

**Names:**.....**Index. No:**.....

**School Exam Number**.....**Signature:**.....

*Candidates should **NOT** write their Centre Name  
or Centre Number anywhere on this booklet*

**553/1**  
**BIOLOGY**  
**(THEORY)**  
**Paper 1**  
**8 August 2024**  
**2½ hours**



**ENTEBBE JOINT EXAMINATION BUREAU**

**Uganda Lower Secondary 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. Use the answer pages provided at the end for*

**Section B**

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

## SECTION A: COMPULSORY

1. Kitwe village received heavy rains which caused heavy floods around the area and most gardens remained water-logged for a long time. Recently, Mary who practices mixed cropping in the same community observed that the leaves of her maize and bean plants are falling off prematurely and yellowing. Some have brown edges and seem to be growing slower than before. She is wondering why.
  - (a) Which plant requirements could be absent in Mary's garden?

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- (b) Explain how the weather patterns experienced in Kitwe village led to Mary's observations.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

- (c) How did the arrangement of Mary's garden prevent the situation from getting worse?

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2. Lokiru has got a job in a furniture-exporting company to operate a manual saw. One of the job conditions was that he had to take regular medical checkup. The checkup revealed that Lokiru has diabetes but he has decided to hide his health condition from his employer because he fears losing his new job.



**Task**

- (a) Describe how the structures of the Lokiru's arms will enable him to work efficiently on his new job.

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This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

(b) What body changes is Lokiru likely to experience due to the newly-revealed health condition.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

- (c) Prepare a day's meal plan suitable for Lokiru so that he does his work efficiently without worsening his health condition.

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3. Sharon got pregnant a few months after she experienced her first menstruation and the man responsible for her pregnancy has warned that he will take responsibility only if the result is a male child. She is worried about the sex of her unborn baby since she cannot manage to provide the necessities without the man's support.

**Task**

- (a) Explain to Sharon the possibility of her unborn baby having the desired sex.

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- (b) Describe the challenges she is likely to experience due to her condition regarding her age.

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- (c) Advise both parents on how best they can care for their baby after birth.

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## **SECTION B**

### **Part 1**

4. In an attempt to keep the city clean, a garbage dumping site has been established in the neighboring rural community. In this community, whenever the wind blows, it carries polythene materials from the garbage dumping site to the gardens and nearby water bodies. Birds and fish have often been found dead after being suffocated by polythene. The community members have recorded a gradual decrease in farm yield ever since. They blame the decrease on the new establishment in their community.

**Task**

Explain how the new establishment is related to the observed challenges and how the challenges can be overcome. Explain to them why it is necessary to maintain their environment in its original state.

5. Kigura is a sparsely-populated area where most people practice fish farming. A new person who owns large herds of cattle and goats has migrated to this community. He cut the trees and cleared a large part of the wetland to establish his farm. To keep ticks and other parasites away from his animals, he sprays regularly and the excess of the spray and animal excreta flows to the wetland. The neighbours have complained due to death of their fish and prolonged drought experienced in Kigura. Although they blame him for it, he has denied to take responsibility.

**Task**

Explain to the immigrant and show him the responsibility he has in the challenges of the community. Advise community members how to control the observed challenges and why it is vital to conserve their environment.

**Part II**

6. Hillary and Henry are twin brothers. Hillary plays chess most of his leisure time while Henry plays football. One evening they decided to race home but Hillary stopped after running a very short distance which prompted Henry to stop too. After stopping they realized that they were sweating, their heart beat rates and rate of breathing had increased but Hillary took longer than Henry to return to normal and experienced pain in his thigh muscles for some time. Hillary was confused as to why there were such observed differences between them.

**Task**

Explain to the twins the observed body changes. Resolve Hillary's confusion and advise him on how he can avoid experiencing the observed differences in future.

7. Tom retired from active military service due to an amputated leg. He went to stay in his village where he continued smoking heavily and neglected his health. Recently he started having sleepless nights due to tooth aches and violent coughs.

**Task**

Explain to Tom what could have caused him the observed challenges. Prove to him that this could be sign of a bigger health problem and advise him on how he can best take care of his health.

[illegible]



[illegible]

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