

**ST. TERESA SS KKUNGU**  
**New Higher Secondary Curriculum**  
**END OF TERM I**  
**S5 BIOLOGY PAPER 1**  
**2:30 minutes**

***INSTRUCTIONS***

*Attempt all items*

*Answers in SECTION A should be written in spaces provided*

*Answers in SECTION B should be written on the answer sheets provided*

**SECTION A**

**ITEM 1:**

Tom is a prominent farmer dealing in citrus fruits in Kawogo village. He has recently had a decrease in yield as a result of yellowing, and drying of citrus plants, yet he always invest alot of money in his Ochard plantation. The agriculture officer diagonized plants and found roots rotting with black patches. The agriculture officer told Mr. Tom that a fungal disease mainly affecting roots was affecting his citrus plants.

Tasks

- a) Identify the tissues affected in the infected organ of the citrus plants.

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- b) Explain how any two of the above tissues adapted for their role.

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**ITEM 2:**

During a scientific investigation, each student was given 50 micro meter long specimen. After observing using a light microscope, one of the students made a drawing of the specimen which was 20mm long. The student got stuck because he was unable to find magnification.

Tasks:

- a) Help the student understand the meaning of magnification and coming up with the magnification of the drawing.
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b) Mention the advantages of using the microscope that was used by students.

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### ITEM 3

Jane was sweeping amidst the moving wind. She later coughed mucus containing dust and she was surprised that dust did not enter one of her vital organs.

(a) Help her understand what happened.

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(b) Identify the organ that was most likely to be affected by the dust.

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(c) Explain how any one tissue in the above-named organ able to perform its role.

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## SECTION B

### ITEM 4.

In one of the investigations to determine effect of inhibitors on enzyme-controlled reaction, John used a combination of amylase enzyme and egg solution while Simon used amylase enzyme and starch solution. The teacher said that John's combination would not give any accurate result because amylase enzyme does not break down eggs.

#### Tasks

- Help John understand why his combination could only give false results.
- Explain how the different types of the factor under investigation affect enzyme activity and how they can be overcome if possible.

**ITEM 5:**

The bodies of organisms have many chemicals of life. These enable organisms survive successfully on planet earth. It has been observed that fats are a common food store in many organisms living in cold environments and desserts.

Tasks: Explain the observations in the scenario and how are fats formed in the bodies of living organisms.

**END**