

Student's Name: Stream:

School:

Class	Stream
S. 2	

(Write your Name, Class Stream and School in the spaces provided.)

553/1
BIOLOGY
(Theory)
Paper 1
JUNE / JULY 2022
2 hours



EDUCAN ONLINE SCHOOL
Uganda Certificate Of Education

S.2 COMPETENCE BASED ASSESSMENT EXAMINATIONS

BIOLOGY

(THEORY)

Paper 1

2 Hours

INSTRUCTIONS:

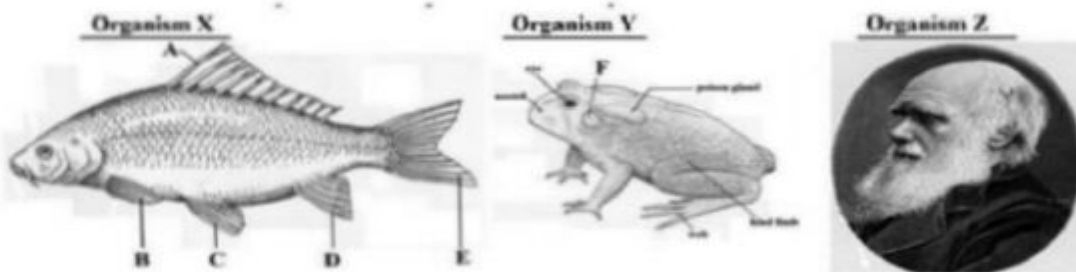
- This paper consists of two sections **A** and **B**. Answer **ALL** questions in section **A** and any **one** question from section **B**
- Answer **all** questions in section **A** in the spaces provided.
- Illustrations in form of drawings should be made where necessary, with a sharp pencil.

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Number	Score	Teacher's comment
1.		
2.		
3.		
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5.		
6.		

SECTION A

1. The following are living organisms that were collected from the environment. They have been labeled as organism X, organism Y and organism Z; but these are not their real taxonomic names. Study them carefully and give appropriate responses to some questions that will follow.



- a) Name the parts labelled A – F.

(03 marks)

A..... B.....

C..... D.....

E..... F.....

- b) The organisms shown above are classified as animals. Outline any two observable features that may qualify them to be called animals.

(02 marks)

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- c) Observe organisms X and Y. state any three differences in structure between the two organisms.

Write your answers in the table below;

(03 marks)

Organism X	Organism Y

- d) Organism X spends the whole of its life in water. However, this organism has some features that enable it to live in water. Identify any **two** of such features from the diagram.

(02 marks)

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2. Mr. Mukundane, a typical farmer from Kabaale district has bought a new piece of land to expand his farm. He has however made some strange observations in the new area that when it rains, the soil becomes dry just shortly after it has rained. The crops he had planted have even started to dry up due to this very high drainage of the soil.

(a) With a reason, suggest which soil type could be making up the highest composition of the soil in the area. **(01 mark)**

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(b) State any other two properties of this soil type other than high drainage. **(02 marks)**

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(c) What other challenges are the crops most likely to face apart from lack of enough water? **(02 marks)**

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(d) How can Mr. Mukundane improve the drainage of the soil in his garden? **(03 marks)**

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3. Below are some of the photos of some organisms that were sighted around a national game park in Uganda. Study them carefully and answer the questions that follow;



Eagle



Crested Crane



Cock



Ostrich

(a) Classify the organisms according to the following categories; **(03 marks)**

(i) Kingdom:

(ii) Phylum:

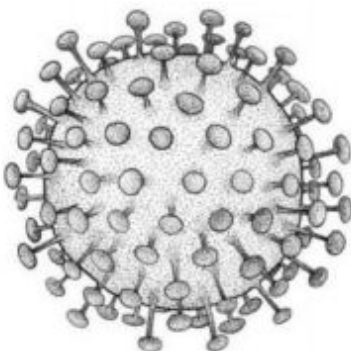
(iii) Class.:

(b) Using only observable features in the photos, state any **two** reasons for the class in (iii) above of the organisms. **(02 marks)**

(c) State any **two** adaptations of the organisms to their way of life. **(02 marks)**

(d) Of what national importance is the crested crane to Uganda? **(03 marks)**

4. In 2019, a global pandemic broke up and affected almost every country in the world. There were lots of deaths across the world, and prolonged lock downs that even caused closure of schools in Uganda. The disease was caused by a strange virus that scientists later isolated as having the structure as showed below;



(a) Write down the name of the virus shown in the diagram. **(01 mark)**

(b) Name the disease caused by the above pathogen. **(01 mark)**

(c) State **two** ways in which the above pathogen can be spread from one individual to another. **(02 marks)**

- (a) Give **three** signs and symptoms of the disease caused by the above virus. **(03 marks)**

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- (b) How can the spread of the above pathogen be controlled? Give three ways. **(03 marks)**

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SECTION B

Attempt only one question from this section

5. Wepkhulu's dad felt pain in his body and he suspected that he had malaria. He visited a clinic for a medical check-up. The doctor requested a laboratory technician to obtain a blood sample from him. He found out that a number of red blood cells had been affected by the malaria parasite. On his way back, Wepkhulu's dad met the village chairperson. He narrated to him what had transpired in the clinic. The chairperson told him that other people in the village were experiencing similar symptoms. The chairperson admitted that he did not know about cells.



Task

Using your knowledge and understanding of cells, help Wepkhulu to design a poster he can give to his dad to help the chairperson to educate the village about cells. **(10 marks)**

6. It has been noted that sugar scarcity in the country has progressively increased, and leaders are trying to find ways of curbing this problem. There has been a decision taken by the district administration to give away the government land next to your school to Mr. Sanje, an Indian Investor dealing in sugar production industry, to build a sugar factory and also plant sugar cane. This land covers a total area of 5km^2 , and is the biggest natural forest in your district. The school community is however concerned about this issue



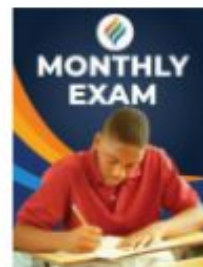
Task:

You are the president of the Nature club in your school and you have been tasked to write a letter to the district forestry officer.

Using your knowledge of life processes, write a letter to the district forestry officer, outlining clearly why it is important that the forest be conserved. **(10 marks)**

END

"The people that finally get to the top of their dreams are those that keep pushing forward, even when the tides seem to be going against them"



+256-701706589 / +256-784652712 / +256-757438443 / +256 -706104584