AMAHORO SENIOR SECONDARY SCHOOL

UGANDA CERTIFICATE OF LOWER SECONDARY EDUCATION

END TERM ONE EXAMS 2024

**Senior three** BIOLOGY PAPER ONE

**TIME: 2 :30HOURS**

INSRUCTIONS

*This paper consists of* **seven** *examination items. It has two sections;* **A** *and* **B***.*

*Section* **A** *has* **three** *compulsory items.*

*Section* **B** *has two Parts;* **I** *and* **II***. Answer* **one** *item from each part.*

*Answer* ***five*** *items in all.*

*Any additional item(s) answered will not be scored.*

**Section A**

**(Answer all items from this section)**

**Item 1** The figure 3 below is an organ for excretion. Factors which affect its functionality lead to fatal occurrence as was the case with late Evelyn Lagu.



a. (i) Give the main functions of the organ above. (2 mks)

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(ii) Suggest the functional unit of the organ above (½ mks)

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b. How is the functional unit of the above organ suited to its functions? (3 mks)

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c. If proteins and glucose constituted the fluids in the ureter, what could have gone wrong?

(1½ mks)

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d. What remedies can be taken if the organ above fails to perform its functions? (2 mks)

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e. How can we take care of the above organ to avoid bad consequences of its failure? (1 mks)

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**Item 2.** The figure 3 below is an organ for excretion. Factors which affect its functionality lead to fatal occurrence as was the case with late Evelyn Lagu.

a. (i) Give the main functions of the organ above. (2 mks)

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(ii) Suggest the functional unit of the organ above (½ mks)

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b. How is the functional unit of the above organ suited to its functions? (3 mks)

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c. If proteins and glucose constituted the fluids in the ureter, what could have gone wrong?

(1½ mks)

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d. What remedies can be taken if the organ above fails to perform its functions? (2 mks)

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e. How can we take care of the above organ to avoid bad consequences of its failure? (1 mks)

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**Item 3** The pictures below **A** and **B** illustrate development from childhood to adulthood. The changes are usually caused by the different chemicals produced by endocrine glands within the body. Use the pictures to answer the questions that follow.

**Picture A Picture B**



a. Suggest the general term of the chemicals produced by the endocrine glands in the body of humans. (½ mks)

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List down the changes being illustrated in the pictures A and B above. (4 mks)

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| **Picture A** | **Picture B** |
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c. Give the names of the chemicals responsible for the changes in each of the pictures illustrated in A and B. (1 mks)

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d. What other changes may not be visible in the above pictures but occur in humans during sexual development. (3 mks)

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e. Suggest any other one chemical which regulate body activities giving its function in each case and where it is produced from. (1½ mks)

**SECTION B**

**Part I**

*Answer only* **one** *item from this part. Answers should be written in the answer booklet(s) provided.*

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**Item 4.** Musimami, a resident in Bukhadaala, a remote village in Manafwa district was disturbed to the point of calling for a clan meeting to sort out a case in which he found a polythene bag wrapped around a bunch of leaves still intact on the stem. Inside the polythene paper was about 60cm3 of a colourless liquid. This incident sparked a lot of quarrels between him and his neighbor, Dombolo as he claimed the liquid in the bag were charms meant to frustrate his life and property.

As a learner who has knowledge of biology with regard to transport in plants, write a speech of not more than 400 words you would present at the clan sitting to educate Musimami and the family on the nature of the process leading to the formation of the liquid in the polythene bag, how wind, temperature, and light intensity affect the rate of Its occurrence. On the same note, consider the significance of the process to farmers and growers. (15 scores)

**Item 5.** The ministry of health through the department of public health has instructed all schools to institute a guidance and counseling club. This is aimed at educating young people in education institutions the dangers of drug and substance abuse and its impact on physiological, social and economic status of youths and adolescents.

You have been selected to address the first assembly to create awareness of what drug and substance abuse is and its implications and consequences in the life of young population. Write a speech of not more than 400 words you would present during the assembly. (15 scores)

**Part II**

*Answer only* **one** *item from this part. Answers should be written in the answer booklet(s) provided.*

**Item 6.** Poor diet is currently a common problem facing most of the communities in Uganda. Most people think they are eating **“good”** food but when they are actually feeding on a poor diet. This has resulted into cases of overweight, obesity and some deficiency diseases among children. The government through the ministry of health has launched a campaign on the aspect of healthy feeding



**Task**

Write an article that will be used by the ministry of health to address the issue during the campaign. (15 scores)

**Item 7** Glucosuria is a condition in which an individual passes out urine containing glucose, such individuals feel frequent thirst caused by excess glucose in blood and frequent urination due to frequent in take of water, however, this condition is disadvantageous because it causes homeostatic mechanisms in be inefficient, in normal individuals increases glucose levels are controlled under the control of the pancres using two hormones.

1. Define the term homeostasis. (2 scores)
2. Describe the homeostatic mechanism in which the human body balances the levels of glucose in the body( 10scores)
3. Why do think its important for glucose levels to be kept constant in the body.(3 scores)

**END**