

553/2

Biology practical

UGANDA

CERTIFICATE

NAME.....

INDEX NO.....SIGNATURE.....

BIOLOGY PRACTICAL

PAPER 2

2 HOURS

Instructions to Candidates

- Answer all questions
- Answers must be written in the spaces provided.
- Additional pages must not be inserted.

Question	Marks
1	
2	
3	
Total	

1. You are provided with specimens **Q** and **R** which are samples of soil. Using materials provided, you are required to investigate some properties of the specimens. Place a filter paper into one of the funnels provided and place the funnel on top of a measuring cylinder. Measure and put 35cm^3 of specimen **Q** into the funnel.

Measure 35cm^3 of water and pour it on **Q** carefully not to spill out. Immediately start a stop clock procedure.

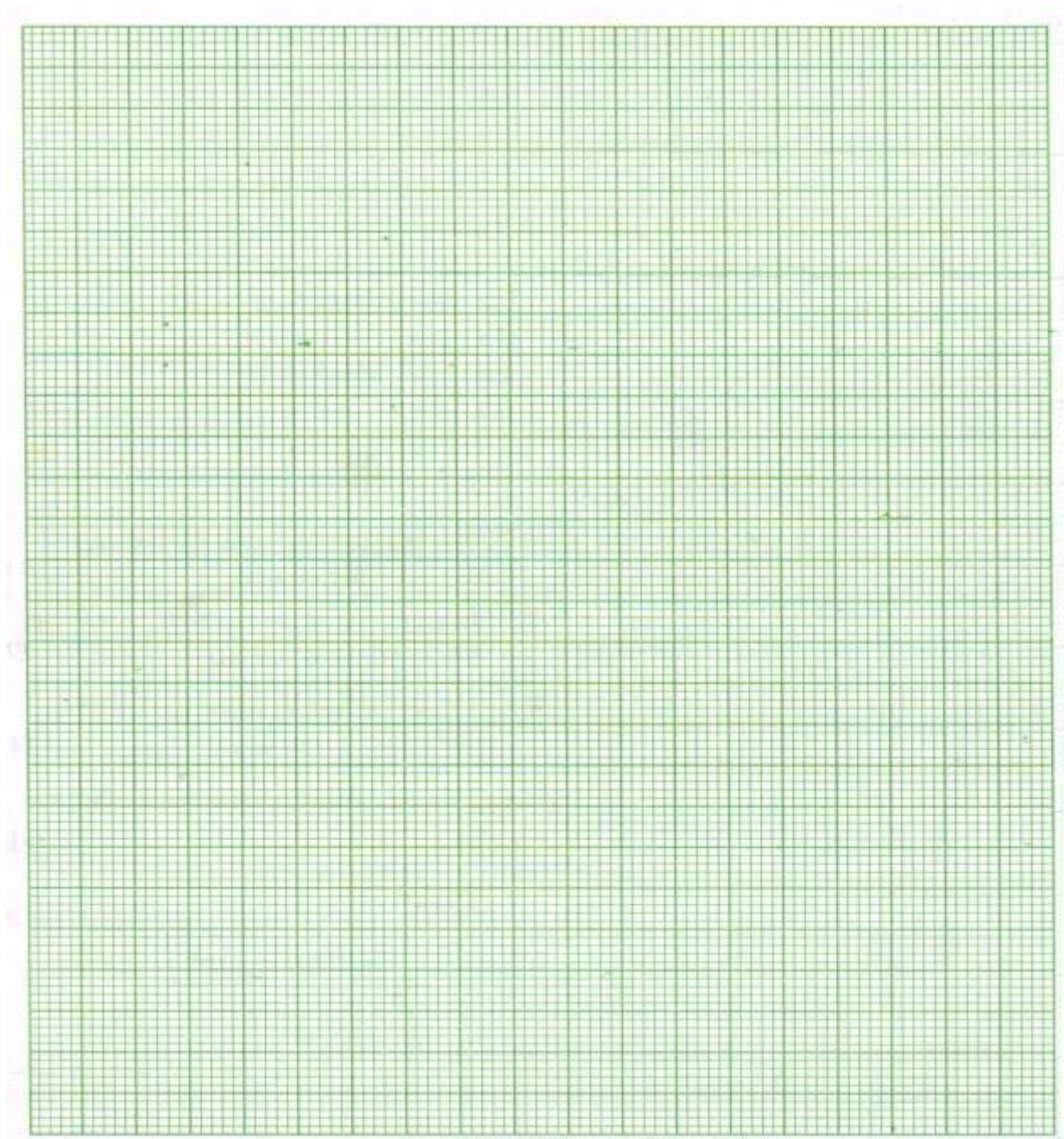
- (a) (i) Measure the volume of water collected in the measuring cylinder every minute for seven minutes. Repeat the same procedure using specimen **R** and record your results in the table that follows; (6 marks)

Time/ minutes	Volume of water collected from R/ cm^3	Volume of water collected from Q/ cm^3
0		
1		
2		
3		
4		
5		
6		
7		

- (ii) What is the volume of water collected from specimen **R** when dripping stops? (01 marks)

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b) On the same axes plot volumes of water collected from the two specimens **Q** and **R** against time. (08 marks)



c) Explain the graphs of **Q** and **R** in the first **five** minute. (5½ marks)

i) Graph of **Q**

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ii) Graph of **R**

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d) From the experiment, draw one conclusion on properties of specimen **Q** and **R**. (01marks)

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2. You are provided with specimens **V**, **W** and **X** from the same animal.

a) Identify the specimens? (03 marks)

V

W.....

X.....

b) Examine the specimens and describe their structure.

(06 marks)

Specimen **V**:

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Specimen **W**:

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Specimen **X**:

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c) Explain the

(i) Differences in functions between specimens **V** and **X**

(02 marks)

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(ii) Functional similarities between specimens **V** and **W**

(02 marks)

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d) Draw and label specimens **V**

(08marks)

3 .You are provided with specimens **Y** and **Z**

a) Describe the following parts of the two specimens:

(08 marks)

i) Petals:

Specimen **Y**

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.....

Specimen **Z**

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.....

ii) Sepals:

Specimen **Y**

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.....

Specimen **Z**

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iii) Stamens:

Specimen **Y**

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.....

Specimen **Z**

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.....

iv) Carpels of specimen **Y**

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b) How is specimen **Z** adapted to its agent of pollination? (03marks)

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c) How is specimen **Y** suited to its type of pollination? (02 marks)

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d) Remove all the petals from specimens **Y**. Draw and label the remaining part. (07 marks)

END