**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**

**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 atthe end of experiment? (1 mark)

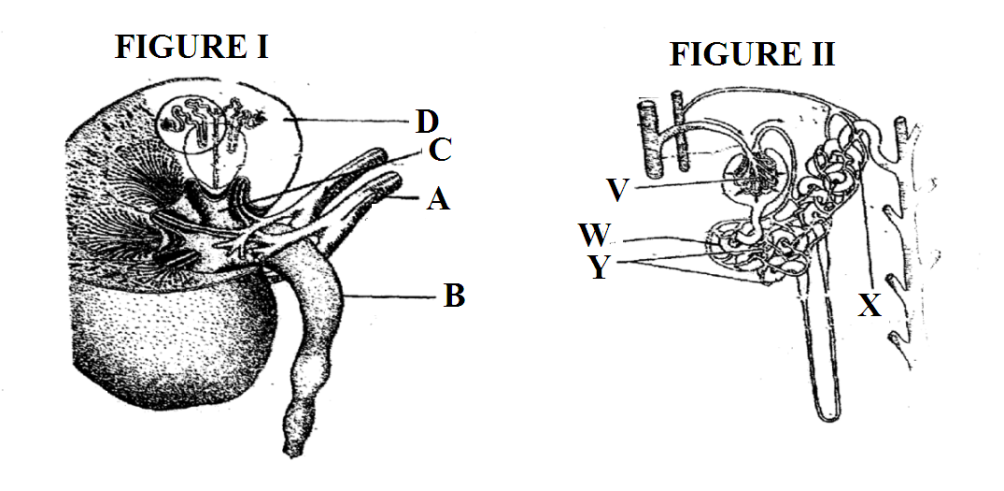
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(ii) Account for your results in (i) above. (3 marks)

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2. Study the kidney diagrams below:



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

A ……………………………………………………………………….……………………

ii) Name the process that takes place in the parts labeledV.

V ……………………………………………………………………………………………

(1 mark)

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

(2marks)

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

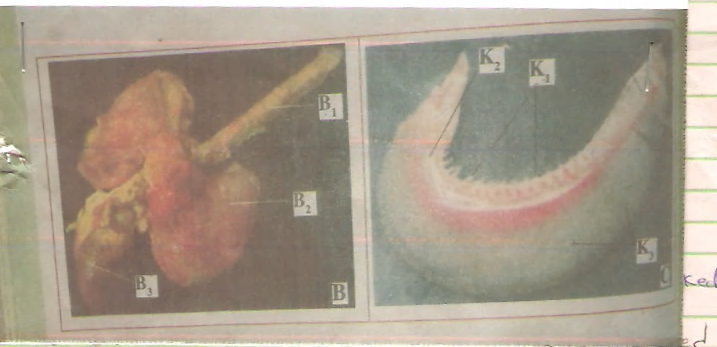
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d) Below are photographs labeled **B** and **C** of organs obtained from different animals. The organs perform similar functions. Examine them and answer the questions that follow.



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

B1 ……………………………………………………………………………………………………………………

B2 ……………………………………………………………………………………………………………………

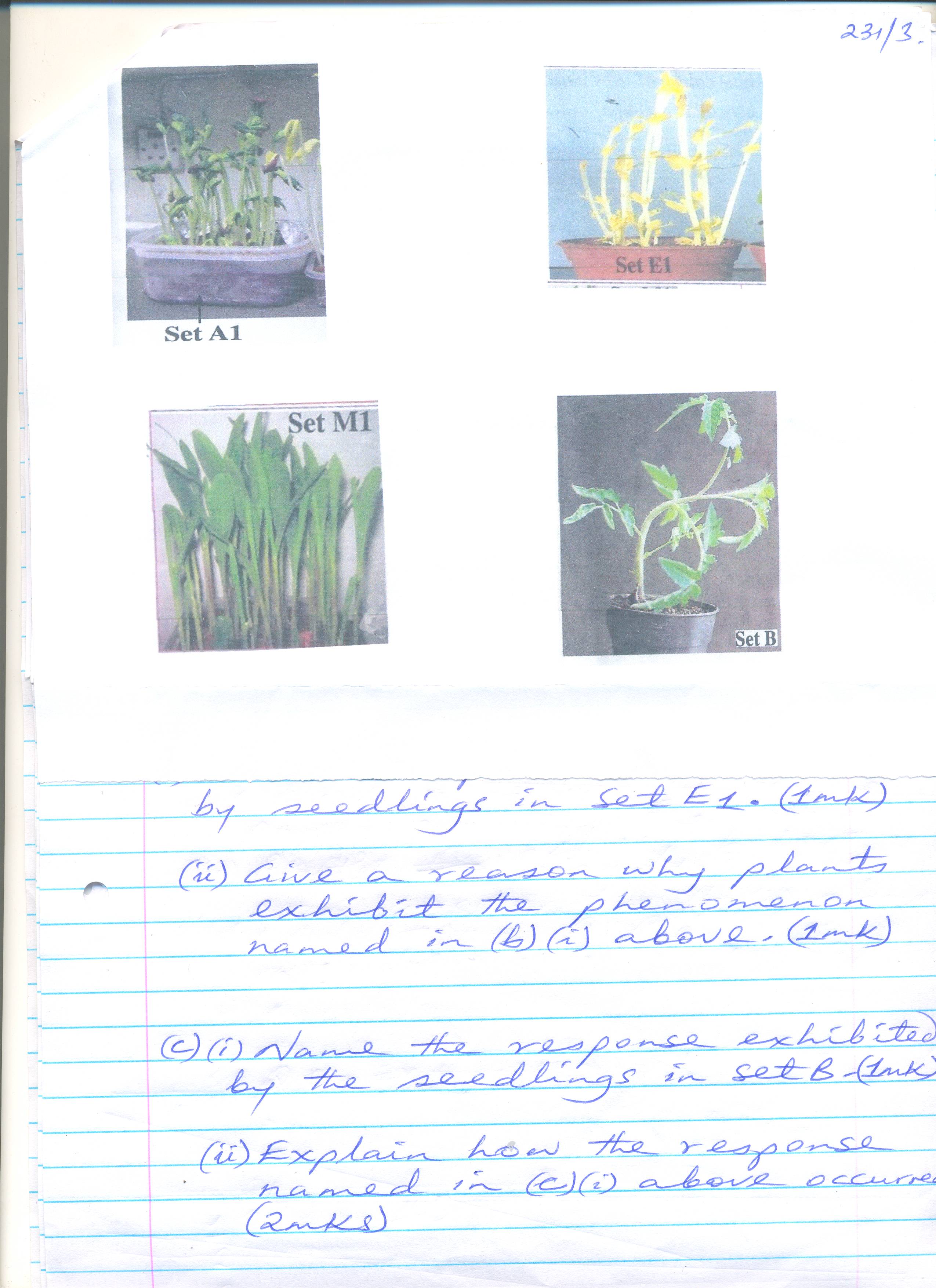
B3 ……………………………………………………………………………………………………………………

(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

(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)

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

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\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

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\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

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\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(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)

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