (10 marks)
9. Compare the values of the following parameters from tables I and II.
- (a) $\frac{SL}{W}$ (1 mark)
- (b) $\frac{GR}{GA} \%$ (1 mark)
10. Based on your observations in procedures 3, 4 and 7, distinguish food items of Group A and B specimens in terms of particle size and nature. (2 marks)
11. State the ideal size of mesh required for gill-netting:
- (a) μ specimen A₅ (1 mark)
- (b) μ specimen B₄ (1 mark)

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