

Name: Registration Number: Class

231/3

BIOLOGY

1¾ hours

TRIAL 6

2018

FORM THREE

Kenya Certificate of Secondary Education (KCSE)

Instructions to Candidates

- (a) Write your name and registration number in the spaces provided above.
- (b) Answer **all** the questions in section A in this paper.
- (c) 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.
- (d) Additional pages must not be inserted.
- (e) This paper consists of 5 Printed pages.
- (f) 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

Questions	Maximum Score	Candidate's Score
1	12	
2	14	
3	14	
Total Score	40	

1. You are provided with

- Liquid cooking oil
- B₁
- B₂
- Irish potato

Label two test tubes X and Y. Into each test tube, put 2 cm³ of water and 8 drops of liquid cooking oil. To the test tube labeled X add 8 drops of liquid B₁, shake both test tubes and allow the content to stand for 2 minutes

(a) (i) Record your observations in (2 marks)

Test tube X

Test tube Y

(ii) Name the process that has taken place in test-tube X (1 mark)

(iii) State the significance of the process named in a (ii) above in digestion (1 mark)

(iv) Name the digestive juice in humans that has the same effect on oil as liquid B₁ (1 mark)

(v) Name the region in the digestive system into which the juice is secreted (1 mark)

(b) Label two test tubes E and F. Place 2 cm³ of liquid B₂ into each. Add a drop of iodine solution into each test tube.

(i) Record your observation (1 mark)

(ii) Suggest the identity of liquid B₂ (1 mark)

(iii) Cut out a cube whose sides are 1 cm from the Irish potato provided. Crush the cube to obtain a paste and place the paste in the test tube labeled E. Leave the set up for at least 30 minutes.

Record your observation (2 marks)

Contents of test tubes F after 30 min

Contents of test tube E after 30 min

(iv) Account for the results in b (iii) above.

(1 marks)

(c) (i) Cut out another cube whose sides are 1cm from the Irish potato and crush it. Place the crushed paste into a test tube. Carry out food test with the reagent provided. Record the procedure and results.

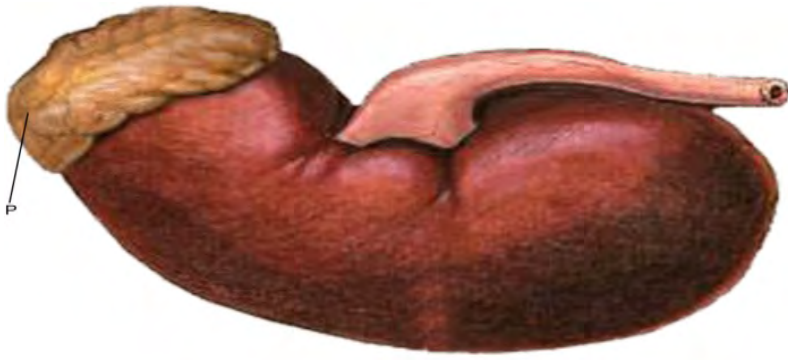
(2 marks)

Food being tested	Procedure	Observation	Conclusion

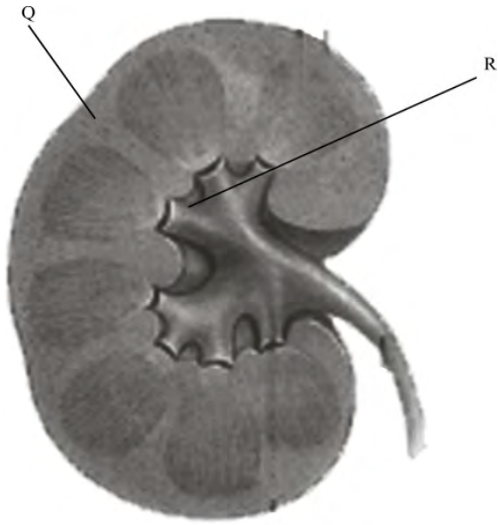
(ii) Account for the results in (c) (i) above.

(3 marks)

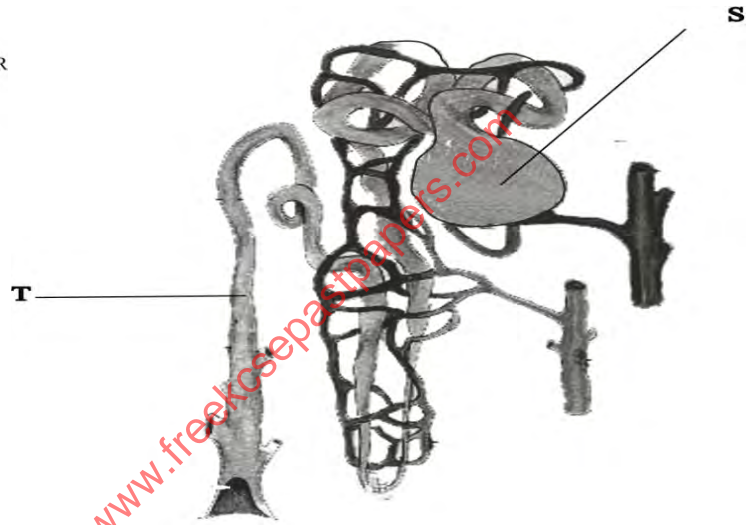
Q 2. The photographs labelled J, K and L are all related to mammalian kidney.



J-KIDNEY



K-Section of Kidney



L - Nephron

(a) Name the hormone produced by the structure labelled P. (1 mark)

(b) Name the parts labelled Q, R and T. (3 marks)

Q

R

T

(c) State the process by which wastes are filtered from blood in the structure labelled S. (1 mark)

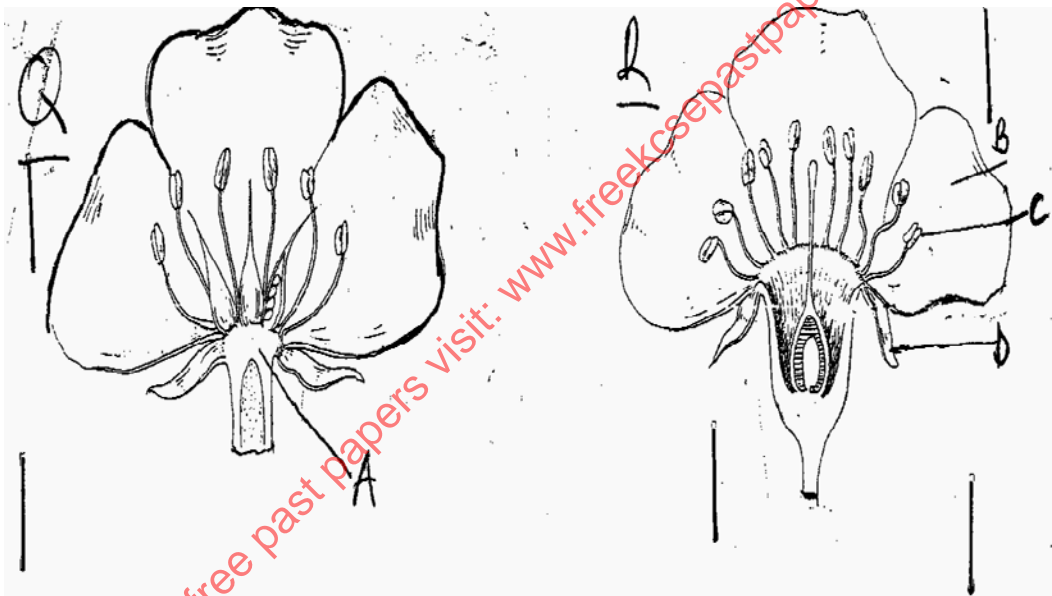
(d) (i) Give two components of blood that are not filtered at structure S. (2 marks)

(ii) Give reason why the components you have named in d (i) above are not filtered. (2 marks)

(e) Give two nutrients reabsorbed at the part labelled S. (2 marks)

(f) What two adaptations would be expected in the structure L in a desert animal like a camel. (2 marks)

3. Below are drawings of specimens from plants. Study them and answer the questions that follow



a) What is the role of the specimens to the plants. (1 mark)

b) Differentiate the specimen Q from specimen R. (2 marks)

c) Label the parts labelled C and D (2 mark)

C

D

d) Explain what happens to the floral structures after fertilization. (4 marks)

e) With a reason state the class of plants from which the specimens were obtained. (2 marks)

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