**TEST ITEMS FOR CONFIDENTIAL BUILDING SEMINAR TO BE HELD ON 13Th-JULY-2024 AT SIRONKO HIGH SCHOOL**

**TEST ITEMS FOR ASSESSMENT PAPER ONE (553/1)**

**SECTION A**

**ITEM ONE**

Planting maize and beans in a form of mixed crop farming practiced by many Ugandans. A farmer closely planted maize and beans. Two weeks after germination, the maize leaves were curled and turned purple along the veins. The bean leaves were observed with smaller blades than expected and had turned brown at the tips. Maize crops grew taller than the beans and fewer yields were obtained from the beans.

***Task***

1. Describe the process which enabled plants to germinate in the first two weeks. (o3Scores)
2. Explain how the close planting affected the normal growth of the plants (06Scores)
3. Describe how some plants were still able to survive. (06Scores)

**ITEM TWO**

A 50 year old woman has a neck lump (swelling), frequent back pains and poor vision. Doctors further revealed that she has porous bones in her backbone and age-related long sightedness. Her family members may manage her condition through diet on addition to other measures.

***Task***

1. Identify the challenges affecting the old woman’s health. (03Scores)
2. Explain causes for the old woman’s health condition and the effect on normal body functioning (06Scores)
3. Suggest how a suitable diet, sight defect correction and other possible strategies would manage her condition (you may include sight defect correction diagrams in your response) (06Scores)

**ITEM THREE**

A couple of heterozygous normal man. Woman produced a sicklier child three months back. Their first born was however normal. During pregnancy, the mother never visited the hospital for checkup. At birth, the baby had low birth weight. Currently she is still experiencing recurrent pain and baby also frequently falls sick.

***Task***

1. Mention the possible causes of the current health status of the mother and the child (03Scores)
2. Explain to the parents how genetic condition in the baby came about and its effect on the health of the baby (06Scores)
3. Suggest suitable advice to couples and explain how it may ensure normal delivery at birth and after birth , and to ensure normal health state of born children (06Scores)

**SECTION B**

**PART I**

***Attempt Only One Item from This Part***

**ITEM FOUR**

**T**he Uganda Wildlife Authority (UWA) has reported that people living near game parks and zoos are victims of hunting edible animals frequently such as antelopes for meat and hides for sale. Some establish gardens beyond boundaries into the gazetted area for game parks. These incidences have increased during the past five years.

Currently, cases of wildlife attack by lions and other wild animals on both humans and their domestic animals has increased. The figure below shows variation in average number of both antelopes and lions in most zoos and game parks as recorded in the past eight years

Uganda Wildlife Authority (UWA) also reported that, industries established around water bodies have contributed to decreased diversity of aquatic wildlife, which also negatively impacts on the country’s economy

***Task***

Explain the effects of these human activities and provide solutions to the challenges experienced by the affected communities and Uganda. How would Uganda and the country benefit if the suggested solutions are implemented (15Scores)

**ITEM FIVE**

In Uganda, the wetlands of Lake Victoria are crucial ecological resources that support diverse plant and animal species, regulate local water systems, and serve as important habitats for the migratory birds.

These wetlands also play a significant role in supporting local livelihoods. Over the past few years, the wetlands of Lake Victoria in Uganda have been facing degradation and misuse due to activities such as; urbanization, pollution from agricultural runoff, over fishing and unsustainable land use practices.

***Task***

Identify the effects of the mentioned human activities and explain the causes of this ecological mismanagement. Suggest potential solutions to address the observed challenges and give the benefits of conserving and sustainably managing the wetlands for both the environment and local communities in Uganda.

**PART II**

***Attempt only one item from this part***

**ITEM SIX**

A 45 year old patient presents the following symptoms; swollen feet and general body weakness (tiredness/fatigue) and with symptoms of anemia

Dr. Emmanuel has recommended the patient to have a simple meal which included a cake and water

After three hours resting, blood and urine samples were obtained and tests on his urine sample made. The test results on the concentration of different substances in blood and urine are presented I the table below

|  |  |  |  |
| --- | --- | --- | --- |
| Substance | Concentration of blood plasma | Concentration in urine of normal person (gll) | Concentration of patient’s urine sample (gll) |
| Glucose | 1.0 | 0 | 0.9 |
| Plasma proteins | 80 | 0 | 40 |

His blood group test is A and yet he has been escorted to the hospital by his son whose blood group is B.

***Task***

Describe the changes that occurred in three hours of rest, explain the patient’s test results and suggest possible solutions on how his condition can be handled. (15Scores)

**ITEM SEVEN**

Marie is a young athlete who recently started a high intensity straining programme to prepare for an upcoming marathon. However, she notices that despite of deinking a lot of water, she experiences frequent muscle cramps even though she stays hydrated and maintains a nutritious and seeks to understand the underlying biological reasons for this issue.

***Task***

Identify the processes/body parts involved and their roles and explain how she can overcome the problems associated with her routine (15Scores)

**BONUS ITEMS**

**ITEM EIGHT**

Jimmy was suspended from school as a result of drinking alcohol. He engages in heavy drinking of alcohol in the nearby trading centre. One day, as Jimmy approached a swamp non his way home staggering from drinking alcohol at 6:00pm, he encountered a snake. His heart started beating faster and his breathing rate increased. He tried to pick a nearby stick but he could not get hold of it on several attempts, so the snake escaped.

***Task***

1. Describe how Jimmy’s body coordinated to bring about his reactions from the time he encountered the snake up to when his rate of breathing increased. (05Scores)
2. What are the likely effects of Jimmy’s lifestyle as described in the scenario (05Scores)
3. Suggest ways in which Jimmy can change his lifestyle (05Marks)

**ITEM NINE**

As more industries are established near Lake Victoria, more industrial wastes are increasingly drained into the lake. This results into several changes to occur in the lake affecting interdependence of various organisms on land and water, hindering their survival and various human activities which hinder social-economic development as one of the SDGs by 2030.

***Task***

Explain why the various changes occurring in the Lake hinder economic growth and provide suitable solutions towards the achievement of the above goals as per vision 2030. Of what benefit is it for Uganda to conserve the natural resources affected by these industries (15Scores)

**END**