Name: …….. Signature:…….
School: ……..

553/2
Biology Practical
Paper 3
July/August 2019
2hours

BUGANDA EXAMINATION COUNCIL MOCKS 2019

Uganda Certificate of Education

BIOLOGY (Practical)

PAPER 2

2HOURS

INSTRUCTIONS TO CANDIDATES:

- Answer all questions in the spaces provided.
- Use a sharp pencil for any drawing.
- Neat work is a **MUST**

For Examiner's use only		
	Marks	Signature & initials
Q.1		
Q.2		
Q.3		
Total		

1. You are provided with solution P, V, T and X.

(a) Carryout the test in table 1 below to determine the chemical composition of solution P. (08marks)

Table 1

	Test	**Observation**	**Conclusion**
(i)	To $2cm^3$ of solution P add 2 drops of iodine solution.		
(ii)	To $2cm^3$ of solution P add $2cm^3$ of Benedict's solution and boil.		
(iii)	To $2cm^3$ of solution P add $1cm^3$ of sodium hydroxide solution followed by 2 drops of copper (II) sulphate solution.		
(iv)	To $2cm^3$ of solution P add $1cm^3$ of dilute hydrochloric and boil, cool, add $1cm^3$ of sodium hydroxide solution followed by $2cm^3$ of Benedict's solution and boil.		

(b) Obtain three test tubes, label them 1, 2 and 3. Mix the solutions in the test tubes as shown in the table II below.

Table 2

Test tube	**content**
1	$2cm^3$ of P and $1cm^3$ of solution V
2	$2cm^3$ of P, $1cm^3$ of T and $1cm^3$ of V.
3	2 cm^3 of P, $1cm^3$ of X and $1cm^3$ of V

Incubate all test tubes at 35^{o}C 40^{o}C for 20 minutes.

After 20 minutes of incubation add $2cm^3$ of Benedict's solution to test tubes 1, 2 and 3 and boil.

Record your observation and conclusion in table III below.

Table 3

Test tube	Observation	Conclusion
1		
2		
3		

(c) With a reason state the nature of;

(i) Solution Y (02marks)

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(ii) Solution T (02marks)

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(iii) State two properties of solution V. (02marks)

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2. You are provided with specimens A, B, C and D.

(a) State the identity of specimens A, B, C and D. Give reasons for your answer.(03marks)

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(b) One specimens A and B transversely and specimens C and D longitudinally.

(i) Examine and describe one characteristic of the following parts of each specimen in the table below. (06marks)

Specimen	Epicarp	Mesocarp	Endocarp	Seed(s)
A				
B				
C				

(ii) Basing on internal features, describe how each of the specimens A, B and C is adapted to its disposal.

Specimen A

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Specimen B

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Specimen C

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(iii) By basing on nature, number and attachment of seeds, construct a dichotomous key to identify specimens A, B, C and D. (05marks)

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3. You are provided with specimen K and L. Examine them using a hand lens.

(a) Identify the class of specimens K and L basing only on their thoracic regions. (02marks)

Class……..

Reason:……

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(b)(i) Examine the wings of both specimens and state 3 differences between the specimens. (03marks)

Wings of specimen K	Wings of specimen L
(i)	
(ii)	
(iii)	

(ii) Give the advantages of the differences given in b (i) above to the specimen.(03marks)

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(c) With a hand lens observe the structure of the limbs of specimen **K**.
State how the limbs increase survival of the specimen in its habitat. (04marks)

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(d)(i) By basing on the head features only, state how specimen **L** is adapted to its role of transmitting diseases in a community. (3marks)

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(ii) Draw and label the abdomen of specimen K from its dorsal view. (05marks)

END.