

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
 March 2022
 1 ½ hours



Uganda Certificate Of Education

S.2 COMPETENCE BASED ASSESSMENT EXAMINATIONS

BIOLOGY

(THEORY)

Paper 1

1 Hour: 30 minutes

INSTRUCTIONS:

- This paper consists of **five** questions.
- Answer **all** questions in the spaces provided.
- Illustrations in form of drawings should be made where necessary, with a sharp pencil.

For official use only

Number	Score	Teacher's comment
1.		
2.		
3.		
4.		
5.		

1. Living organisms have several features or characteristics that make them different from objects that are not alive. Collectively, these features enable them to carry out life processes. The figure

Figure 1

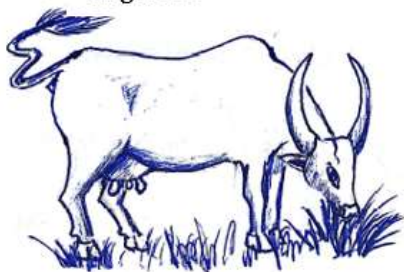


Figure 2



The figures 1 and 2 indicated above show organisms exhibiting one of the life processes.

- (a) Identify the life process being exhibited in the figures 1 and 2. (01 mark)

.....

- (b) State any **two** ways how the life process identified in in (a) above is important in both living organisms. (02 marks)

.....

- (c) State **four** other life processes that are common to the organisms shown in figures 1 and 2. (04 marks)

.....

- (b) Plants and animals carry out the same life processes but in different ways. Briefly explain in the table provided below, how any **three** named processes are carried out differently by plants and animals. (03 marks)

<i>Life process</i>	<i>How it is carried out in plants</i>	<i>How it is carried out in animals</i>

2. Below are images extracted from a biology album of S.1 group A students, compiled during one of their field studies about a particular insect. Study them carefully and answer the questions that follow;



(a) Identify the common name for the insect shown in the pictures above.

(01 mark)

.....

(b) The above insect is commonly found at our homes and has many harmful effects. State any **four** harmful effects of the insect.

(04 marks)

.....

.....

.....

.....

.....

(c) Which features observable in the pictures enable the insect to cause harm at home as stated in (b) above? Identify any **two** features.

(02 marks)

.....

.....

.....

.....

(d) Suggest any **three** possible ways how we can curb the harmful effects of the above insect in our homes. (03 marks)

.....

.....

.....

3. The Binomial system of nomenclature is a system of naming organisms in which each organism is given two taxonomic names. First developed by a Swedish scientist Carl Linnaeus, this system is widely used in naming of organisms in Biological study.

(a) In the Binomial system, the hippopotamus is named as *Hippopotamus amphibius*.

(i) State the **Genus** and **species** of the hippopotamus. (02 marks)

Genus name: Species name:

(ii) What conclusion can you make from the species name of the hippopotamus?

(01 mark)

.....

(b) A student wrote the Binomial name of an elephant as *loxodonta Africana*.

(i) State any **three** reasons why the name is not correct. (03 marks)

.....

.....

.....

(ii) Write down the correct Binomial name of the elephant. (02 marks)

.....

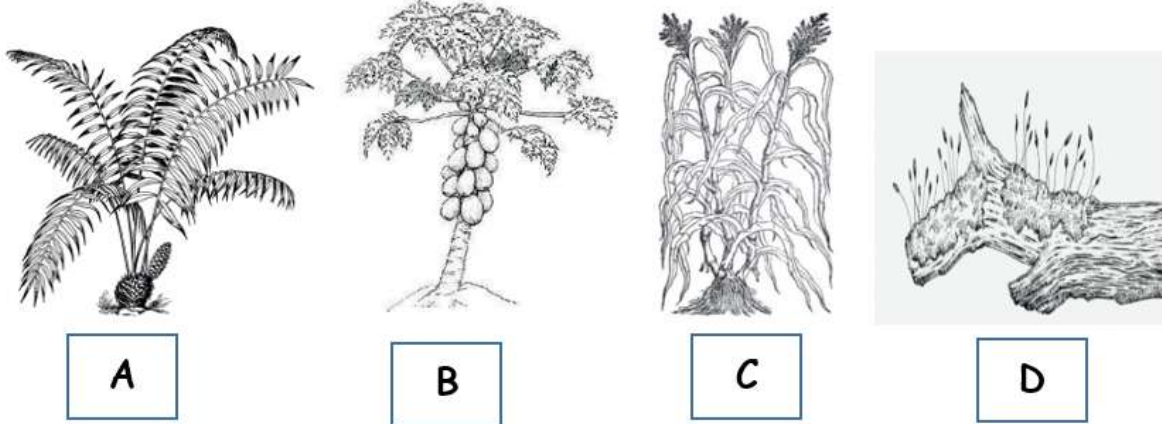
(iii) State any **two** reasons why scientific names are important in Biological study of organisms. (02 marks)

.....

.....

.....

4. Study the pictures below are organisms that belong to the same taxonomic grouping. Study them **carefully** and answer questions that will follow.



- (a) The organisms in pictures **A**, **B**, **C** and **D** are said to be plants. Outline any **two** observable features in the pictures that can show that they are plants. **(02 marks)**

.....

.....

- (b) Suggest a group of plants to which each of the organism in pictures **A**, **B**, **C** and **D** belong. **(04 marks)**

Organism	Group of plants to which it belongs
A	
B	
C	
D	

- (c) Outline any **four** importance of plants to man and the environment. **(04 marks)**

.....

.....

.....

.....

.....

5. The table below shows results of a study carried out by group 3 of senior one class. The study was about the characteristics of different types of leaves.

The leaves included; **Jacaranda** (A), **Cassia** (B), **Cassava**(C), **Bryophyllum** (D) and **Hibiscus** (E). The table shows the characteristics of different parts of the leaves that were studied. Study it carefully and answer the questions that follow.

Feature	Specimens				
	A	B	C	D	E
Venation	Reticulate	Reticulate	Reticulate	Reticulate	Reticulate
Leaf margin	Smooth/entire	Smooth/entire	Smooth/entire	crenate	Serrated
Type of leaf	Compound bipinnate	Compound pinnate	Digitate	Simple	Simple
Stalk	Has pulvinus	Has pulvinus	Has pulvinus	No pulvinus	Has pulvinus
Lamina	Divided	Divided	Undivided	Undivided	Undivided

- (a) Draw a flow chart from the table of characteristics / features given in the table above.

(05 marks)

