Candidate's Name: .....

Signature: .....

Random No.								

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

For Scorers' Use Only

Total Weighted Score		
Initials		

553/1
BIOLOGY
Paper 1
(Theory)
Oct./Nov. 2026
2½ hours

UGANDA NATIONAL EXAMINATIONS BOARD

Uganda Certificate of Education

INSTRUCTIONS TO CANDIDATES:

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

Section **A** *has three* **compulsory** *items. Responses to items in Section* **A must** *be written in the spaces provided.*

Section **B** *has* **two** *parts;* **I** *and* **II.** *Respond to* **one** *item from* **each** *part.*

Responses to items in Section **B must** *be written in the answer booklet(s) provided.*

Responses to **each** *item in Section* **B** *should start on a* **fresh** *page.*

Respond to **five** *items* **in all.**

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

For Scorers' Use Only

Item No.	Basis Code	Weighted Score	Scorer's Initials
1	PU		
	PA		
2	CU		
	CA		
3	RU		
	RA		
(4/5)	EU		
	EA		
(6/7)	MU		
	MA		
Total Weighted Score			

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SECTION A

Respond to **all** *items in this section in the spaces provided.*

Item 1

One season, Alice planted beans and cassava in the same garden.
When the bean plants started forming structures for reproduction, Alice sprayed the crops with a pesticide that remained active for a long time. When the cassava plants were at tuber formation stage, a strong wind destroyed some parts of both the cassava and bean plants. These made Alice to wonder if she could obtain any harvest from her garden. However, at harvest, she got some yield from the cassava plants but very poor yield from the bean plants. Alice would like to understand this occurrence.

Task:

(a) Explain how the bean plants were affected which eventually led to the very poor yield.

For Scorer's Use Only

Basis Code	PU
Score	

(b) Explain how the cassava plants managed to overcome the challenges and produced some yield.

For Scorer's Use Only

Basis Code	PA
Score	

Item 2

A 50-year-old man suffering from diabetes stays with his grandchild. One day, while sitting at home discussing challenges associated with his health condition with the grandchild, they heard a loud sound and ran into the house. Both experienced increased breathing rate and increased heart beat in their bodies.
The grandchild is concerned about the sudden changes in their bodies and the act of running into the house.

Task:

(a) Explain the concern of the grandchild.

For Scorer's Use Only

Basis Code	CU
Score	

(b) Advise the old man on how to manage his medical condition.

For Scorer's Use Only

Basis Code	CA
Score	

Item 3

During one of the regular pregnancy check-ups in the school, Nimo, a 16-year-old girl was found to be pregnant. She became irregular at school which affected her studies. Later she gave birth to a baby with sickle cell anaemia.

Nimo blames Hytol the father of her child for the sickle cell trait. However, both Nimo and Hytol appear normal for the sickle cell trait. Nimo's father is threatening to chase her from home for producing a baby with sickle cell anaemia. Nimo is worried and needs advice.

Task:

(a) Using illustrations, explain to Nimo and her father how the child's condition was brought about.

For Scorer's Use Only

Basis Code	RU
Score	

(b) Advise other girls of Nimo's age on how to avoid problems faced by Nimo.

For Scorer's Use Only

Basis Code	RA
Score	

SECTION B

Part I

Respond to only **one** *item in this part.*
Responses should be written in the answer booklet(s) provided.

Item 4

A swamp with a stream running across it used to provide residents with water for domestic use, for animals to drink and with medicinal plants. One day, a local authority converted an area located near the swamp into a landfill for dumping domestic rubbish and other solid wastes from the nearby town.

After some time, the residents of the area have started complaining of bad smell, change of colour of water in the stream and reduced medicinal plants. There were also increased cases of Malaria in the area. These problems need to be addressed.

Task:

(a) Explain how actions of the local authority caused challenges experienced by the residents.

(b) Suggest possible solutions to the challenges experienced in the area for a better living.

Item 5

In one savanna grassland, a group of lions used to feed on kobs. After a prolonged drought, the lions became more common around human settlements. This frightened the community members who complained to the Wildlife Authority about the increased attacks by the lions. Due to fear of the lions, children in the community were no longer attending school regularly. The community needs help.

Task:

(a) Explain how the ecological changes in the grassland led to the problems experienced by the community.

(b) Suggest ways by which the Wildlife Authority can ensure that the community lives peacefully.

Part II

Respond to only **one** *item in this part.*
Responses should be written in the answer booklet(s) provided.

Item 6

Henry stays with his 7-year-old son in a trading centre. He set up a shop in a room next to a bar where most clients are also smokers. His son enjoys eating sweets and biscuits. He also brushes his teeth once a week, has dark spots on his teeth, experiences toothache and bleeding gums. Currently, both Henry and the son have difficulty in breathing, high Body Mass Indices and are worried about their health status. They need help.

Task:

(a) Explain the causes of the health problems experienced by Henry and his son.

(b) Advise Henry and his son on how to improve their health status.

Item 7

A debate arose among senior three students about the explanation of the percentage composition of air entering and leaving the lungs to the atmosphere as shown in table **1**.

Table 1

	Experiment A	**Experiment B**
Component of air	Percentage of air entering the lungs from the atmosphere	Percentage of air leaving the lungs to the atmosphere
Carbon dioxide	0.04	4
Oxygen	21	17
Nitrogen	79	79

The students failed to agree on the explanation each side gave.

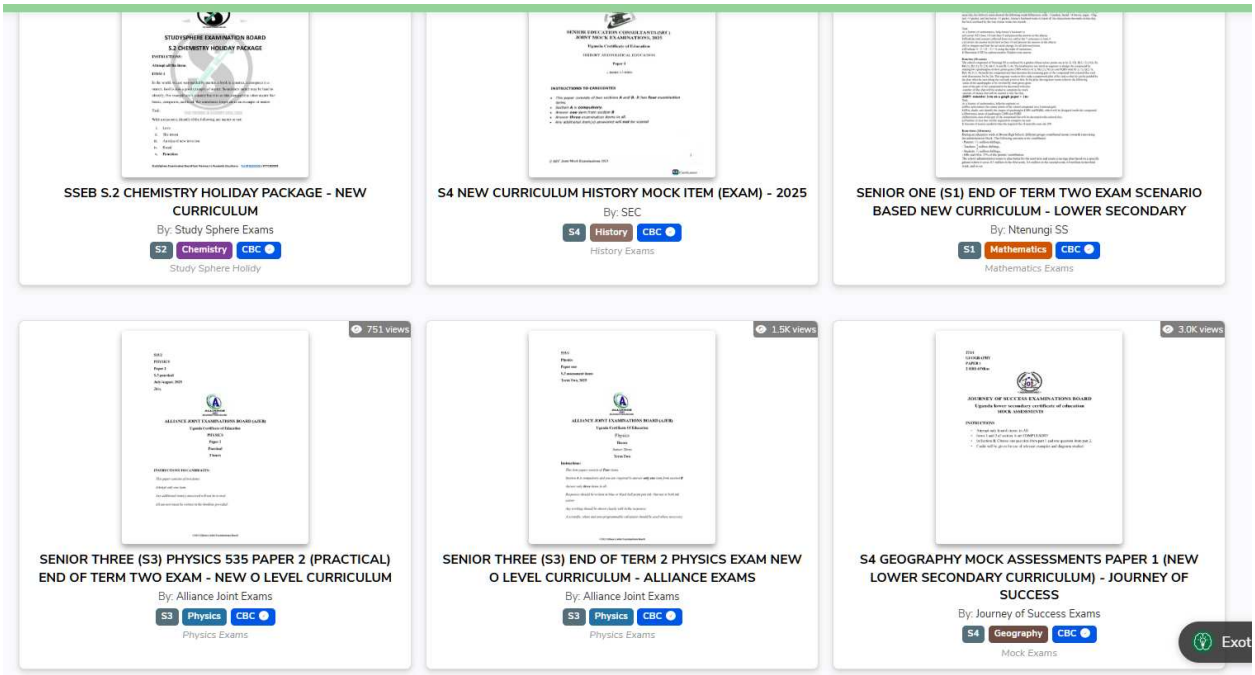
Task:

(a) Explain to the students the results obtained in table **1**.

(b) Describe how the mechanism of the respiratory system led to the process investigated in experiment **B**. (*Do not include figures in the description.*)

END

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