

S.1 Biology
Theory paper 1

Paper 1
Theory

INSTRUCTIONS

- ✧ *This paper consists of three examination items in two sections A and B.*
- ✧ *Write your responses in the gaps left for section A and use the answer booklets given for responses in section B*
- ✧ *Respond to all the items in both the sections.*
- ✧ *Untidy work and unreadable handwriting will not be scored.*

SECTION A

Item 1

At Nabyongo village, people and their crops were invaded by severe infections. Some people died while others are in critical condition. All tomatoes were attacked by a blight pathogen. On examination by the government health workers, it was found out that the diseases that attacked people were Malaria and Cholera. The village health workers have been asked to make a report but they lack knowledge on this invasion. Your knowledge is required to help them.

Task

Help the health team to understand;

- ai) The pathogens that caused the disease that invaded people and crops at the village.
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- ii) The vectors that are responsible for spreading the diseases around the village among people.
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..... 03scores
- iii) The taxonomic kingdom to which each specific group of pathogens that attacked people and crops belong.
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..... 03scores
- b) The most difficult disease pathogen to control among others and why.
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..... 03scores
- c) How Malaria spread in the village.
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..... 03scores
- d) How the two diseases that attacked people can be controlled.
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Item 2

Jane planted her maize in the garden and the maize plants all looked healthy and vegetative. However, some maize plants that were planted under the shade of the tree in the middle of the garden failed to produce cobs. The leaves were yellow and the stems were very weak and bent their shoot heads away from the tree towards the field. Eventually, Jane harvested nothing from these plants.

Task

Explain to Jane

- a) Why the plant shoots bent to the field away from the tree shade.

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- bi) The major plant cells that were affected due to yellowing of leaves.

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- ii) How the plant cells identified above were affected.

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- iii) How the effect caused on the plant cells in bii) above affected the product yields of the maize plants.

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Section B

Item 3

Innocent is an S.1 learner. Innocent was given a task by his Biology teacher to classify some leaves using a dichotomous key. One leaf from each category is provided to you as specimens A,B,C and D. Innocent tried to open some books for research but during his research, he came across some pictures of animals whose names were not clear to him. The pictures were named as follows.

Picture 1	<i>Musica domestica</i>
Picture 2	<i>Periplaneta americana</i>
Picture 3	<i>Apis mellifera</i>
Picture 4	<i>Canis familiaris</i>

She failed to understand why the animals were named like that.

Task

Your help is needed to

- a) Construct the dichotomous key 06scores

- bi) Translate the names of the animals into common English to help Innocent understand the pictures 04scores

- ii) Describe what each part of each name represents. 08scores