



For Mock Exams and any Inquiry
 +256 772 688 769
 +256 394 506 481
 +256 703 800 597

PRE-REGISTRATION EXAMINATIONS 2024
Uganda Certificate of Education
BIOLOGY
PAPER 1
TIME: 2 HOURS 30 MINUTES

INSTRUCTIONS:

- This paper consists of **six** examination items.
- It has **two** sections; **A** and **B**.
- Attempt **all** items in Section **A** and **two** items in section **B**
- Write answers of Section **A** in the spaces provided while answers of section **B** on the answer sheet(s)

SECTION A

Item 1

Two Ugandan Towns **P** and **Q** each have industries that release carbon dioxide gas, smoke and dust. The levels of air pollution in the two towns are as shown in table

Town	Level of air pollution(units)
P	25
Q	75

Peter was living in town **P**. He used to jog every day, and would experience normal changes in his body during and after jogging. When he shifted to town **Q**, he continued with his usual routine of jogging. However, he started experiencing complications such as difficulty in breathing, chest pain and coughing.

Task

(a) Explain to Peter his experiences while living in town **P**. (04 scores)

.....

.....

.....

.....

.....

.....

.....

.....

(b) Explain Peter’s new experiences encountered in town **Q**. (04 scores)

.....

.....

.....

.....
.....
.....
.....
.....

(c) Advise Peter on how to manage the challenges experienced in town Q. (02 scores)

.....
.....
.....

Item 2

In Makondo village, Mr. Ntumwa’s cassava garden was invaded by the neighbor’s goats at the time of tuber formation. He reported to the L.C 1 chairman but the owner of the goats has refused to compensate Mr. Ntumwa and he is worried that the yields will be poor.

Task

(a) Identify the plant structures affected by the goats. (02 scores)

.....
.....

(b) Explain how the goats affected the processes in the cassava plants. (06 scores)

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

(c) Why should Mr. Ntumwa be compensated even if the cassava plants were able to grow again? (02 scores)

.....
.....
.....

Item 3

(a) **AIDS** is a viral disease that has claimed many lives of people worldwide. It is carried by a retrovirus, that is small, very infectious and possess features for both living and nonliving things.



<p>For Mock Exams and any Inquiry +256 772 688 769 +256 394 506 481 +256 703 800 597</p>

Tasks: State reasons why viruses are considered to be;

(i) Living things. (01 score)

.....
.....

(ii) Nonliving things. (01 score)

.....
.....

(iii) How can students prevent themselves from being infected with AIDS? (02 scores)

.....
.....
.....

(b) Cassava plant, *Manihot esculenta* produces root tuber, which is the major source of fiber and carbohydrates in many families in Uganda. During a research study in Kikubajinja village, it was noted that the major cause of low cassava productivity is infection with a viral disease, Cassava mosaic that causes twisting of leaflets reducing leaf area exposed to light and amount of food manufactured by the plant.

Task

Describe how cassava mosaic is spread and suggest the ways farmers in the village can prevent its spread and effects. (06 scores)

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

SECTION B

Answer only **two** items from this part.

Answers should be written on the answer sheet(s) provided

Item 4

Moses planted and mixed maize and bean crops on his plot along an extremely dusty road side. As a way of obtaining good yields, prepared his garden well, planted quality seeds in closely packed columns and rows, applied fertilizers, sprayed to prevent any pests and removed weeds. He planted maize earlier and planted beans later after maize plants were already tall. His maize yielded poorly and beans remained stunted with no yields. He is nervous about the outcomes yet spent lot of money on the garden.

<p>For Mock Exams and any Inquiry +256 772 688 769 +256 394 506 481 +256 703 800 597</p>

Task.

Help Moses understand the cause of the outcomes and advise how he can plant the same plants in the same garden in other seasons with minimal losses. (15 scores)

Item 5

Musa a student at Kyambogo University was knocked down by a speeding car as he was escorting his sister Fatuma back to school. He was rushed to Frost hospital and the doctor realized that he had lost a lot of blood. Musa needed a donor of blood but Fatuma could not donate blood to him since he was of blood group A which Fatuma could not believe since they have the same mother and father. Later they got a donor and Musa got proper treatment. Fatuma realized some wounds on Musa's body healed on their own without being dressed. The doctor advised Fatuma to feed Musa on green vegetables and liver.

Task

Analyze and help Fatuma to understand the whole situation as a student of Biology. (15 scores)

Item 6

John was suspended from school as a result of drinking alcohol. He engages in heavy drinking of alcohol in the nearby trading center. One day, as John approached a swamp on his way home staggering from drinking alcohol at 6:00 pm, he encountered a snake. His heart started beating faster and his breathing rate increased. He tried to pick a nearby stick but he could not get hold of it on several attempts, so the snake escaped.

Task

Describe how John's body coordinated to bring about his reactions and suggest effects and solutions to John's lifestyle. (15 scores)

END

For Mock Exams and any Inquiry

+256 772 688 769

+256 394 506 481

+256 703 800 597