

Each learner should be provided with;

1. A thermometer.
2. Two plastic beakers/cups
3. Stop clock
4. 6 test tubes
5. Reagents of food test
6. Distilled water
7. 10ml of freshly prepared 0.5% starch solution labelled **T**
8. 5ml of 5% amylase enzyme labelled **X**
9. 5ml of 5% invertase enzyme labelled **Y**
10. Sources of warm water and cold water
11. 10cm³ measuring cylinder
12. Heating source
13. At least 3 labels/a piece of masking tape.
14. Test tube holder

Element 2

Each learner should be provided with;

1. Mature worker termite labeled **A**
2. Mature house fly labeled **B**
3. Mature honey bee labelled **C**
4. Hand lens

Candidate's Name.....

Index Number: Signature:

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Biology

Paper 2

July/August 2024

$\frac{1}{2}$ Hours



RWENZORI REGION SESEMAT AND ASSHU

(RRSA) MOCK EXAMINATIONS

UGANDA LOWER SECONDARY CERTIFICATE OF EDUCATION

BIOLOGY

Paper 2

Practical

2 hours 30 minutes

INSTRUCTIONS TO CANDIDATES:

- ❖ This paper consists of two examination items. Answer all the items in this paper 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 are to be used.
- ❖ Work on additional sheets will not be scored.

Item 1

An investor wants to construct a biscuit producing factory in Kyanga. Customers like biscuits which are sweet (sugary). The raw material available in the area is provided as solution **T** which is a food extract. The local people told the investor that extract **T** contains a good amount of starch but no sugars. For that reason, a biochemist has suggested enzymes **X** and **Y** for an investor that they can help him to convert starch to sugars. Before he can proceed with his plan, the investor wants to;

- (i) Prove if what the local people told him about extract **T** is true.
- (ii) Find out which of the two enzymes **X** and **Y** suggested for him can effectively help him achieve the conversion of starch to sugars.

(Note: Enzymes **X** and **Y** work best at neutral pH and a temperature between 35°C to 40°C)

Task

Using scientific inquiry process skills, carryout an experiment to provide information that can be used to advise the investor accordingly.

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Item 2

Ministry of health wants to ensure there is no more cholera outbreak in the country and it is known that there is an insect vector responsible for transmitting this disease. Entomologists laid traps in villages to determine the distribution of insects in order to predict which villages are at a high risk of outbreak.

Some of the insects which were caught are provided and labelled as A, B and C.

Task

- a. Identify the specimen that is most associated with transmitting the disease mentioned

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- b. Describe how the specimen is adapted for transmission of the disease.

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- c. How does the structure of specimens A and B relate to their ecological roles?

- (i) A

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This image shows a single sheet of white paper with horizontal 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 slightly textured appearance and some minor discoloration or staining, particularly towards the bottom left corner where there's a small brownish mark. The overall tone is off-white or light cream.

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END