

Candidate's Name: Signature:

545/1

Biology

Paper 1

2 hours



STUDY SPHERE EXAMINATION BOARD

Uganda Certificate of Education

PRE-REGISTRATION EXAMINATION 2025

BIOLOGY

Paper 1

2 hours

INSTRUCTIONS:

1. This paper consists of two sections; A and B. it has six examination items.
2. Section A has three compulsory items.
3. Answer two item from section B.
4. Answer five items in all.
5. Answers to section A must be written in the spaces provided while those in section B must be written on the answer booklet(s) provided.
6. Any additional item(s) answered will not be scored.

FOREXAMINER'S USE ONLY			
SECTION	ITEM	SCORE(S)	EXAMINER'S SIGNATURE
A	1		
	2		
	3		
B	4		
	5		
	6		
TOTAL			

SECTION A (Attempt all the items)

Item 1

Mark is a student who had love mangoes. So, he decided to plant a mango tree at home. The tree developed and started providing fruits to Mark. However, the tree provided fruits at even the old age of the Mark.

Task;

- a. Explain how this discribe the difference in the development of the mango tree and the student.

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- b. How is the development of plants economically significance to the economic survival of man.

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Item 2

Peter joined a group of young boys who sniff petrol and smoke marijuna frequently. The group became known for crime, violence and causing chaos in the trading centre.

Peter and his group members were one day surrounded by police men who fired gun shots at them. This caused Peter's heart beat to increase suddenly and have ran very fast back to their home.

Task:

- a. What challenges do you think Peter may face if he continues to associate with such a group.

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- b. Describe how Peter's body coordinated and made him reach home.

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- c. Explain how Peter can avoid challenges associated with being in such groups.

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Item 3

Grace a 19-years old girl living in the hilly areas of mount.Rwenzori in Kasese, became pregnant by a man from her home village. Due to the staying in the the hilly area, she failed to access antenatal care. After birth of the baby, the man refused to provide parental support, claiming

that the baby's skin and hair appearance was unlike any in his family lineage. Distressed, Grace consulted a doctor who explained that the baby's appearance was due to a genetic disease.



Figure1.1 shows Grace and her child

Task:

- a. Identify the genetic disease and show how it was genetically passed on the baby.

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- b. Explain the dangers of the lifestyle experienced by Grace before giving birth.

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c. State the risks associated with the situation Grace encountered at her age.

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SECTION B (Attempt two items from this section)

Item 4

In a village in western Uganda, Swamps have been cleared for cattle farmlands and sand mining. The area environmental officer organised a radio talk show on sustainable resources in swamps. Unfortunately, Doreen a resident of the area only heard the concluding statement, *"From the presentation, I kindly request every body to use our natural resources sustainably"*

Task:

Explain to Doreen the problem being addressed by the environment officer and how they can be solved. Explain why the village should conserve the natural resources in the swamps.

Item 5

Ayebale, a good sports lady, and her husband who is a smoker, live near a swampy area. As time went on, she developed poor appetite and was found to be HIV positive, having heart and respiratory diseases and frequently suffers from malaria. Ayebale observed that her level of performance had greatly declined and she could not understand the cause.

Task:

- a. Explain why Ayebale's level of performance in sports had declined.
- b. Advise Ayebale on how she can manage her health condition.

Item 6

Jackson, whose mother has hepatitis B was involved in a moto accident. He hit his head. Lost a lot of blood and became unconscious. He was rushed to the nearby hospital where they found that he is of blood group AB. The doctor advised that Jackson should undergo blood transfusion in addition to other medication.

the hospital did not have blood but Jackson's relative with safe blood were willing to donate blood to save his life. However, they were confused as to who of them could donate blood. The table below shows the blood groups of Jackson's relative available.

Relative of Jackson	Blood group
Cousin	A
Mother	B
Sister	AB
brother	O

Task:

- Explain how the accident affected the functioning of Jackson's body
- Without referring Jackson to another hospital, suggest with reasons. Which of the relative(s) could donate blood to Jackson.

THE END

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