Name:..... Centre/ Index No.....

School..... Signature:.....

553/3
BIOLOGY
Practical
PAPER 3
July/August 2023
2hours

WAKISSHA JOINT MOCK EXAMINATIONS

Uganda Certificate of Education

BIOLOGY

(Practical)

Paper 3

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		

1. You are provided with solutions **D** which contains food nutrients.

(a) Carry out the tests specified in the table below. Record your tests, observations and deductions. (16 marks)

Table 1

Test	Observations	Deductions
(i) Iodine test		
(ii) Benedicts' test		
(iii) Non-reducing sugar test.		
(iv) Biuret's test		

(b) (i) Identify the food nutrients in solution **D.** (01 marks)

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(ii) Name two natural sources of each of the food nutrients in solution **D.** (02 marks)

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(c) State one effect of under consumption by man of each of the food nutrients in solution **D**. (01 mark)

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2. You are provided with specimens **E** and **F** which are plant organs.

(a) Observe the specimens and describe three features common to both specimens. (03 marks)

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(b) Explain how each specimen is adapted to its mode of pollination.

i) Specimen **E** (03 marks)

ii) Specimen **F** (03 marks)

(c) Examine the structures of each of the specimens **E** and **F**. State four structural differences between the two specimens. (04 marks)

Specimen E	Specimen F

(d) Explain one ecological advantage of specimen **F** over specimen **E**. (01 mark)

(e) Remove all the sepals, petals and stamens of specimen **E** to expose the pistil. Draw and label the remaining part. (06 marks)

3. You are provided with specimens U, V, W and X which are freshly killed animals.

(a) Examine the specimens and give any three features common to all of them. (03 marks)

(b) State any three structural differences between specimens U and V. (03 marks)

Specimen U	Specimen V

(c) How is specimen U adapted to its mode of life as a parasite. (03 marks)

(d) Using structures used for locomotion and feeding, construct a dichotomous key to identify specimens U, V, W and X. (03 marks)

(e) State one survival advantage of specimen X over W. (01 mark)

(f) Remove an inner wing from specimen V and draw it, but do not label. (07 marks)

END

WAKISSHA MOCK 553/3

Each candidate should be provided with the following;

- $10cm^3$ of Solution D. (Solution D is prepared by mixing of one egg albumen in 1 litre of 1% starch solution)
- Common reagents for food tests.
- Cassia flower labelled E.
- Morning glory / sweet potato flower labelled F.
- Freshly killed mature cockroach labelled V.
- Soldier termite labelled W.
- Housefly labelled X.
- Tick labelled U.

Access to:

- Source of heat.
- 5 test tubes.

END