

HeLP BIOLOGY FACILITATION ITEMS

Section A

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

Task:

- a) Describe how the conditions experienced affected the functioning of the pumpkin plants which led to poor yields

- b) Explain how the pumpkins managed to survive the conditions experienced.

2. Paul who was formerly a young responsible man, joined a drinking group that he is so much attached to, drinks daily and heavily. His children are now out of school and look malnourished. One evening as he was coming from his drinking joint, he fell down and broke his only pair of eye glasses that he has been using for long. Now Paul struggles to read from close range.

Task:

- a) How Paul's involvement in his group disorganised his family.

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- b) Explain why Paul is now struggling to read and how his eye glasses were helping him read.

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- c) What should be done in the society to overcome challenges related to those faced by Paul and his group?

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3. A fifteen-year-old girl of senior two was regularly seen in the company of a neighbour's son aged 20 years. She used to put on tight short dresses and was seen drinking beers often.

During a routine medical checkup at school, she was found to be pregnant and suspended from school, but was also sent away from home by her parents. She started living with the boy in a slum area, and continued to drink beers regularly despite not having enough money for buying food.

Task:

- a) Explain the possible challenges that she is likely to face.

- b) What advice would you give to her to overcome the challenges she is facing and those she is likely to face?

- c) Advise her classmates on how to avoid getting into problems faced by Mary.

Section B

Part 1

4. A hilly place previously covered with thick vegetation has recently been dominated by many activities that include, timber-cutting, charcoal burning, rearing of cattle and crop gardening. Farmers practice bush burning in preparation for planting and also dig up and down the slopes of the hill. Incidences of strong wind, mud slides and flooding of gardens in the valleys have become common in the area.

Task:

Explain how the different activities have caused challenges in the area and how they can be overcome.

5. Fred is a farmer growing maize on the slopes of a mountain. The mountain had thick vegetation cover on the mountain top before a volcanic eruption occurred. After sometime, Fred observed that whenever it rains, there is a large volume of water which flows rapidly from the mountain top down the slopes, there are frequent landslides, crop yield along the slopes has reduced, many animals that used to live on the mountain top have descended down the slopes and are destroying people's crops. Also, people no longer get the medicinal plants from the mountain top and are suffering from most of the diseases they would treat before.

Task:

- a) Explain the environmental challenges observed by Fred.
 - b) Explain why it is important to restore that environment back to its original state?

Part II

6. Chepkul, a good sports lady, and her husband who is a smoker, live near a swampy area. As time went on, she developed poor appetite and was found to be HIV positive, having heart and respiratory diseases and frequently suffers from malaria. Chepkul observed that her level of performance had greatly declined and she could not understand the cause.

Task:

- a) Explain why Chepkul's level of performance in sports had declined.
- b) Advise Chepkul on how she can manage her health condition.

7. Eranga has been smoking cigarettes, eating a lot of fatty meat and drinking fluids with high sugar content. He was advised to monitor his activity for one week. On day one, Eranga tried physical exercises, he experienced heavy breathing, painful muscle cramps and produced a lot of sweat and his body became wet. From day two to day seven, Eranga did not do any physical exercises but still felt body fatigue, difficulty in breathing and chest pains.

Task:

- a) Explain Eranga's experiences on:
 - i) Day one
 - ii) Day two to seven.
- b) Apart from going to see a medical doctor/medical worker, how can you advise Eranga to manage what he experienced from day 2 to day 7.

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