

# ST.PETERS HIGH SCHOOL BUSABALA

## UGANDA CERTIFICATE OF LOWER CURRICULUM

### END OF YEAR EXAMS 2024

#### S.3 BIOLOGY

TIME: 2 ½ HOURS

NAME.....SIGN.....  
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#### INSTRUCTIONS

ATTEMPT ALL ITEMS

#### ITEM 1

Two farmers Paddy and Jaliah planted equal acreage of maize in the same season. Paddy's garden is near an extremely dusty and busy murram road, while Jaliah's garden is very far away from the road. The maize in both gardens showed different growth rates, despite being under similar weather conditions and soil profile. The garden for Jaliah was invaded by caterpillars at flowering stage, however, the maize managed to give yields before that of Paddy.

Task

- (a) Point out the major processes and organs affected by the prevailing conditions in the garden of the two farmers. ( 3 scores)

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- (b) Explain how the conditions in the garden of Mr. Paddy were responsible for the delayed yields. (6 scores)

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(c) How did the maize in the garden of Madam Jaliah finally managed to give yields despite all the challenges. ( 3 scores)

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Juliana was always sick and initially resisted seeking medical attention but eventually realized the negative impact her deteriorating health was having on her life. When she was eventually taken to the hospital, she reported symptoms of frequent urination, thirst, fatigue, weakness, blurred vision, unintended weight loss, irritability, and mood changes after meals. Her diet primarily consists of posho and sweet potatoes. An examination revealed difficulty standing steadily and alcohol on her breath.

Task.

(a) Share insights on which organs are affected by the patient’s symptoms explaining the roles these organs play in the body. (6 scores)

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(b) Discuss possible causes of her condition. (3 scores)

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(c) Suggest strategies for managing the condition ( 3 scores)

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Item 3

Nakirijja is a secondary school girl, studying in a day school near her home. As a result of bad peer groups, she started drinking alcohol and dodging school. When the school authority tried to trace why Nakirijja was dodging school, they found out that she had a boyfriend in the nearby village, where she would stay, without reaching school.

A few months later, Nakirijja started feeling sickly and vomiting. When her parents carried out an HCJ urine test, it turned out positive and they were very bitter with her. She was forced to marry her young boy friend by her parents; however she continued with her habits and did not attend antenatal care.

Task.

- (a) Explain the events that resulted into the changes in Nakirijja's body from the time she met her boyfriend up to when she started feeling sickly and vomiting (6 scores)

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(b) What are the likely consequences of Nakirijja’s lifestyle? (6 scores)

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(c) Advice Nakirijja on how she can improve her living conditions. (3 scores )

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**SECTION B ( ATTEMPT ALL ITEMS )**

**PART I**

#### **ITEM 4**

Lameck , a good sports man , and his wife who is a smoker, live near a swampy area in Busabala. As time went on, he developed poor appetite and was found to be HIV positive, having heart and respiratory diseases and frequently suffers from malaria. Lameck observed that his level of performance had greatly declined and he could not understand the cause.

#### **SUPPORT MATERIAL**





### **Task**

- (a) Explain why Lameck's level of performance in sports had declined.
- (b) Advice Lameck on how he can manage his health condition.

## **PART II**

### **ITEM 4**

Reagan and Fred, both considered strong contenders as athletes, were expected to lead their respective classes to victory in the inter-class competitions. However, on the day of the event, Fred consumed a heavy carbohydrate meal while Reagan abstained from eating. Despite this, Fred won all his races while Reagan struggled and eventually collapsed during one of the races. Reagan had to be carried off on a stretcher, breathing rapidly and heavily and was able to recover after giving him glucose and enough resting time.

### **SUPPORT MATERIAL**



### Task

Explain the physiological role of nutrition in athletic performance, identify the problems faced by Reagan and propose solutions to optimize performance and prevent adverse outcomes in similar situations.

***'SUCCESS DOESN'T COME TO YOU, YOU'VE GOT TO GO TO IT.....'***

**END**



