

Candidate's Name.....

Signature.....

553/1

BIOLOGY

Paper 1

2024

2 hrs.30mins



SHAPTA JOINT ASSESSMENT BOARD 2024

Uganda Certificate of Education

BIOLOGY

Paper 1

Theory

2 HOURS: 30 MINS

INSTRUCTIONS TO CANDIDATES:

- The paper consists of **seven** examination items. It has two section **A** and section **B**
- Section A has **three** compulsory items.
- Section B has two parts: I and II. Answer **one** item from each part.
- Answer **five** items in all.

SECTION A.

Item 1

Your mother was so concerned about your change in behavior ever since you joined secondary. You no longer want to be showered nor to be observed when showering. The kind of friends you used to have on the village have also changed and these days you are selective to only boys that look somehow fare. There is a day your mother entered your bedroom at night without alerting you and suspected that you were watching something funny on the phone. You got scared and on reaching you, you were breathing very fast with a high heartbeat.

TASK

Explain the issues behind the change in your behavior.

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ITEM 2

You went to read your books and found a pigeon on your table and it was all messed up. The table was dry but you got concerned about the white pellets that appeared in its droppings. Trying to connect with what had been taught someday but things didn't figure out in her mind.

TASK

How would you reach out to her puzzling situation?

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ITEM 3

In eastern Uganda, swamps have been cleared for planting Rice and brick mining. The environment officer has organized a radio talk show to sensitize the use of natural resources in swamps. Unfortunately you were too busy you won't listen to what the environment officer was addressing on the radio. However, your friend has asked to brief him or her on what the officer was talking about.

TASK

Explain to your friend the environmental challenges being addressed by the officer and how they can be solved. Explain to your friend why we should conserve the natural resources in the community?

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SECTION B

Part 1

Answer only **one** item from this part. Answers should be written in the answer booklet(s) provided.

Item 4

- i. Use the above survey observations to identify the organisms responsible for the complaints of people in Magogo.
- ii. Suggest the possible ways this particular family can adjust their lifestyle to minimize the effects of the organisms.
- iii. Construct an identification key for the organisms challenging this particular family.

Item 5

Musomina and the brothers have posho and fatty meat as their daily meal. This has enabled them have the energy through respiration in their body cells. One of the brothers has a missing canine and finds it hard enjoying the meal. He is the smallest of them with stunted growth and hair loss.

TASK

Write a letter to Musomina addressing some of the issues among which include:

- i. How nutrients from the food they eat is obtaining and how it reaches the body cells like those in the feet to cause growth.
- ii. Why the brother couldn't enjoy the same meal they have.

Part II

Answer only **one** item from this part. Answers should be written in the answer booklet(s) provided.

Item 6

In the Ugandan localities today, there is a smelly fungus considered to be the heart of the soil. However there has always existed misconceptions of what living things were. Chinese at times thought of fire, soil, sunlight among others to be living things. Robert Whittaker an American ecologist saw it wise to put all the living things into five broad kingdoms. However, many people today can't tell which organisms belong to which group and why viruses have been put to their own group. Some groups have got tiny organisms called micro that some people may not even be aware of, though some use them in processing food but can't really tell the exact role these microorganisms play in boosting their economic progress.

TASK

Design a one page write up that can be uploaded on the internet to respond to the above queries and misconceptions.

Item 7

Mr. Magogo Charles is an annual farmer who invests in beans, maize and rice utilizing two of his plots for now 40 years. During dry season he uses his plot in the swamp for rice cultivation but during the wet season he opts for the plot on hilly grounds which he cleared off trees to grow the other crops. He has observed certain slight deep trenches on the hilly plot since last year and a reduction in his yields and increased number of ball -like structure on the roots of the beans he harvests with

yellow leaves. He well knows that rice requires much water so he tries growing it even on the hilly plot during rainy season but he has never harvested from them a single grain.

TASK

Respond to him in writing about the reasons behind his observations and any piece of advice so as to obtain better yields.



END