Name: …… Index No……....

School: …… Signature: ……..…

553/2
BIOLOGY
(PRACTICAL)
PAPER 2
July/August 2017
2 hours

WAKISSHA JOINT MOCK EXAMINATIONS

Uganda Certificate of Education

BIOLOGY

(PRACTICAL)

Paper 2

2 hours

INSTRUCTIONS TO CANDIDATES:

- This paper consists of **three** questions.
- Answer **all** questions.
- Drawings should be made in the spaces provided.
- Use sharp pencils for your drawings.
- Coloured pencils or crayons should **not** be used.
- No additional sheets of writing paper are to be inserted in the booklet.
- Work on additional sheets will **not** be marked.

FOR EXAMINER'S USE ONLY.

Question	Marks	Examiner's No. & Initials
1		
2		
3		
TOTAL		

Turn Over

1. You are provided with solutions X and Y.

(a) Carryout the tests in the table below to determine the food nutrients present in solution X. Record your observations and deductions in table 1 below. (06 marks)

Table 1

Test	Observations	Deductions
(i) To 1cm^3 of solution X in a test tube, add 3 drops of Iodine solution.		
(ii) To 1cm^3 of solution X in a test tube add 1cm^3 of Benedict's solution and boil.		
(iii) To 1cm^3 of solution X in a test tube, add 1cm^3 of dilute sodium hydroxide solution followed by 2 drops of copper (II) sulphate solution and shake.		

(b) Put 3cm^3 of solution X into a test tube and add 2cm^3 of solution Y and incubate in water bath maintained at 35ºC - 40ºC for 20 minutes. After 20 minutes, repeat tests in table 1 above on the mixture.

Record your observations and deductions in table 2 below. (07$^1/_2$ marks)

Table 2

Test	Observation	Deductions
(i) Iodine test		
(ii) Benedict's test		
(iii) Biuret's test		

(c) (i) State the effect of solution Y on solution X. (01 mark)

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(ii) Give two reasons to support your answer in c(i) above. (02 marks)

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(d) Why was the solution:

(i) Incubated in water bath for 20 minutes. (01 mark)

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(ii) Incubated in the water bath at 35ºC - 40ºC. ($1^1/_2$mark)

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(e) State the factor which is being investigated in this experiment. (01 mark)

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2. You are provided with specimens P, Q, R and S which are leaves.

(a) Give two observable features which show that the specimens P, Q, R and S are leaves. (02 marks)

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(b) (i) Specimens P and Q perform other special functions in addition to their usual functions.

Describe how each of these specimens P and Q is adapted for its special function(s). (03 marks)

Specimen P.

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Turn Over

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Specimen Q.

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(ii) Basing on one observable feature, state one function carried out by all Specimens P, Q, R and S. (02 marks)
Function;

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Observable feature;

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(c) Describe specimen S. (03 marks)

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(d) Using the characteristic features of the lamina only, construct a dichotomous key to identify the specimens P, Q, R and S. (03 marks)

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(e) Draw and label specimen P. State the magnification. (06 marks)

3. You are provided with specimens F, G and H.

(a) Examine the specimens and give three reasons, for identification of the phylum to which they belong.

Phylum; (01 mark)

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Reasons; (03 marks)

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Turn Over

(b) Observe the mouth parts of the specimens F, G and H. Explain two ways in which each is adapted to it's functions.

(i) Mouth parts of F; (02 marks)

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(ii) Mouth parts of G; (02 marks)

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(iii) Mouth parts of H; (02 marks)

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(c) Observe the thorax of F and G. Give four differences between F and G. (04 marks)

Specimen F	**Specimen G**

(d) With the aid of a hand lens, observe the lateral view of the head of specimen G. Draw and label. State the magnification of your drawing. (07 marks)

END