



GOOD SAMARITAN HIGH SCHOOL (GSHS)

“O” AND “A” LEVEL MIXED DAY & BOARDING SCHOOL
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“Wisdom for excellence”

GRAND ANNUAL “O” LEVEL BIOLOGY SEMINAR **ASSESSMENT ITEMS ON 8TH OCTOBER, 2024.**

GOOD SAMARITAN HIGH SCHOOL.

Item 1. Due to the need for charcoal, space for farming and infrastructure development, most forest reserves across the country have been destroyed. This continuously hinders Uganda from achieving the sustainable development goals (SDGs0 2030).

Task;

Explain how such activities hinder the attainment of the possible SDGs and describe strategies for the achievement of the SDGs affected by such activities. Suggest such how strategies would ensure the economic growth of Uganda and the well-being of people of Uganda.

Item 2. As more industries are established nearly Lake Victoria more industrial wastes are increasingly drained into the lake. This result into several changes occurs into the lake affecting interdependence of various organisms in the water and the land, hindering their survival and various human activities which hinder social economic development. As one of the SDGs by 2030.

TASK;

Explain why various changes occurring in the lake hinder social economic growth and provide suitable solutions towards achievement of the above goal as per vision 2030. Of what benefit is it for Uganda to conserve the natural resources affected by these industries?

ST PAUL SS, KYANUKUZI

Item 3. A 40 year old male patient showed the following signs and symptoms. Painful and bleeding gums, high blood pressure and shortness of breath of breath and coughs up mucus with blood. He admits to the doctor that he has been smoking for the recent 20 years.

Task;

Identify the body organs affected and describe how the patient’s body functions are affected and suggest possible strategies that would improve his health.

Item 4. The hygiene observed discolored teeth in a 45 year old man. He has history of smoking tobacco and for the past 25 years. He has pain full gums, shallow respiration and signs of developing stroke. The table below shows more results of physical examination.

	Patients value	Normal range
Breathing rate	28 breaths per minute	12-18 breath per minute
Heart rate	140 beats per minute	60-100 beats per minute
Blood pressure	160/98	Systolic pressure(100-120)mmhg/ diastolic pressure (60-80)mmHg

Task;

Identify the affected body organs and describe how the normal body function of the patient is affected. Explain possible measures to rescue his life to normal.

ST DENIS S.S, MAKONDO

Item 5. Planting maize and beans is a form of mixed crop farming practiced by many Ugandans. A farmer closely planted maize and beans. Two weeks after germination, three maize leaves were curled and turned purple along the veins. The beans leaves were observed with smaller blades than expected and had turned brown at the tips. Maize crops grew taller than the beans, and less yields were obtained from the beans.

Task;

- Describe the process which enabled plants to germinate in the first two weeks.
- Explain how the close planting affected the normal growth of the plants.
- Describe how some plants were still able to survival.

Item 6. A 60 year old woman has a neck lump (swelling), frequent back pains and poor visions. 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 on addition to other measures.

- Identify the challenges affecting the old woman's health.

- b) Explain cause for the old woman's health condition and the affected on normal body functioning.
- c) Suggest how a suitable diet, sight defect correction and other possible strategies would manage her condition. (You may include defect correction diagram in your response)

ST.PEREGRINE S.S NAKATOGO

Item 7. Sugar cane ginger and onions are some of the crops grown in Uganda. In the bid to fight poverty, local farmers have been advised to grow some of these plants on a large scale for sale. There is however a need for educating local farmer's across the country before planting materials can be distributed.

Task;

- a) Identify possible planting material to be supplied by the government.
- b) Explain how the supplied materials are able to give new plants.
- c) Describe any other possible planting materials that the government my supply to engage farmers in commercial farming and how these plant materials can give rise to new ones.

Item 8. Simon was always sick and initially resisted seeking medical attention but eventually realized the negative impacts his deteriorating health was having on his life. When he was eventually taken to the hospital, he reported symptoms of frequent urination, thirst, fatigue, weakness blurred vision, unintended weight, irritability and mood changes after meals. His diet primarily consists of posho and sweet potatoes. An examination revealed difficult in standing steadily and alcohol on his breath.

Task;

- a) Mention which organs are affected by the patient's symptoms explaining the roles these organs play in the body.
- b) Identify possible causes of his condition
- c) Explain the strategies for managing the condition.

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Item 9. Joan and sarah married for 15 years, have three children micheal, oliva and sofia. Micheal and olive show signs of sickle cell anaemia with aneamia pain eposodes, and hand and foot swelling while sofia has a history of malaria. John without any illness or malaria history doubts with the children's paternity. This tension prompts john to seek understanding of how sickle cell anemia and malaria genetics impacts his children.

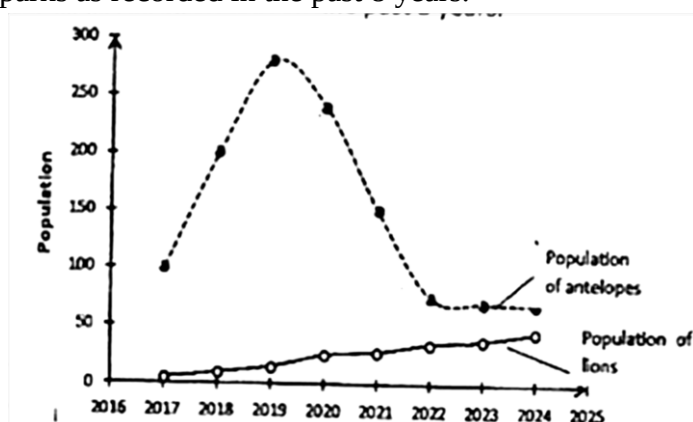
Task;

- a). Describe the genetic processes showing how Sarah and john are responsible for the genetic status of their children.
- b). identify the possible causes of the problems to the children.

c). provide recommendations for the family to address the issue and manage the status of the family members.

Item 10

The Uganda Wild life Authority, UWA has reported that people living near game [parks and zoos victims of frequent hunting edible animals such as antelopes for meat and hides for sale. Some establish gardens beyond their boundaries into the gazette area for the 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 have increased. The figure below shows variation in average number of both antelopes and lions I most zoos and game parks as recorded in the past 8 years.



Uganda Wild life Authority also reported that, industries established around water bodies have Contributed t the decreased diversity of aquatic wildlife, which also negatively impacts on the country's economy

Task.

Explain effects of these human activities and provide solutions to the challenges experience b the affected communities and Uganda. How would Uganda and the country benefit if the suggested solutions are implemented?

ST MARY'S MANJA SS, KYANUKUZI.

Item 11

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 migratory birds These wetlands also ply significant role in supporting local livelihoods. Over the past few decades, the wetlands of Lake Victoria in Uganda have been facing severe degradation and misuse due to activities such as urbanization, pollution from agricultural run –off, overfishing 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

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managing the wetlands, for both the environment and local communities in Uganda.

Item 12

A 45 year old patient presents the following symptoms swollen feet and general body weakness (tiredness/ fatigue), and with symptoms of anaemia. Doctors recommended the patient to have a simple meal which included cake and water. After three hours resting, blood and urine samples were obtained and tests on his urine sample made. The results on concentration of different substances in blood, and urine are presented in table below.

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

His blood group is A, and yet has been escorted to hospital by his son who blood group B. Task. Describe the changes that occurred during the three hours of rest, explain the patient's test results. Suggest possible solutions on how his condition can be handled.

Item 13. Sarah is a young athlete who recently started a new high intensity training program to prepare for an upcoming marathon. However, She notices that despite drinking plenty of water, she experiences frequent muscle cramps during her work outs. She wonders why she is experiencing these cramps even though she stays hydrated and maintains a nutritious diet, 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.

Practical paper (553/2/3)

All items are compulsory

Item 1. A 2 year old child experiences delayed wound healing, en large belly, frequent sickness and signs of anemia. Doctors revealed that the child's diet should be changed and patients have been advised to supplement his new diet with minerals too. He has been feeding on foods whose samples, sample X and Y have been provided.

TASK;

Carry out scientific investigation on the food samples provided, explain to the parents the cause of the sickness and suggest a suitable advice to improve the child's condition.

Item 2. An outbreak of cholera has been registered in kasawo village. The people in the village have been advised by the village health team to keep latrines clean. The village chair person has also advised that spraying flies around homes is an alternative solution. The specimen A and B have been collected from compound around on of the homes in the same village.

Task;

- a) Classify the specimen into their phylum and class using suitable characteristics.
- b) Explain the structural adaptations of the specimen responsible for the outbreak.
- c) Draw and label the hind limb of specimen B.

We wish you the best and enjoy the best of Good Samaritan. High School

- ***All clarifications are made in the assessments guide, so please excess it.***

❖ *If Education is expensive, try ignorance*