

Candidate's Name:

Signature:

Random No.						Personal No.		

(Do not write your School/ Centre Name
or Number anywhere on this Booklet.)

553/1
BIOLOGY
Paper 1
2024
2½ hours



MATIGO EXAMINATIONS BOARD

Uganda Certificate of Education

BIOLOGY

Paper 1
Theory

2 hours 30 minutes

INSTRUCTIONS TO CANDIDATES:

*This paper consists of **seven** examination items. It has two sections; **A** and **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.*

Any additional item(s) answered will not be scored.

SECTION A

*Answer **all** the items in this section in the spaces provided.*

Item 1.

Mr. Kityos sugarcane plantation was affected by a natural fire during a dry season, he's now worried that it may take a long period for him to benefit from the plantation.



Task

(a) Name plant parts that were affected by the fire.

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(b) How were the life processes in the sugarcane plant affected by the fire?

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(c) Why would Mr. Kityo take long to benefit from the sugar plantation?

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Item 2.

Okoth is a teen who joined a peer of boys. As a result, he started chewing marijuana which altered his mental senses. One day, Okoth stepped on a sharp nail while walking bare footed. He felt pain and quickly withdrew the foot from the nail.

Task:

- (a) Describe how Okoth's body became aware of the pain caused by the nail up to when the foot was withdrawn

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- (b) How is Okoth's ways of life likely to be affected by the behavior he adopted from the peer?

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(c) Suggest ways in which Okoth would acquire a better life style?

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Item 3.

Suzan gave birth to a baby having brown hair and pink eyes which worried her. On consultation in the hospital, the doctor explained to her that the baby's appearance was due to a genetically inherited disorder. This made Suzan and the husband become more worried about the consequences that may result from the baby's appearance.



Fig. 2 Shows Susan, her husband and their child at 7 years old.

Task

- (a) Identify the genetic disorder and show how it was passed on from the parents to the child

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- (b) What challenges are likely to be faced by the couple while raising up their child

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(c) Suggest ways in which the couple can solve the challenges experienced while raising up their child.

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SECTION B

Part I

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

Item 4.

There has been a lot of digging up of clay for pottery, construction of structures and poor waste management by residents in areas surrounding Lake Victoria, these practices have led to several environmental challenges, threatening sustainability of the lake

Task

Explain to the residents how these environmental challenges arose in the area and advise them on how to minimize on the effect of these challenges.

Emphasize importance of sustainable use of natural resources in the area

Item 5.

The Ugandan government gave a piece of land to a local investor to establish an industry. As a result, several environmental challenges emerged in the area



Fig. 3 shows the piece of land that was given to the local investor by the government.

Task

Explain to the residents in the area how the environmental challenges came about and how to reduce on the effects of the challenges. Explain why the environment in this area should be conserved.

Part II

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

Item 6.

Mr. Kironde's persistent habit of drinking alcohol has caused swelling of his lungs and blockage of the pancreatic ducts. He now feels general body weakness. In the hospital the doctors put him on medical for three months. However, Mr. Kironde recovered from general body weakness following the medication.

Task

What life processes in Kironde's body were affected by alcohol and explain how the effect of alcohol on these processes caused general body weakness. Explain how the medication enabled Kironde to recover from general body weakness.

Item 7.

In a riot initiated by traders in Kampala, who were protesting against a certain government policy, police started shooting bullets in all directions. Musa a mechanic man ran away very fast for a long distance until he eventually entered a friend's place of work. Musa told his friend that he missed breakfast and he was even feeling weak in the body. Musa's friend wondered how he could run fast without eating anything and gave him biscuits to eat. After 30 minutes, Musa felt strength in his body.

Task.

Explain to Musa's friend how life processes in Musa's body enabled him to run fast even though he had not eaten breakfast. Explain how the biscuits Musa ate enabled his body to regain strength.

END