

Student's Name: ..... Steam: .....

Signature: .....

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553/1

BIOLOGY

Theory

Paper 1

November 2024

2 hours



ASK INTEGRATED TEACHER'S EXAMINATIONS BUREAU LTD

Uganda Lower Secondary Certificate of Education

END OF YEAR ASSESSMENT 2024

BIOLOGY PAPER 1

SENIOR TWO

(Theory)

2 Hours

**INSTRUCTIONS TO CANDIDATES:**

*This paper consists of five examination items.*

*It has two sections; A and B.*

*Section A has three compulsory items.*

*Section B has two examination items. Answer one item from this section.*

*Answer four items in all.*

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

## Item 1

A new minister of agriculture was chosen by the president. He was tasked to lay strategies for improving the agricultural sector of Uganda.

a) As a student of biology, explain what soil conservation methods you would recommend to the minister in the following areas

i) Kabale

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ii) Karamoja

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iii) Lake Victoria shores

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## Item 2

The Kampala district officer wanted to address the problem of poor feeding in Katwe region. He studied the diets and feeding behaviours in various categories of people as follows:

- **Category A:** the busy working class: the youths and the school children:  
For most of their working hours, survive on processed wheat flour foods e.g. chapattis, samosas and cakes. Factory sugar drinks e.g. sodas and energy, because they lack adequate time to prepare biologically recommended food.

- **Category B:** families: the common and most affordable meal consists of white maize flour (posho) and beans.

### Task

i) Explain the dangers associated with this kind of diets and life styles (06 Scores)

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ii) What best recommendations can you make to the people? (04 scores)

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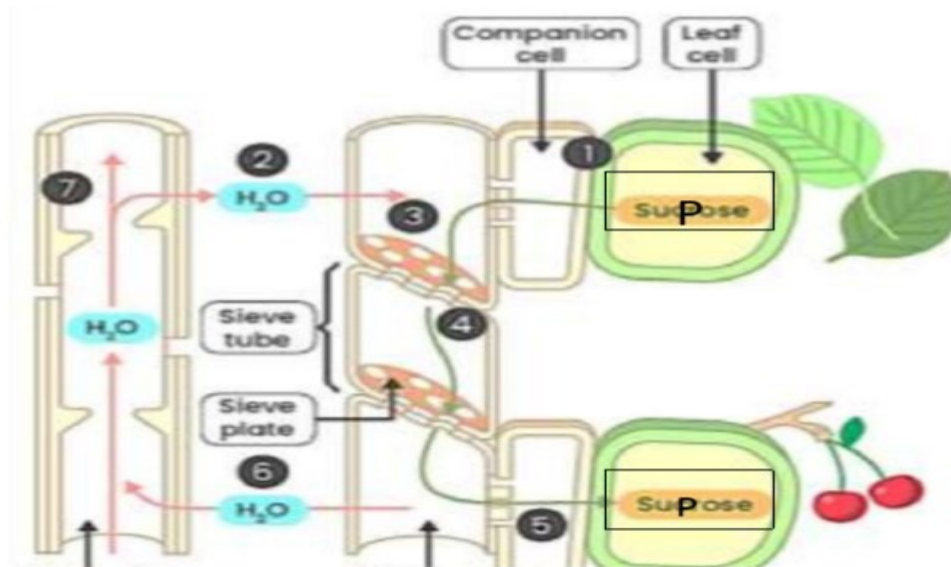
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### Item 3

Upon absorbing water and mineral salts from the soil and carbon dioxide from the atmospheres, plants use these materials to make glucose during photosynthesis which is converted to substance P. P is transported to various parts of the plant through tissue T that is composed of the companion cells and sieve tube cells. However, the flow of these materials are disrupted by various human activities.



## Task

a) Identify tissue T, substance P and plant parts to which P is transported. (3scores)

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b) Explain the flow of water and P in the plant in tissue T. (5scores)

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c) Mention the various ways that the flow of materials in plants is interrupted and suggest measure to overcome these challenges. (4scores)

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#### **Item 4**

Kyeyune and his brothers always have posho and meat as their daily meal. This has enabled them to have the energy through respiration in their body cells. However one of the brothers does not enjoy the meal because he has a missing tooth which prevents him from enjoying the meat. He is the thinnest of them all and he looks very stunted, with a lot of hair loss.

#### **Task**

- (a) Explain how Kyeyune and his brothers obtain the nutrients from the food and how it reaches the body cells like the hands where it produces energy for writing.
- (b) Which type of teeth is Kyeyune's brother missing and why is he unable to enjoy the same meal and make recommendations to him about his body disorders?

#### **Item 5**

Mr Yeko has a huge farm full of avocado trees that have started flowering. He wanted to control pollination of the flowers and so he enclosed the shoot of the tree in polyethene bags to prevent insects from landing and pollinating the flowers. He tied transparent bags around the shoots and checked on the plants frequently. When he checked on the plants at 9:00 am, he noticed droplets of a colourless liquid inside the polyethene bags. When he checked again at 2pm, he found out that the number of droplets had increased. This worried him as he thought his apples were going to dry up. He rushed to the agricultural officer for help.

#### **Task**

As a student of biology, prepare a report that you would send to the agricultural officer to calm Mr Yeko down and stop him from worrying.



Total  
scores

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# AITEL END OF YEAR ASSESSMENTS

## Uganda Certificate of Education

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