

Student's Name.....

Signature.....Index Number.....

553/1

BIOLOGY (Theory)

Paper 1

July/Aug, 2024.

2½ hours.

BUIKWE DISTRICT JOINT MOCK EXAMINATIONS BOARD (BUSSHA)

MOCK EXAMINATIONS 2024

Uganda Certificate of Education

BIOLOGY (THEORY)

Paper 1

2 hours 30 minutes.

INSTRUCTIONS TO CANDIDATES:

This paper consists of sections A and B.

Answer all items in section A.

Answers to section A should be written in the spaces provided.

Section B consists of two parts; PART I and PART II. Answer any one item from PART I and any three items from PART II.

Answers to section B should be written on the answer booklets provided.

Extra questions answered shall not be scored.

For Examiner's Use Only					
SECTION A			SECTION B		TOTAL
1	2	3	Qn.	Qn.	

SECTION A

Answer all questions in this section. Answers should be written in the spaces provided.

Item 1.

Recently, the world experienced the pandemic of Covid 19, that claimed the lives of many people, including Ugandans. Covid 19 is caused by corona virus. In an attempt to raise health awareness among the students of Nante s.s, the health prefect organized a debate between the girls and boys about the motion: "Viruses are living things", girls proposed while boys opposed the motion.

(a) Suggest some points raised by;

(i) Girls.

.....

.....

.....

.....

.....

.....

(ii) Boys.

.....

.....

.....

.....

.....

.....

(b) Suggest an explanation why it is difficult to manage viral infections in organisms.

.....

.....

.....

.....

.....

.....

.....

Item 2

In an experiment to investigate some of the physiological processes that occur in higher plants, a laboratory technician made a circular patch around the lower part of the tree. After one month, the upper part of the cut edge got swollen as shown in figure 1 below.

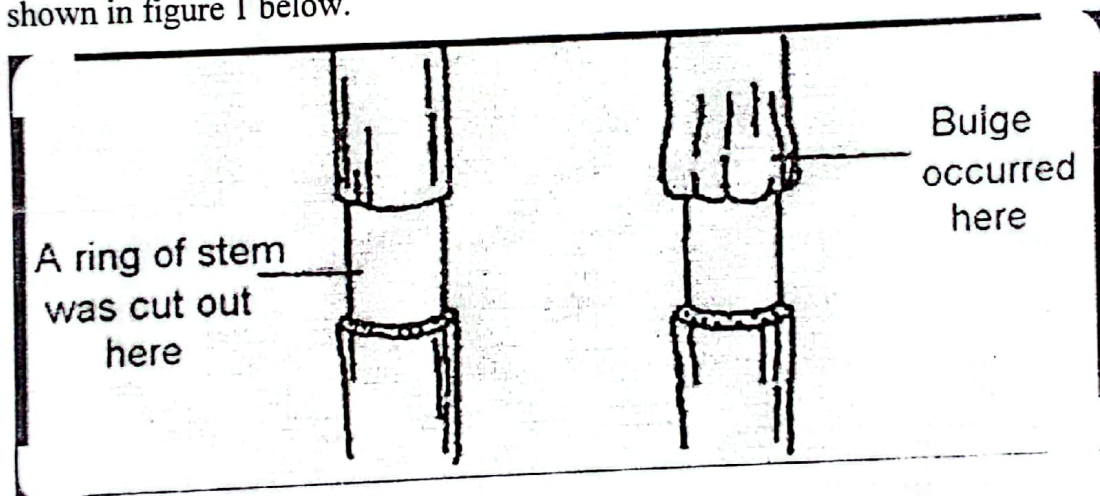


Fig.1

(a) Suggest an explanation for the bulging of the upper cut edge as shown in figure 1 above:

.....

.....

.....

.....

.....
.....
.....
.....
.....
.....
(b) Suggest an explanation for the observation made on the lower part of the plant below the cut edge.

.....
.....
.....
.....
.....
.....
.....
.....
.....
(c) Describe how the nature of liquid droplets formed on lower part of the plant below the cut edge could be investigated.

Item 3

Joshua Cheptegei is a Ugandan athlete who has won many gold medals in world athletic competitions. However, in 2017, during the world marathon competitions that took place in Kampala, Joshua lost pace, and complained of excess pain in his thighs.



Fig.2

(a) Suggest an explanation for the above incident.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....
.....
(b) Explain what happened to Joshua's body shortly after the race.

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

SECTION B

PART 1

Attempt one item from this part. Answers should be written on the answer sheets provided. Extra items answered shall not be scored

Item 4

Soil is a nonrenewable resource which should be used sustainably for continuity of life. In Busoga sub region-Eastern Uganda, people use soil for farming of crops such as sugar canes and rice, mining of sand used for construction and plastering of buildings, as well as making of bricks and crockery.

However, most people have limited knowledge on physical and chemical properties of soil, and as such, farmers get poor crop yields, plaster flake and fall off walls of buildings, while bricks and crockery

normally break after a very short period of time. This has caused serious economic losses.

Task

As a student of soil science, make a write up you would use to advise each of the categories of people so as to save their businesses from total collapse.

Item 5

Poor disposal of plastics and other nonbiodegradable wastes in Uganda's urban centers and their suburbs as well as in land-fills such as Kiteezi in Wakiso district, is one of biggest threats to safe living of humans, livestock as well as other property in those areas and their neighborhoods.

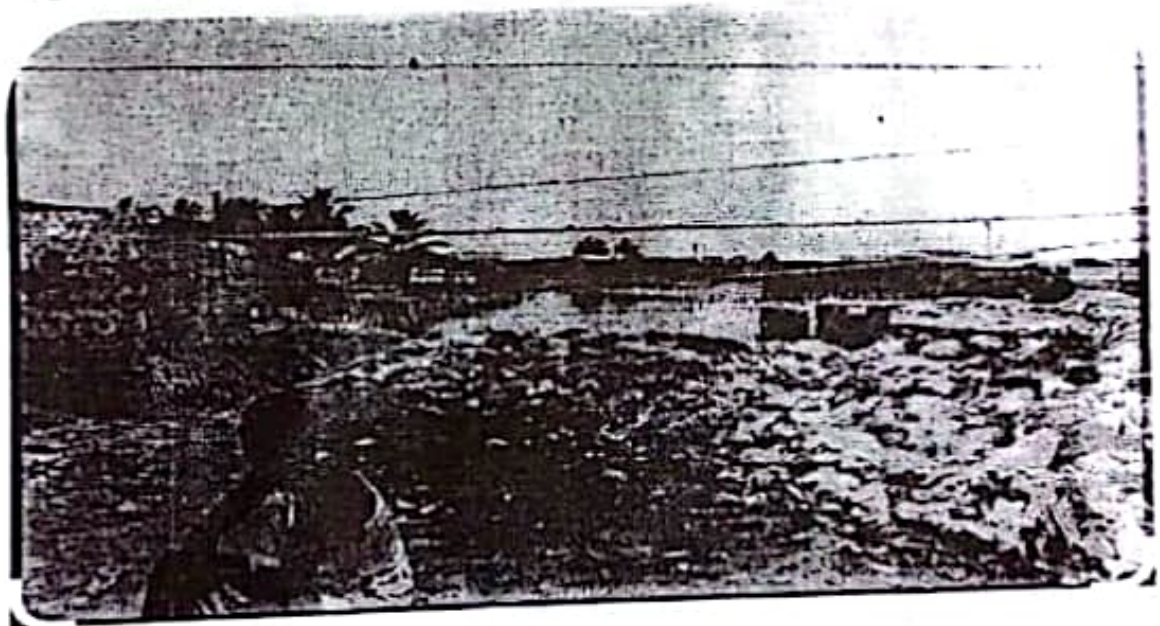


Fig. 3

TASK:

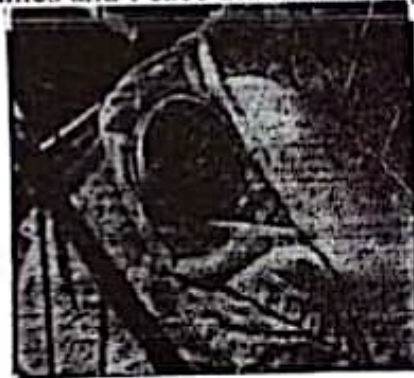
As the head prefect of Sir secondary school, write a sensitization message you would deliver at the school assembly about plastic management and the risks the community may face if your message is not adhered to.

PART II

Answer only one item from this part. Answers should be written in the answer booklet(s) provided. Extra items answered shall not be scored.

Item 6

James and Peace, a married couple living in Mbarara city, western Uganda, produced a son of weight 1.8kg at birth. Peace breast fed the baby every time he felt hungry. During the routine health visits at the division health center III for immunization, the baby weighed 6kgs in two months after birth. One of the nurses commented that "*All the processes that lead and causes growth are going on well.*" However, James and Peace did not understand the Nurse's statement.



Baby at day 1



Baby at 2 months

Fig. 4

TASK:

Suggest an explanation you would give to James and Peace so as to make them appreciate the nurse's comment.

Item 7

Football is one of the outdoor games played not only in schools but also at international level. Each football team consists of eleven players and the game is officiated by an umpire (referee) who uses a whistle to signal a mistake committed by a player, in which case a freekick, yellow card, red card or fair play may accompany the sounding of the whistle. The standard playing time is ninety minutes divided into two halves, each half having forty-five minutes. The blowing of the whistle marks the start and the stop of the game. At half time, players are given fifteen minutes of rest during which players may drink water, remove shirts, take a shower, etc, before returning to the field for the second half. (<https://img.fifa.com>)



Fig. 5

TASK:

- (a) Assuming that a player committed a mistake and the referee awarded a free kick to the opposing team, make a write up of how the players are able to follow the referee's instructions, right from

the point the referee blows the whistle up to the time of taking the free kick,

- (b) Suggest an explanation why players may drink water at half time and immediately after the game.

END