

NASEB EXAMINATION BUREAU

Uganda Certificate of Education

Biology Paper 1

TIME : 2HOUR

NAME _____ Stream _____

INSTRUCTIONS

- *This paper comprises two sections A and B*
- *Attempt all items in section A*
- *Choose only one item from section B*
- *Answers to section A must be written in spaces provided*

SECTION A

item One Mr. Muhammad is a prominent farmer in Masaka. He grows bean and maize plants on the same piece of land. At the **flowering** stage, Muhammad's garden was attacked by a strange flying organism that greatly destroyed the bean plants more than the maize plants. Worried about the yields, Mr. Muhammad invited a biology specialist from Makerere university to help him identify the strange organism.



Task

- a) Identify the plant structures that could have been damaged by the strange insect.

- b) How are the damaged structures going to affect the yields of plants in Mr. Muhammad's garden?

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- c) Explain to Mr. Muhammad why it was the bean plants that were greatly destroyed.

- d) Using your knowledge of branches of biology, Identify the department in Makerere university where the specialist is coming from.

item Two

Fatumah and Swabrah went to a birthday where only swabra ate a sugary cake. On their way back home they saw a tough snake, their heart rates increased, breathing rate increased and ran to save their lives. They both reached home sweating heavily but swabrah reached first.

Task

- a) Identify the body organs and their functions that were involved in the incidence from the time the two girls saw the snake up to when they reached home.

- b) Suggest any **three** (3) life processes (characteristics of life) observed from the two girls and suggest how the life processes enable the normal functioning of their bodies.

c) From the scenario, suggest a reason why swabra reached home first.

item Three Musa and Hamza are neighbors; they complain of cockroaches that have attacked their houses destroying their valuable items.

Musa decided to collect the cockroach and put their heads in the water.

Hamza collected the cockroaches and placed their abdomens in water.



Task

a) What features of the above organisms enabled it in causing the destruction?

b) (i) Which of the men managed to kill the cockroaches. Give a reason for your answer.

c) Explain why the other man was unsuccessful in killing the cockroaches.

SECTION B

Attempt only one item from this section

item Four According to the world Health Organisation (WHO), malaria is the leading killer disease in Uganda today. Malaria is caused by a parasite that is transmitted by female anopheles mosquito. You have been invited to give a sensitization message and also educate the members about malaria.

Task.

- a) Help the member to identify that parasite.
- b) Explain to members why it is female anopheles to transmit the parasite.
- c) Suggest preventive measures to the people in your community on how to overcome the threat as stated by WHO.

item Five Kabale district is a well-known for growing cabbages. Recently they started complaining of poor yields, the cabbage leaves develop white patches and become undeveloped. The farmers invited a specialist who informed them that the cause of the poor yields was due to a cabbage pest called ***pieris rapae***.

The farmers decided to spray the pest but the ministry of agriculture warned them about the potential impact of the chemicals particularly on the beneficial organisms such as insects which could also be harmed.

Task

- a) Explain to the farmers the likely dangers to occur in case they proceed to spray the pest
- b) Suggest any **three** reasons why the specialist identified the pest using such a name.

END