

**KIYALA HIGH SCHOOL**  
**END OF YEAR ASSESSMENT TEST 2024**  
**BIOLOGY**  
**S.3**

**Time: 2 Hours**

**INSTRUCTIONS:**

- The paper contains *five* items with both section **A and B**
- *Section A* is compulsory and choose only one item from *section B*
- Any *additional item* attempted *will not* be scored

**SECTION A**

*Attempt all items in this section*

**Item 1**

Badru is a pumpkin farmer in Kitumba village. The village experienced along dry season characterized by high temperatures, much sunshine and dry windy conditions. During the season, the hairy pumpkin leaves would drop (bend downwards) and flower petals remained closed for a long part of the day but they would straighten and open during early morning hours respectively. Badru had a very poor yield of pumpkins.

***Task***

**a)** Mention the process in the pumpkin plants that were affected by the conditions experienced.

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**b)** Describe how the conditions experienced affected the functions of the pumpkin plants which led to poor yields.

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**c)** Explain how the pumpkins managed to survive the conditions experienced.

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## **Item 2**

Donald joined a group of young boys who sniff petrol and smoke marijuana frequently. The group became known for crime, violence and causing chaos in trading centres. Donald and his group were one day surrounded by policemen and the policemen fired gun shots at them. This caused Donald's heartbeat to increase suddenly and he ran very fast back to their home.

### ***Task***

a) What challenges do you think Donald may face if he continues associating with such a group?

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b) Describe how Donald's body coordinated and made him reach home.

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c) Explain how Donald can avoid challenges associated with being in such a group.

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## **Item 3**

Jack has of recent experienced frequent urination, increased thirsty, frequent hunger and blurred image of far objects, when he went to the hospital, the doctor tested his urine which tested positive for glucose. Later the doctor advised him to manage his diet, not engage in vigorous exercises and visit an optician.

### ***Task***

a) Identify the disorder Jack is experiencing.

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b) Show how each disorder leads to the symptoms present in Jack's body.

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c) Explain possible ways to manage Jack's health conditions.

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## SECTION B

*Attempt only one item in this section*

### **Item 4**

A chemical factory was established in a swamp which had a flowing river, supporting nearby communities with water and mud fish. The water in the river stream became greenish, and there was a lot of growth of water hyacinth (water weed) in the river. The mud fish harvest has greatly dwindled and many community members were diagnosed with respiratory diseases. The community members have recorded serious complaints with the local leaders

#### ***Task***

- a) Explain to the local leaders the problem in the community.
- b) Suggest possible solutions and show why the swamp should be kept in its natural state.

### **Item 5**

Kiprotich is one of the famous athletes in Uganda who has participated and represented the country in various common wealth games held in Moscow in Russia. In one of the Olympics games, before the competitions began, Kiprotich took a meal rich in carbohydrates 30 minutes prior to the race. At the start of the race, he was observed sprinting at a faster rate though towards the end of the race, his speed reduced, heart beat and breathing rates increased and seemed to be experiencing a lot of muscular pain in his limbs. After the race, he rested for a while and later stood and moved across the field.

#### ***Task***

Explain how the carbohydrates eaten before the race were metabolized in his body, physiological changes that occurred during the race and after the race.

***Wishing you Good luck***