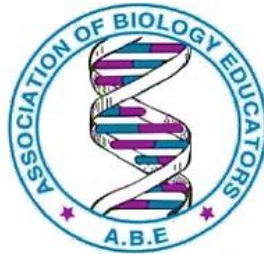


Learner's name _____

553/1
BIOLOGY
(Theory)
Paper 1
Nov-2023
2½ hours.



DISSECTED SCRIPT

**Uganda Lower Secondary Certificate of Education
End of Cycle Examination
BIOLOGY
(Theory)
2 Hours: 30 Minutes**

INSTRUCTIONS TO LEARNERS

Respond to all items

Responses must be written in the space provided only.

Element of construct 1: Appreciates diversity of living things and sustainability of natural resources.

Item 1.

Queen Elizabeth National park has abundant wild life, including several plant species, kobs, Nile crocodiles, lions, hyenas and wild rabbits. People from neighbouring community illegally hunt kobs and wild rabbits for meat. This affects the stable interdependence among wild life and as a result, other deadly wild animals then attack human life and their domestic animals as escape from the park to neighboring community. Due to loss of human life and effect on tourism sector, government calls upon potential people to sensitize the community about the current situation.

Task.

Explain how various human activities affect the interdependence of the above organisms and sensitize the community on outcomes of their activities and likely possible benefits they avoid such activities. **(15 scores)**

Element of construct 2: Understands how plants obtain nutrients to meet their requirements during which raw materials and products are carried to and from various organs involved.

Item 2.

Moses planted and mixed maize and bean crops on his plot along an extremely dusty road side. As a way of obtaining good yields, prepared his garden well, planted quality seeds in closely packed columns and rows, applied fertilizers, Sprayed to prevent any pests and removed weeds. He planted maize earlier and planted beans later after maize plants were already tall. His maize yielded poorly and beans remained stunted with no yields. He is nervous about the outcomes yet spent lot of money on the garden.

Task.

Help Moses understand the cause of the outcomes and advise how he can plant the same plants in the same garden in other seasons with minimal losses. **(15 scores)**

Element of construct 3: Understands how mammals obtain and use nutrients to meet their energy requirements during which raw materials and products are carried to and from various organs involved.

Item 3

A 48 year old patient presents the following symptoms- swollen feet and general body weakness (tiredness/fatigue).

Doctors recommended the patient to have a simple meal which included bread, piece of egg and water. After three hours resting, blood and urine samples were

obtained and test on his urine sample made. The test results on concentration of different substances in blood, and urine are presented in table below.

Substance	Concentration of blood plasma (g/dm ³)	Concentration of urine of normal person (g/dm ³)	Concentration of patient's* urine sample (g/dm ³)
Glucose	1	0	0.9
Urea	0.3	300	50
Plasma proteins	80	0	40

Task.

Explain why resting was necessary and analyze the patient's results to provide possible solutions on how the condition can be managed. **(15 scores)**

Element of construct 4: Appreciates how human body coordinates various activities and adjust to ensure normal functioning of body systems.

Item 4.

A 60 year old woman has a neck lump (swelling), frequent back pain and poor vision. Doctors further revealed that she has porous bones in her back bone and Age-related long-sightedness. Her family members may manage her condition through diet. The family people lack correct plan and nature of diet to administer.

Task.

Explain cause for the old woman's health condition, suggest how a suitable diet and sight defect correction would manage her condition. (You may include sight defect correction diagrams in your response). **(15 scores)**

Element of construct 5: Appreciate how characteristics are inherited in living organisms passed to generations through reproduction and manifested as organisms grow.

Item 5

After birth, the baby emerged as an albino yet the two parents have normal skin color. The family relatives to the man have rejected the baby claiming she could have conceived from another man who is probably an albino. The family suspects so because the first born to the couple had normal skin color.

Task

Explain to the couple and entire family the possibility of having such a baby and accept it as part of their family. **(15 scores)**

END