Name:.....Centre/Index no: ...../.....

Signature: .....

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BIOLOGY
PRACTICAL
Paper 2
August 2022
2 hours

JINJA JOINT EXAMINATIONS BOARD

Uganda Certificate of Education

MOCK EXAMINATION –AUGUST 2022

BIOLOGY PRACTICAL

Paper 2

2 hours

INSTRUCTIONS TO CANDIDATES:

Answer **ALL** *questions in the spaces provided.*

Extra credit shall be given to clear drawings made in pencil

No additional sheets of writing paper are to be inserted in the booklet.

For Examiner's Use Only

QUESTION	MARKS
1	
2	
3	
TOTAL	

1. You are provided with solutions A, B and C Solutions A and B contains food nutrients. You are required to carry out tests to identify the food values in solution A and B. Record your observations and deductions in the table below.

(a)

TESTS	OBSERVATION	DEDUCTIONS
(i) To 1cm^3 of solution and 3 drops of iodine solution and shake		
(ii) Repeat procedure (i) using solution B.		
(iii) To 1cm^3 of solution A add 1cm^3 of Benedict's solution and boil.		
(iv) Repeat procedure (iii) using solution B.		

Label 4 boiling tubes 1, 2, 3 and 4 and add 10cm^3 of distilled water to each of the boiling tubes. Tie one end of the four visking tubings securely using the thread provided. Wet the visking tubing for easy opening and add contents to each as follows.
To the first visking tubing add 2cm^3 of solution A, tie the remaining end and place the tubing labelled 1. Add 2cm^3 of solution B to the second visking tubing, tie the remaining end and place the tubing in the boiling tube labelled 2.
In the third visking tubing add 1cm^3 of A and add 1cm^3 of C, tie the remaining end and place it in the boiling tube labelled 3.
To the fourth visking tubing, add 1cm^3 of solution B and add 1cm^3 of solution C, tie the remaining end and place the tubing in the boiling tube labelled 4.
Place all the boiling tubes in a water bath maintained at $(37 - 40)^0$c for about 30minutes
(b) After 30 minutes, carry out a Benedicts' test on the water in each boiling tube. Record your observation and deductions in table below.

TESTS	OBSERVATION	DEDUCTIONS
(i) To 1cm^3 of water from boiling tube 1 add 1cm^3 of Benedicts solution and boil.		
(ii) Repeat test (i) using water in boiling tube 2		
(iii) Repeat test (i) using water in boiling tube 3.		
(iv) Repeat test (i) using water in boiling tube 4.		

(c) Explain the results of each test.

(i) Test (i)

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(ii) Test (ii)

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(iii) Test (iii)

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(iv) Test (iv)

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(d) (i) From your results state the nature of solution C.

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(ii) With a reason state one property of the active ingredient in solution C.

Property

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Reason

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2. You are provided with specimens W, X, Y and Z which are plant parts. Examine them carefully and use them to answer the questions that follow.

(a) Identify each specimen giving a reason to support your answer in each case.
(i) Specimen W
Identify

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Reason

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(ii) Specimen X

Identify

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Reason

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(iii) Specimen Y

Identify

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Reason

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(iv) Specimen Z

Identify

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Reason

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(b) Outline the observable characteristic features of each specimen.

(i) Specimen W

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(ii) Specimen X

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(iii) Specimen Y

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(iv) Specimen Z

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(c) Using the characteristic in (b) above, construct a dichotomous key to identify the specimens W, X, Y and Z

(d) Cut specimen Z longitudinally and draw half one of the specimen. State your magnification

3. You are provided with specimens F and G.
   (a) Giving the reasons identify the specimens as follows.
   (i) Phylum

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   Reasons

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   (ii) Class

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   Reasons

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(b) Carefully remove the heads and abdomens of each specimens.
Outline the differences between the thorax of specimens' F and G

Thorax of specimen F	Specimen G

(c) Observe the legs on specimen F and state how they are adapted for their function.

(d) Make a well labelled drawing of the dorsal view of the head of specimen F.

End