**Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Index No. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Candidate’s signature \_\_\_\_\_\_\_\_**

**Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**231/3**

**BIOLOGY**

**PAPER 3**

**PRACTICAL**

**1 ¾ HOURS**

**FORM 4 SUKELLEMO JOINT PRE-MOCK EXAMS 2023**

***Kenya Certificate of Secondary Education (K.C.S.E)***

**INSTRUCTIONS TO CANDIDATES**

Answer ALL the questions in the spaces provided in the question paper.

You are supposed to spend the first 15 minutes to read the whole paper carefully before commencing your work.

**FOR EXAMINERS USE ONLY**

|  |  |  |
| --- | --- | --- |
| **Questions** | **Total marks** | **Candidates score** |
| 1 | 16 |  |
| 2 | 13 |  |
| 3 | 11 |  |
| Total score | 40 |  |

***This paper consists of 5 printed pages***

***Turn Over***

1. You are provided with solution labelled L, a piece of visking tubing, some string, four

test tubes, a beaker a white tile and these reagents iodine solution and Benedict’s solution.

1. Using the appropriate reagents, carry out food tests to identify the food substances

contained in L. Outline procedure used and record your observation and conclusions

in the table below. (6 marks)

|  |  |  |  |
| --- | --- | --- | --- |
| Food substance | Procedure | Observations | Conclusion |
|  |  |  |  |
|  |  |  |  |

Securely tie one end of the visking tubing with the string and place solution L into it

until it is about full. Ensure that it is not leaking and tie up the other end securely.

Wash away all traces of solution L from the outside of the visking tubing. Place the

visking tubing in the beaker and submerge in distilled water. Note the time and allow

the set up to stand for at least 30 minutes. After 30 minutes take some of the water

from the beaker and carry out similar food tests on it.

(b) Record your observation and conclusions in table below. (4mks)

|  |  |  |  |
| --- | --- | --- | --- |
| Food substance | Procedure | Observations | Conclusion |
|  |  |  |  |
|  |  |  |  |

(c) Account for the results obtained (a) and (b) (3 marks)

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(d) What physiological process is demonstrated by this experiment? (1 mark)

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(e) (i) Name **one** part of the body where a similar process takes place. (1 mark)

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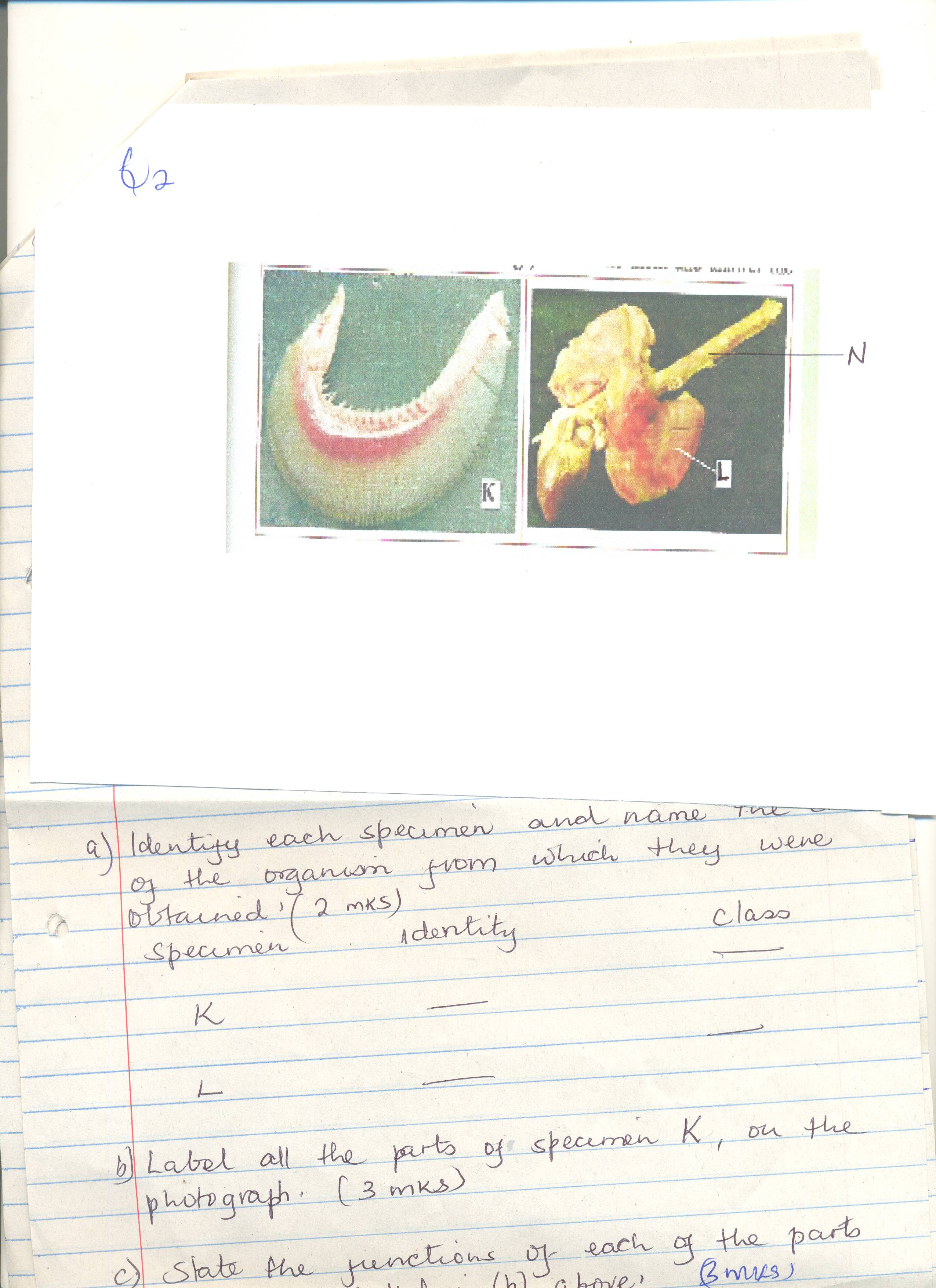
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(ii) What is the process you have named in e(i) above called? (1 mark)

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Q2. You are provided with photographs of specimens labeled K and L. examine them and answer the questions that follow.



(a) Identify each specimen and name the class of the organism from which they were obtained. (2mks)

**Specimen** **Identity** **Class**

K \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_

L \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_

(b) Label all the parts of specimen K, on the photograph. (3mks)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
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(c) State the functions of each of the parts you have labeled in (b) above. (3mks)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
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(d) State two ways in which the part labeled L is adapted to its functions. (2mks)

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(e) State the functional relationship between

(i) Specimen K and L (1mk)

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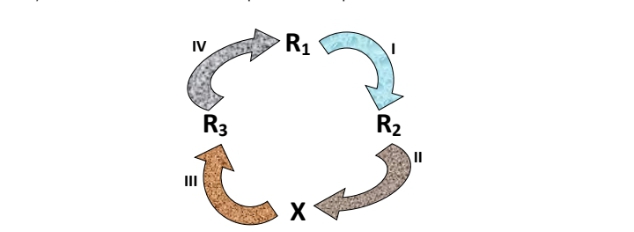
(ii) State two adaptations of the part labeled N to its function. (2mks)

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Q3. You are provided with specimens labeled R1, R2 and R3 representing different stages of plant development. Study the specimens carefully and answer questions related to them.

1. The chart below shows relationship between the specimens



1. Identify process 1 (1mark)

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

1. state one internal and one external condition necessary for the process identified in (1) above

(2 marks)

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

1. Name the: (2 marks)

Stage of development R2

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

Process immediately before R3 in process (III)

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

1. Dissect specimen R3 logitudinally and open it out
2. Make a drawing section and labeled it (4 marks)
3. Explain two adaptations of the specimen to its function (2marks)

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

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