

ST.PETERS HIGH SCHOOL KAJJANSI

UGANDA CERTIFICATE OF LOWER CURRICULUM

END OF YEAR EXAMS 2024

S.3 BIOLOGY

TIME: 2 ½ HOURS

NAME.....SIGN.....

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

Michael joined a group of young boys who sniff petrol and smoke marijuana frequently. The group became known for crime, violence and causing chaos in training centers.

Michael and his group members were one day surrounded by policemen and the policemen fired gun shots at them. This caused Michael's heart beat to increase suddenly and he ran very fast to their home.

SUPPORT MATERIAL



Task

(a) What challenges do you think Michael may face if he continues associating with such a group (6 scores)

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(b) Describe how Michael’s body coordinated and made him reach home(6 scores)

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(c) Explain how Michael can avoid challenges associated with being in such a group. (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 Kajjansi. 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

