



# MOCK EXAMINATIONS 2024

Uganda Certificate of Lower Secondary Education

Biology paper 1 (Theory)

2 hours 30 minutes

## INSTRUCTIONS

- ✓ You are strongly advised to read each item carefully before responding to it.
- ✓ This paper consists of two sections A and B.
- ✓ Respond to all items in section A and only TWO items in section B, one from each part.
- ✓ Responses to section A must be written in the spaces provided.

| SECTION | ITEM | SCORES | EXAMINERS SIGN. |
|---------|------|--------|-----------------|
| A       | 1.   |        |                 |
|         | 2.   |        |                 |
|         | 3.   |        |                 |
| B       | 4.   |        |                 |
|         | 5.   |        |                 |
|         | 6.   |        |                 |
|         | 7.   |        |                 |

**ITEM 1**

Douglas is a farmer who plants maize every season and has done this for a long period of time on his small piece of land located in the valley (lowland). This year, he planted towards the end of the wet season characterized by daily heavy rains, very few seeds germinated. Due to financial challenges, he never weeded his crops. He observed that, most of his plants were stunted and had yellow leaves, at the beginning dry season, some dried up and at the time of harvest, he received very low yields.

- (a) As a biology student, explain how the location of the land could be responsible for quality of yields.

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- (b) Describe how his practices could have resulted into yellowing of leaves of germinated plants and low yields.

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(c) Advise Mr. Douglas on what he should do next time so as to avoid the challenges he has faced this season.

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**ITEM 2**

Gerald a senior two student was recently expelled from school because he was found with marijuana in his bag, The following day he sneaked back into the school and was caught stealing a computer from the library. The security guard was instructed to keep watch of him as they waited for the police to come. As the police arrived at the gate which was far away, Gerald was able to see police officers at the gate and his heart beat increased, begun sweating and breathed heavily, he used force to ran away from the watchman and jumped over the fence, when the security guard was asked, he claimed he is not always able to see people who are far away.

**Tasks:**

(a) Describe how Gerald's body coordinated to bring about his actions from the time he saw the police officers up to when he ran away.

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(b) What are the likely effects of Gerald's lifestyle are as described in the scenario and state ways in which he can change his life style?

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(c) Explain the challenges being faced by the security guard and state how he can overcome them.

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**ITEM 3**

Jayden and shalom, have been married for two years now. Last year, shalom got pregnant and after nine months of pregnancy, she gave birth to a baby boy whom they circumcised but bled excessively and the bleeding took long to clot, the baby has reddish swollen and painful joints, frequently nose bleeds, passes blood in the stool. Both of them were physically normal.

**Tasks:**

(a) Identify the possible genetic disorder and show how was genetically transmitted to the baby.

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(b) Describe the health challenges that the child will face in future.

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Suggest various ways how the couple can manage the baby's condition.

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## SECTION B

*Attempt any one item from each part. Any additional item from the same part will not be scored.*

### PART I.

#### ITEM 4

Due to limited land, some people in Bukababi village in Mayuge district have decided to clear the swamps for settlement and rice growing, however they have faced several challenges and do not know the exact cause of those challenges.



Figure1.0 above shows two pictures taken from different parts of Bukababi village.

Task:

Explain the problems being faced by the people of Bukababi village and help them to overcome the challenges that they are facing.

### ITEM 5

Lwakhakha boarder town in Naminsindwa district is developing at a faster rate due to the cross border trade. The population has rapidly increased in Shauri yako, a suburb in Lwakhakha town. People in this suburb dispose most of their wastes in the nearby stream that links to river Malaba. However they have complained of increased cases of death due to malaria and chlorella. The people are concerned but not certain of what could be the source of the problems and how to overcome them.



Figure1.1 above shows part of the stream that passes through Shauri yako and links to river Malaba.

Task:

Help the people of Shauri yako to understand the source of their problems and give them advice on how they will overcome their challenges.

## PART II

### ITEM 6

Jemima has been an office secretary for over 20 years, recently she has been complaining of chest pain, fatigue, and shortness of breath, she also urinates large quantities of dilute urine and frequently feels headache. These complications have limited her from attending to work.

Task:

Explain the causes of the conditions that Jemima is having and give her advice on what she should do so as to manage her conditions, additionally sensitize people on how to avoid such conditions.

### ITEM 7

Joseph, a new resident of Namanve industrial area likes jogging in the morning hours before going for work; he does this to keep his body healthy. However, he breathes and sweats heavily in the process and always fails to complete his exercise; he has associated this with air pollution from traffic congestion and industrial emission.

Task:

Explain to joseph his experiences during the exercise and the dangers of jogging within his area of residence and suggest the possible ways in which he can overcome the challenges.

*“Illuminate, innovate, elevate”*