

Name:.....Stream:.....

LCE  
S3 BIOLOGY  
November, 2023  
2 hours



**LCE EXAMINATIONS 2023**  
**Uganda Certificate of Lower Secondary Education**  
**END OF YEAR ASSESSMENT 2023**  
**SENIOR THREE**  
**BIOLOGY**  
**2 hours**

**INSTRUCTIONS**

- All items in section **A** are **compulsory**
- Attempt any **TWO** items in section **B**.

**SECTION A: (Intermediate level)**

1. LCE's farm has many plants with so many roots. The suitability of roots in the farm is unknown to the Bureau. Use the photographs below to respond accordingly.

prop roots



butress roots



carrot



sweet potato



Roots of mangrove tree



**Task**

Sensitize LCE and other farmers, how roots may be modified to perform different functions for plants? (05 scores)

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2. An assistant in the biology laboratory is looking for a housefly, cockroach, mosquito, termite, bee and butterfly for the practical examinations.

**Task**

Advise him on where he can find and how he can identify each insect with a unique structural feature from the rest? (10 scores)

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3. The farmer in Mukono has a well-established fish farm. Fishes are exchanged among different ponds by trained employees. Employees were previously trained to drain fishes together with water from pond to pond simultaneously, but without an explanation. The farmer, recently recruited untrained new employees who are draining water from ponds first, before moving fishes from one pond to another. The farmer is now challenged with an increased number of fish deaths under new employees' care unlike in those days of old trained employees.

**Task**

Write an explanation you may give to the fish farmer to solve this challenge?

(05 scores)

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4. You were part of the village health team which investigated, causes and prevention of high blood pressure, coronary heart disease and stroke.

**Task**

Write a report back to members of your village?

(05 scores)

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5. The school warden called for an assembly where he informed the school that he won't tolerate boys who bath but forget to brush. Anyone found shall be suspended immediately.

**Task**

Write a message to support the school warden as the school health prefect? (05 scores)

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6. You're a group leader in a class where the teacher taught the process involved in the digestion of starch in the alimentary canal. All group members failed to understand the flow.

**Task**

Use the tree diagram to summarise the key aspects involved in the process of digestion of starch? (10 scores)

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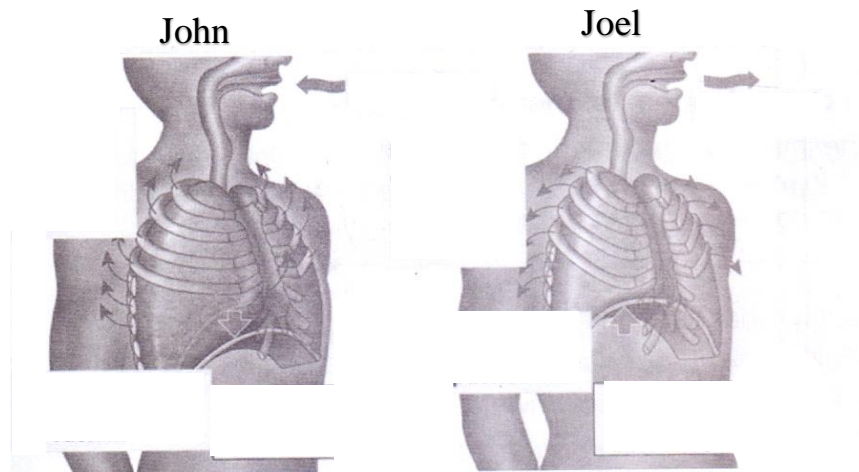
**SECTION B: (High order level)**

7. The farmers of Kigezi highlands, Karamoja and Lake Victoria basin presented their concerns of reduced soil fertility which has resulted into low yields in their regions. This was tabled on the floor of parliament and the matter was referred to the Ministry of Agriculture, Animal industry and Fisheries (MAAIF).

Write a statement, explaining causes of reduced soil fertility and methods of promoting soil conservation in each region as a permanent secretary and biologist?

(20 scores)

8. The most accurate tailor in Kampala took chest circumference measurements for John and Joel. Measurements were taken when John was breathing in and Joel was breathing out. The tailor made shirts for John and Joel following their accurate measurements. However, neither the shirt made for John nor Joel fitted them in the chest. Both John and Joel are complaining and the tailor has no clear explanations for each and for himself.



Write an explanation which you may give to John, Joel and the tailor? (20 scores)

9. Teaching children how lungs function to ensure ventilation seems difficult. As a graduate of biology in gaseous exchange, design a model and demonstrate how it can be used to teach the mechanism of breathing in, to enable children understand it with locally available materials.

Your design should include aspects like title, list of each material and the part it represents on the human respiratory system, Procedures, illustration of the model, explanation of how it works and conclusion. (20 scores)

**END**