

Candidate's Name: .....Signature:.....

553/2

BIOLOGY

Paper 2

Nov. /Dec. 2024

2 $\frac{1}{2}$  hours

S.3



UGANDA CERTIFICATE OFF EDUCATION  
BIOLOGY

Paper 3

(Practical)

END OF YEAR

SENIOR THREE

2hours 30 minutes

INSTRUCTIONS TO CANDIDATES:

- This paper consists of **two** examination items. Answer **all** the items in the spaces provided.
- 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 scored.

For examiner's use only

Item	1	2	Total scores
Scores obtained			

## ITEM 1

A tomato farmer divided his land into two portions **Q** and **R** each with different soil type. Last season he planted tomatoes in each portion, in a well-spaced pattern and provided the same nutrients to crops in each portion. Plants in portion **R** when exposed to short periods of sunshine, they withered and some dried however the tomato plants in portion **Q** grew very fast and made very good yields yet they were both exposed to same environmental conditions. The farmer was not certain of the cause of the difference in yields obtained. You are provided with soil samples **R** and **Q** which have been obtained from the two garden portions respectively.

## Task

Design and carry out a scientific investigation on the two soil samples and advise the farmer accordingly.

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on the right side, suggesting it's resting on a surface. There is no handwriting or other markings on the paper.

[illegible]

[illegible]

## ITEM 2

In Katanga slum, there are increased cases of sickness due to diarrhea, cholera and dysentery. After a research conducted by the health officers, heaps of garbage near homes and old pit latrines were reported. Several organisms in the area were collected for a science study in order to assess the possible vector for the health challenges. You are provided with specimen **M** and **K** obtained from the area.

### Task

(a) Giving two observable features, Classify the organisms to their two shared taxonomic levels. **[05 scores]**

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(b) With comparative reasons, identify the specimen responsible for the spread of the health challenges. **[05 scores]**

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(c) How is the identified specimen in (b) above, adapted for the spread of the health challenges. **[05 scores]**

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(d) Draw and label the thorax of the identified specimen with its attached structures.

**END**  
**WE WISH YOU NICE HOLIDAYS**