

Name..... Index Number.....

Student's Signature.....

231/3

BIOLOGY

PAPER 3

PRACTICAL

JUNE, 2016

1 ¾ HOURS

KASSU JOINT EXAMINATION

Kenya Certificate of Secondary Education

BIOLOGY

Paper 3

Practical

TIME: 1 ¾ Hours

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Q1. You are provided with Four Test-tubes label as **A, B, C** and **D**. You are required to prepare the contents of test tube **A, B, C** and **D** as follows.

To test tube **A** add 2cm³ of solution **R** provided and test using the provided reagent.

To test tube **B** add 2cm³ of solution **T** provided and test using the provided reagent.

(5 marks)

(a)

Test tube	Procedure	Observation	Conclusion
A			
B			

(b) To test tube **C** and **D**, prepare them as follows:

To test tube **C** add 2cm³ of **R** and 2cm³ of solution **H** provided boil it and allow it to stand for 5 minutes.

To test tube **D** add 2cm³ of **R** and 2cm³ of solution **T** boil and allow it to stand for 30 minutes. For both **C** and **D** test using the provided reagents and tabulate your results below.

(5 marks)

Test tube	Procedure	Observation	Conclusion
C			
D			

(c) To the provided visking tubing tie one end with the provided string and add solution **R**. Tie the remaining end and immerse it in a solution of iodine solution in a beaker (50ml). After 2 minutes remove it from the beaker and observe.

(i) What was your observation of the contents of the visking tubing at the end of experiment? (1 mark)

.....

(ii) Account for your results in (i) above. (3 marks)

.....

2. Study the kidney diagrams below:

FIGURE I

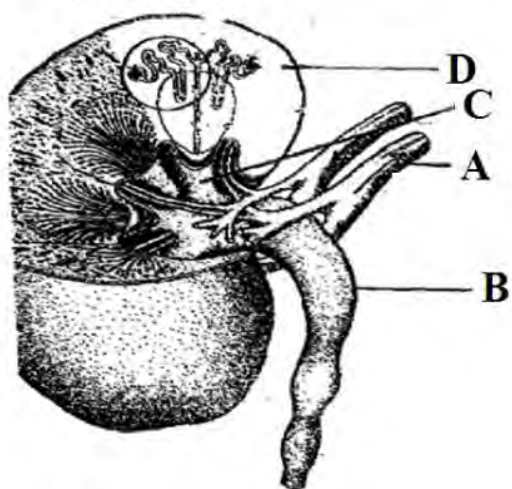
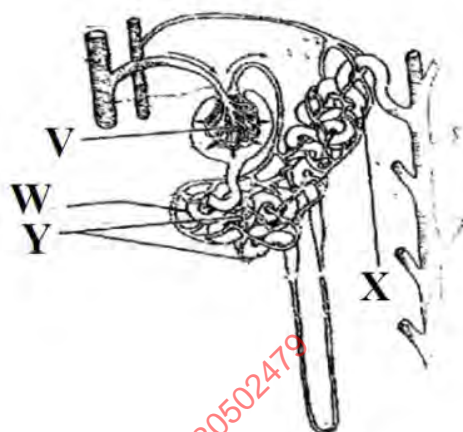


FIGURE II



a) i) Name the part labeled A in figure I (1mark)

A

ii) Name the process that takes place in the parts labeled V.

V (1 mark)

b) State two homeostatic functions of the organ in the diagram above. (2marks)

.....

c) Explain what will happen to the process of urine formation in absence of ADH. (3marks)

.....

d) Below are photographs labeled **B** and **C** of organs obtained from different animals. The organs perform similar functions. Examine them and answer the questions that follow.



(i) Name the parts labeled B1, B2 and B3 in photographs B (3marks)

B1

.....

B2

.....

B3

.....

(ii) Identify the parts labeled K1, K2 and K3 in photograph C (3marks)

K1

.....

K2

.....

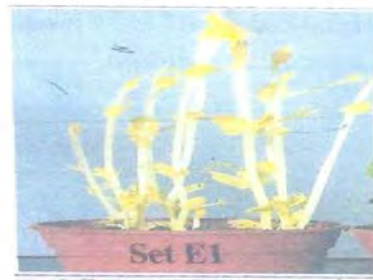
K3

.....

3. Study the diagrams set **A₁**, set **E₁**, set **M₁** and set **B** carefully and answer the questions below



Set A₁



Set E₁



Set M₁



Set B

(a) State the conditions under which each set up was grown. (3mks)

Set A₁ _____

Set E₁ _____

Set B _____

(b) (i) Name the phenomenon exhibited by seedlings in set E₁ (1mk)

(ii) Give a reason why plants exhibit the phenomenon named in (b) (i) above (1mk)

(c) (i) Name the response exhibited by the seedlings in set B. (1mk)

(ii) Explain how the response named in (c) (i) above occurred (2mks)

(d) (i) State the type of germination exhibited by seedlings in set A₁ and set M₁. (2mks)

Set A₁ _____

Set M₁ _____

(ii) Give a reason for your answer in (d) (i) above (2mks)

Set A₁ _____

Set M₁ _____

(iii) State the mode of dispersal in set A above when mature. (1 mk)

(iv) Name the type of fruit formed by M₁ on maturity. (1 mk)
