Name: ……Index No……

Signature: …….. School: ……

553/2
Biology
Paper 2
July/August 2019

BUGANDA EXAMINATIONS COUNCIL MOCKS

Uganda Certificate of Education

BIOLOGY (Practical)

PAPER 2

2HOURS

INSTRUCTIONS TO CANDIDATES

- Attempt all questions.
- All drawings must be made in the spaces provided.
- Drawings should be made with a sharp pencil.

Number	Marks	Signature
1		
2		
3		
Total		

1. You are provided with two sets of bean seeds/seedlings labeled **A** and **B** at different levels of germination and solution **H** which is a common laboratory reagent.

(a) Obtain two test tubes, label them **CA** (cotyledon of A) and RA (radical of A). Select 5(five) large seedlings from group **A**, peel and separate the cotyledons and radicals. Crush each part separately into a paste. Add $10cm^3$ of water; decant clear extract into corresponding test tubes.
Repeat the procedure above for group **B** to obtain **CB** and **RB**

(i) Carryout the iodine and Benedict's tests on the extracts. Record your test and observations in the tables below.

Table I (5marks)

Iodine test	**Extract**	**Observation**
	CA	
	RA	
	CB	
	RB	

Table II (5marks)

Benedict's test	Extract	Observation
	CA	
	RA	
	CB	
	RB	

(b) To $2cm^3$ of **CA** and **CB** add $2cm^3$ of solution **H**.

Complete table III below. **(4marks)**

Table III

TEST	OBSERVATION	DEDUCTION
(i) To $2cm^3$ of CA add $2cm^3$ of H		
(ii) To $2cm^3$ of CB add $2cm^3$ of H		

(c) Explain your observation in table **I, II** and **III**

(i) Explanation for deduction of results in table **I** (2marks)

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(ii) Explanation for deduction of results in table **II** (2marks)

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(iii) Explanation for deduction of results in table III (2marks)

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2. You are provided with specimens **C**, **D**, **E** and **F**. Examine them and use them to answer the questions below.

(a) What part of the plant are the specimens? Give a reason for your answer. (2marks)

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(b) Cut all four specimens longitudinally.

Describe the following parts. (12marks)

	C	D	E	F
Epicarp				
Mesocarp				
Endocarp				

(c) Describe how the structure of specimen **D** rotates to the mode of dispersal. (3marks)

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(d) Make a drawing of the longitudinal section of specimen **E**. (Do not label). (3marks)

3. You are provided with specimens **Q** and **R** obtained from the same animal.

(a) Giving two reasons, identify the structure of the animal represented by **Q** and **R**.(3marks)

Structure: ……

Reasons: ……..

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(b) Write a reason in each case, state the specific identity of the specimens. (4marks)

(i) Identity of **Q**: …….

Reason: ……

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Identity of **R**: ……..

Reason: ……..

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(c) Compare specimens **Q** and **R**

(i) Similarities. (3marks)

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(ii) Differences (4marks)

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(d) Using observable structural features, suggest the function(s) of the specimens. (6marks)

(i) Function of Q

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Structure feature:

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(ii) Function of R:

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Structural feature

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END

END