

29.4.3 Biology Paper 3

Name Index Number/.....

231/3
BIOLOGY
Paper 3
(PRACTICAL)
Oct./Nov. 2008
1³/₄ hours

Candidate's Signature

Date

THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education
BIOLOGY
Paper 3
(PRACTICAL)
1³/₄ hours

Instructions to candidates

Write your name and index number in the spaces provided at the top of this page.

Sign and write the date of examination in the spaces provided above.

*Answer **ALL** the questions.*

You are required to spend the first 15 minutes of the 1³/₄ hours allowed for this paper reading the whole paper carefully before commencing your work.

Answers must be written in the spaces provided in the question paper.

*Additional pages must **not** be inserted.*

For Examiner's Use Only

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

This paper consists of 7 printed pages.

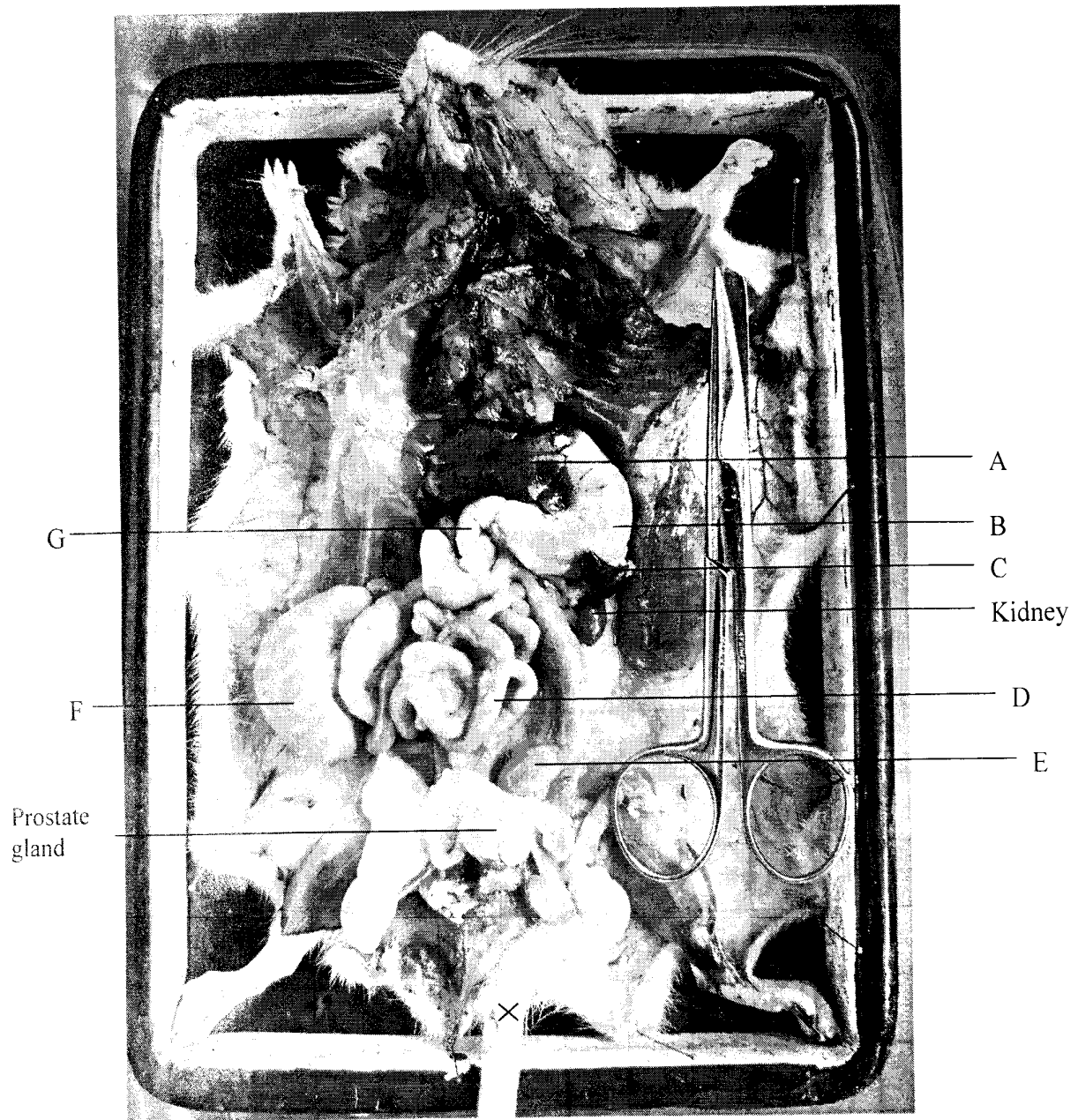
Candidates should check the question paper to ascertain that all the pages are printed as indicated and no questions are missing.

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Turn over

8141

1 Below is a photograph of a dissected mammal. Examine the photograph.



- (a) Name the parts labelled **A**, **B**, **C**, **D** and **G**. (5 marks)

A.....

B.....

C.....

D.....

G.....

- (b) State the function of the structures labelled **E** and **F**.

E..... (1 mark)

F

- (c) In the photograph label the structure where vitamin K is produced. (1 mark)

- (d) (i) Name the sex of the mammal in the photograph. (1 mark)

- (ii) Give a reason for your answer in (d) (i) above. (1 mark)

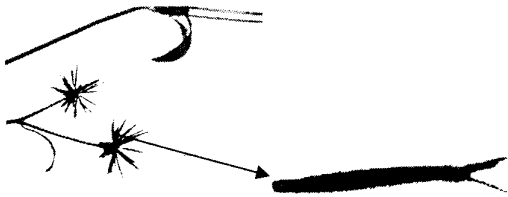
- (e) (i) The actual length of the dissecting scissors in the photograph is 15 cm.
Calculate the magnification of the photograph. (2 marks)

- (ii) Calculate the actual length of the mammal from the tip of the nose to point **X** on the tail. (2 marks)

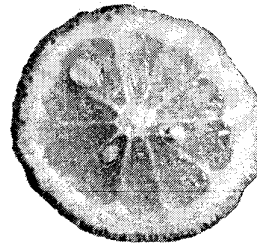
- 2 You are provided with substances labelled **S**, **T**, **U**, **X** and **Y**. **S**, **T** and **U** are food substances, while **X** is 10% sodium hydroxide solution and **Y** is 1% copper sulphate solution. Carry out tests to determine the food substance(s) in **S**, **T** and **U**. (9 marks)

| Substance | Food substance being tested for | Procedure | Observations | Conclusion |
|-----------|---------------------------------|-----------|--------------|------------|
|-----------|---------------------------------|-----------|--------------|------------|

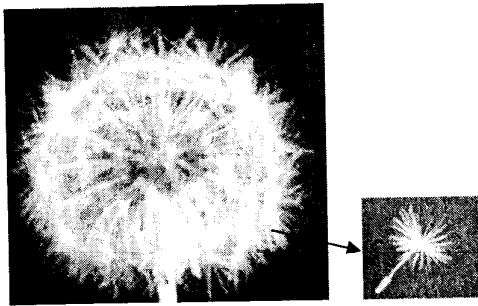
- 3 Below are photographs of specimens obtained from plants. Examine the photographs.



SPECIMEN K



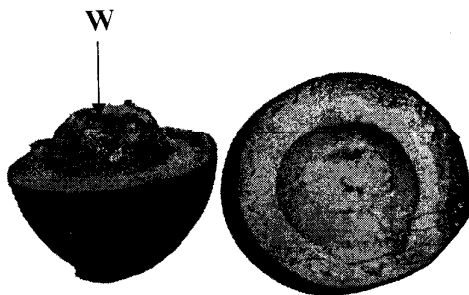
SPECIMEN L



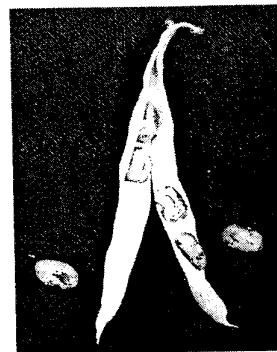
SPECIMEN M



SPECIMEN N



SPECIMEN P



SPECIMEN Q

- (a) In the table below name the mode of dispersal and the features that adapt the specimen(s) to that mode of dispersal. (12 marks)

| Specimen | Mode of dispersal | Adaptive features |
|----------|-------------------|-------------------|
| K | | |
| L | | |
| M | | |
| N | | |
| P | | |
| Q | | |

- (b) (i) Label any **two** parts on specimen **L**. (2 marks)
- (ii) State the type of placentation in specimen **L**. (1 mark)
- (c) Name the structure labelled **W** on specimen **P**. (1 mark)