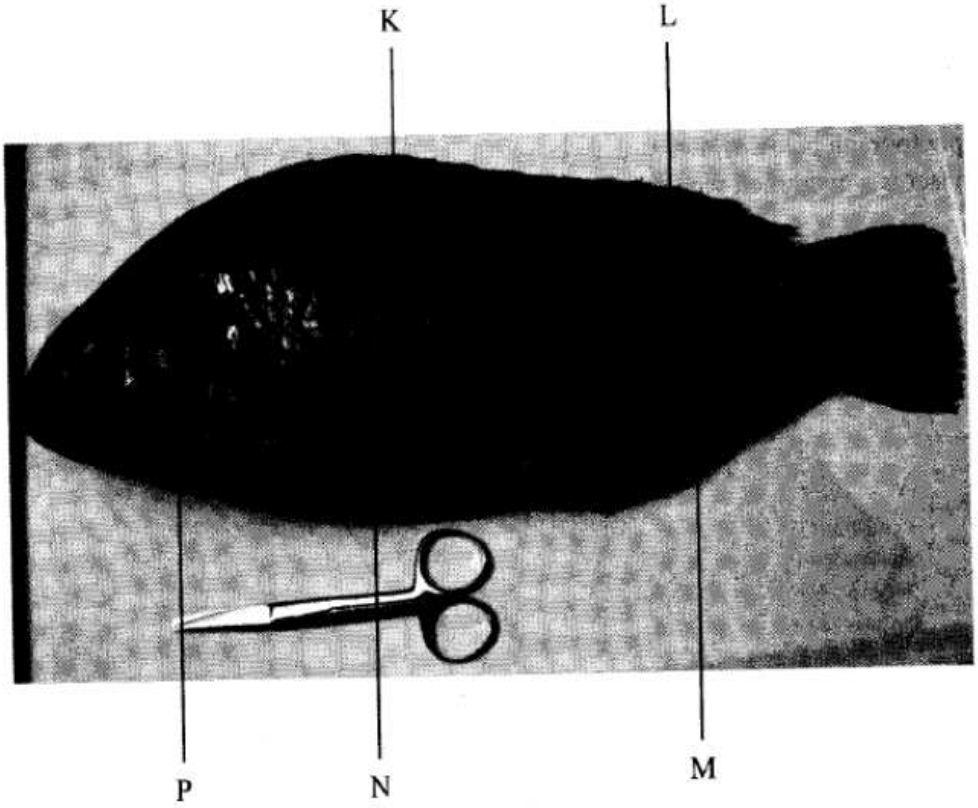
2.1.3 Biology Paper 3 (231/3)

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)

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

(i) Yawing: .....

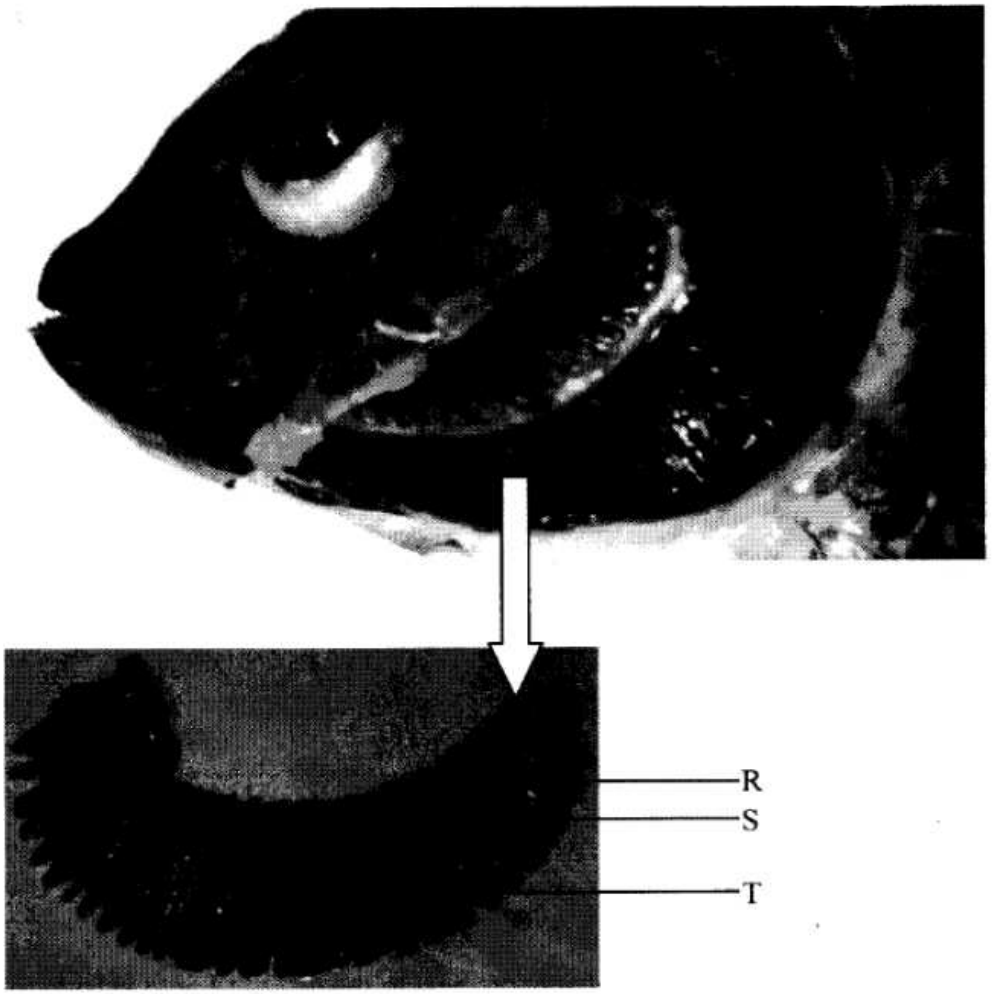
(ii) Pitching: ..... and .....

(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)

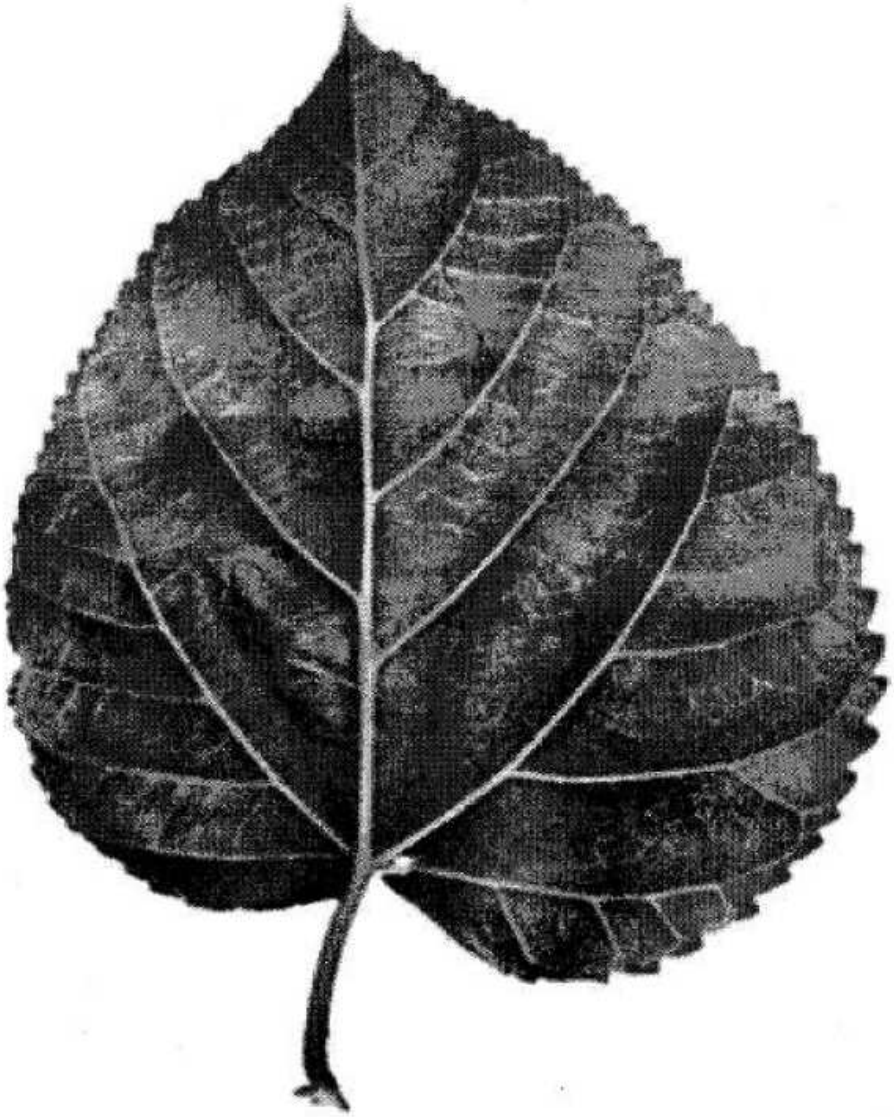
R .....

S .....

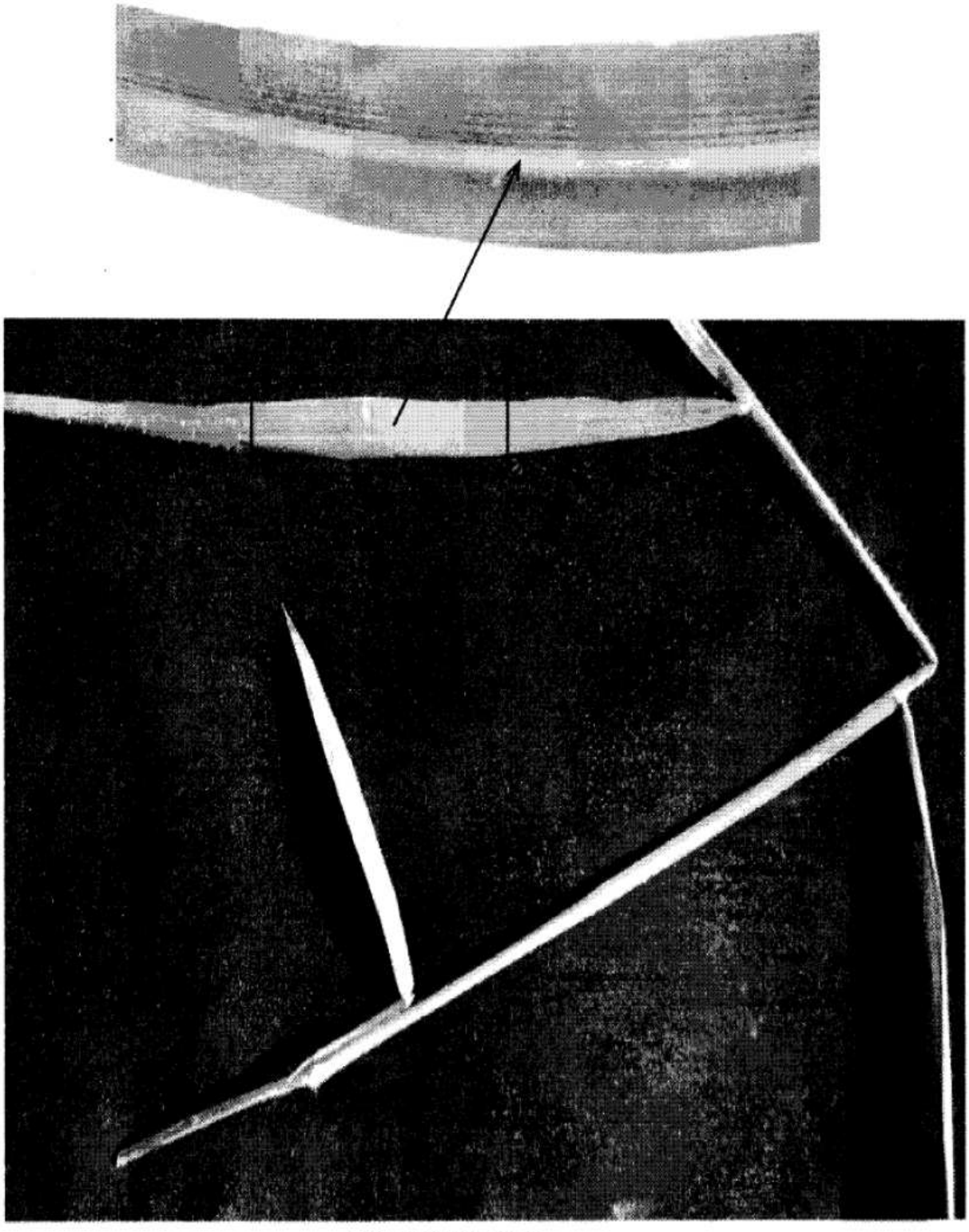
T .....

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

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 .....

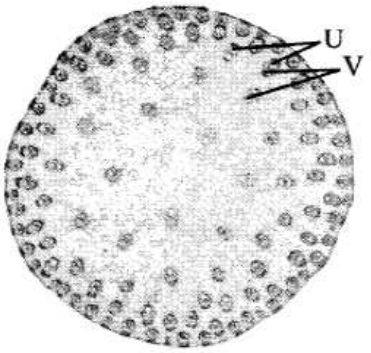
Reason .....

Photograph E .....

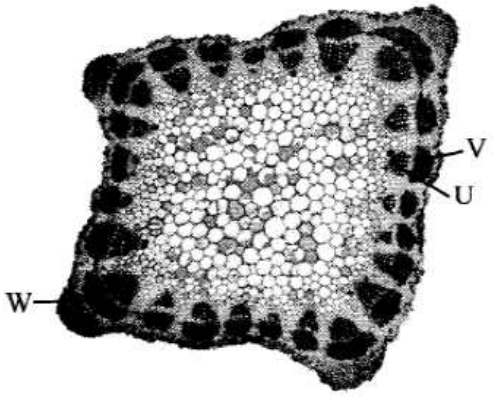
Reason .....

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

(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 .....

(b) State the function of the part labelled B. (1 mark)

28 (a) What is a tropic response? (1 mark)

(b) State **two** ways by which auxins regulate growth in seedlings. (2 marks)

29 State **four** reasons why water is significant in seed germination. (4 marks)

(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
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

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 mark

Food being tested for	Procedure	Observations	Conclusion