

Candidates Name

School Signature.....

553/2

BIOLOGY

PRACTICAL

May – June 2019

2 Hours

RESOURCEFULL EXAMINATIONS TERM II 2019

Uganda Certificate of Education

BIOLOGY

PRACTICAL

Paper 2

2 Hours

INSTRUCTIONS TO CANDIDATES:

- ✓ This paper consists of **three** questions.
- ✓ Answer **all** questions.
- ✓ Answers **must** be written in the spaces provided.
- ✓ Use *sharp pencils* for your drawings.
- ✓ Colored pencils must not be used.
- ✓ No additional sheet should be inserted in this booklet.

FOR EXAMINER'S USE ONLY

Questions	Marks
1.	
2.	
3.	
Total	

1. You are provided with specimen **P**. You are required to carry out tests on the specimen following the procedures below.

Procedure

- Using a sharp knife, cut out five cubes from **P** each measuring 1cm X 1cm X 1cm.
- Cut the first cube into **2** equal parts.
- Cut the second cube into **4** equal parts.
- Cut the third into **16** equal parts.
- Cut the fourth into **4** equal parts, put them in a test tube add 4cm³ of water and heat to boil, allow them to cool and remove them from water.
- Leave the fifth cube intact.
- Label five test tubes as **1,2,3,4** and **5**
- Add 3cm³ of Hydrogen peroxide to each test tube.
- Now, add contents of specimen **P** to each test tube as shown in the table below.

TEST TUBE	CONTENTS
1	One half of the first cube
2	Second cube cut into equal parts
3	Third cube cut into 16 equal parts
4	Fourth cube cut into 4 equal parts, boiled and cooled.
5	Fifth cube left intact.

a) Record your observations in table below.

(05 marks)

Test tube	Observation
1	
2	
3	
4	
5	

b) Explain your results in each test tube.

(10 Marks)

Test tube .1

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Test tube 2.

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Test tube 3

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Test tube 4

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Test tube 5.

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c) What being investigated in the tests? **(03 marks)**

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- d) Give **two** conclusions from your results. **(02 marks)**

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2. You are provided with specimens **P, Q and S**. Examine the specimens and answer questions that follow.

- (a) Open up **P** longitudinally and also cut transverse sections of **Q** and **S**. observe the sections of **P** and **S** and state three differences between them. **(03 marks)**

Specimen P	Specimen S
(i)	
(ii)	
(iii)	

- (b) Identify the type of fruit each specimen Q and S is, basing on their structure.

(02 marks)

Q

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S

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(i) State the mode of dispersal for specimen **P**. (01 mark)

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(ii) Describe how each of the specimens is dispersed. (07 marks)

P

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Q

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S

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(c) Draw and label a longitudinal section of P. state your magnification. **(07 marks)**

3. You are provided with specimen **K and L**.

(a) State **three** characteristic features that make them belong to the same class.

(03 marks)

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(b) Using a hand lens, observe features of the head region of specimen **K** and **L**. Basing on observable features, give three differences between the specimens.

(03 marks)

Specimen K	Specimen L

(c) Describe how the features on the head of specimen **K** enable it live successfully in its habitat.

(03 marks)

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(d) Using a hand lens, observe the dorsal part of the thorax of specimen **L**.

Describe the observable features.

(03 marks)

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- (e) Cut off the hind limb of specimen **K**. Draw the tibia including the tarsi and claws.
State your magnification. **(06.5 marks)**

END

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No. 1

P Is big sized **IRISH POTATO** tuber

No. 2

P is Fresh bean pod

Q is raw tomato

S is ripe Orange

No.3

Specimen **K** is freshly killed mature **COCKROACH**

Specimen **L** is a mature **HOUSEFLY**