

Name: Index No:...../.....

231/3
BIOLOGY
 Paper 3
 (PRACTICAL)
 Oct./Nov. 2011
 1¾ hours

Candidate's Signature:.....

Date:.....

THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education
BIOLOGY
Paper 3
(PRACTICAL)
 1¾ hours

Instructions to Candidates

1. Write your name and index number in the spaces provided above.
2. Sign and write the date of examination in the spaces provided above.
3. Answer *all* the questions in the spaces provided.
4. You are required to spend the first 15 minutes of the 1¾ hours allowed for this paper reading the whole paper carefully before commencing your work.
5. Additional pages must *not* be inserted.
6. This paper consists of 8 printed pages.
7. Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

For Examiner's use only

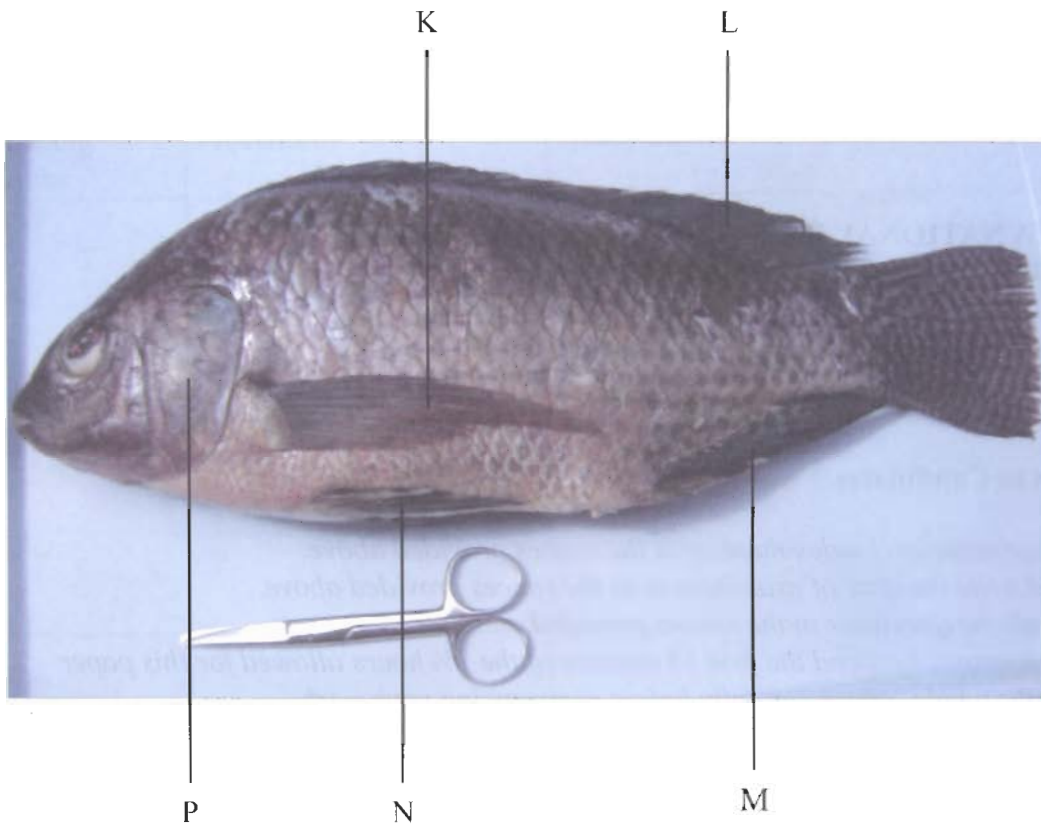
Question	Maximum score	Candidate's Score
1	16	
2	15	
3	9	
Total Score	40	



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**Turn over**

1 Below is a photograph of a fish. Examine it and answer the questions that follow.



(a) Name the parts labelled K, L, M and N. (4 marks)

- K
- L
- M
- N

(b) The actual length of the pair of scissors next to the fish is 12.5cm. Using this information, calculate the actual length of the fish. (3 marks)

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.....

.....

(c) Name the fins that prevent the following movements of fish during swimming. (3 marks)

(i) Yawing:

(ii) Pitching: and

(d) The photograph below shows structures visible after removing the part labelled P. The inset is a magnified view of one of the structures.



(i) Name the parts labelled R, S and T. (3 marks)

R

S

T

- (ii) Explain how each of the parts named in (d) (i) above is adapted to its function. (3 marks)

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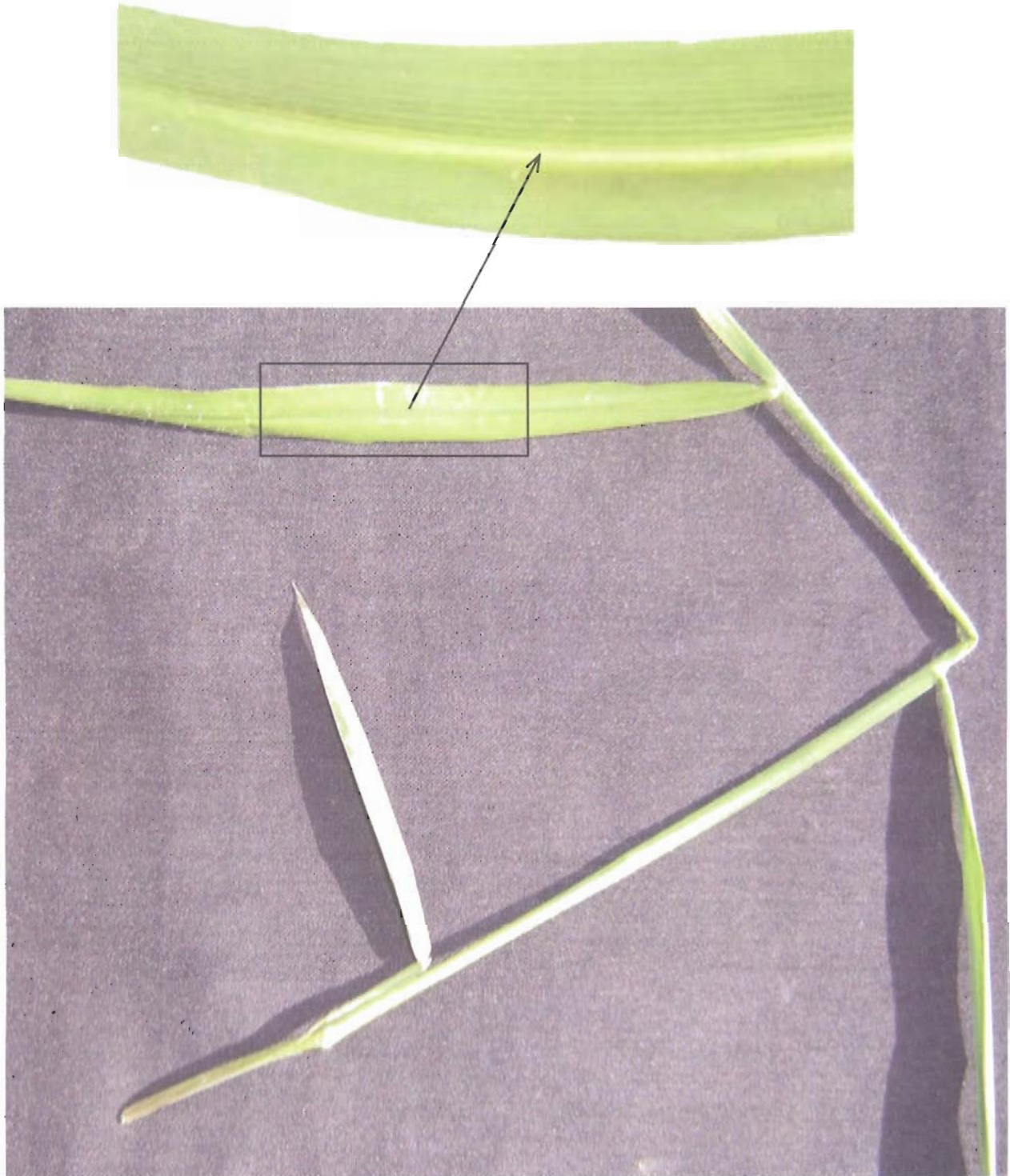
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- 2 The photographs labelled D and E show two types of leaves.



PHOTOGRAPH D



PHOTOGRAPH E

- (a) With a reason, state the classes of plants from which the leaves in Photographs D and E were obtained. (4 marks)

Photograph D

Reason

Photograph E

Reason

- (b) State three features in the leaf shown in photograph D that adapt it to its functions. (3 marks)

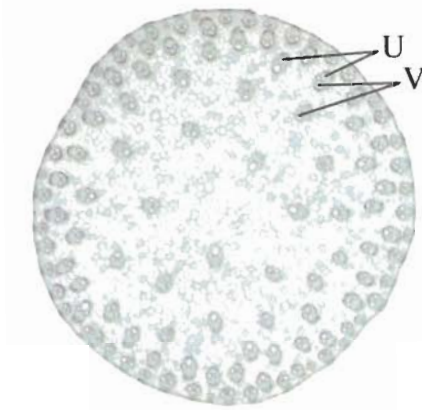
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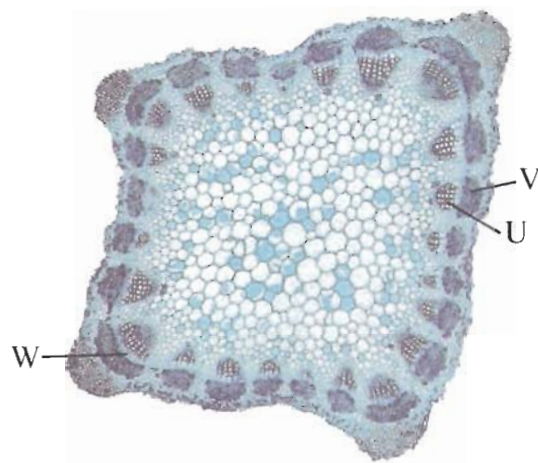
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- (c) The photographs below show the structures observed in cross sections of parts of two types of plants as seen under a light microscope.



PHOTOGRAPH F



PHOTOGRAPH G

- (i) Name the parts labelled U, V and W. (3 marks)

U

V

W

- (ii) Identify **five** differences between cross sections F and G and record them in the table below. (5 marks)

Cross Section F	Cross Section G
.....
.....
.....
.....
.....
.....
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- 3 You are provided with a sample of food labelled **X** in solution form, solution **J** (Iodine solution), solution **K** (Benedict's solution) and solution **L** (Biuret's reagent). Carry out tests on the food sample to identify the type of food substances present. (9 marks)

Food being tested for	Procedure	Observations	Conclusion

THIS IS THE LAST PRINTED PAGE.