

NAME:.....SIGNATURE.....

P553 /1

Biology

PAPER 1

NOVEMBER, 2024

2hours



**CLEVERLAND HIGH SCHOOL-MAYA
END OF YEAR ASSESSMENT EXAMS 2024**

Senior One

BIOLOGY

PAPER 1

2 hours

Instructions:

- This paper comprises of two sections **A** and **B**.
- Attempt all questions in both sections.
- Answers to section **A**, should be written in spaces provided.
- Answers to section **B**, should be written on the answer sheets provided.

SECTION A (50 marks)

ITEM 1

During an ecological study tour which was conducted by S.1 students at your school, learners collected and labeled organisms as **A,B,C** and **D**. They later observed their features and summarized them in table 1 below.

Table 1

Organism	Features
A	No chlorophyll. Has rhizoid. Its body is a mycelium. Has sporangiophore.

B	Has chlorophyll. Has spore capsule. Has rhizoid. Has leaf- like structures.
C	Has leaves with chlorophyll. Has flowers. Has tap root system.
D	Has fronds with chlorophyll Has adventitious roots Has rhizome Has Sori

Use the information in table 1 above to answer the following questions.

- (a) What is the most likely type of nutrition exhibited by organisms **A,B,C** and **D**.

Give a reason for your answer.

- (i) **A** (2 scores)

Type of nutrition

.....
Reason

- (ii) **B, C and D.** (2 scores)

Type of nutrition

.....
Reason

.....

(b) Which one of the organisms is an angiosperm? Give on reason.

(2 scores)

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(c) Construct a simple dichotomous key that you may use to identify the organisms in the table 1 above.

(3 scores)

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(d) Give one role in nature, of organisms that belong to the same kingdom as organism A.

(1 score)

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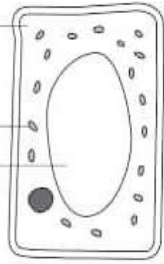
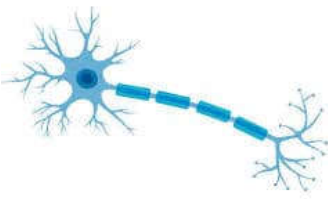
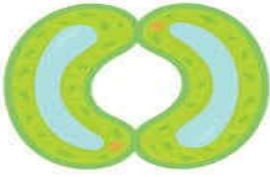
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ITEM 2

S.1 learners had a discussion in which they were exposed to pictures of different specialized cells. They required identifying the cells, giving their characteristic features and function of each. They were required to fill that information in the table 2 below.

Table 2

Specialized cell	Characteristic feature	Function
		
		
		
		
		

You have been approached by S.1 learners for help. Complete the table above by filling in the name, characteristic features and function of the specialized cells whose pictures is shown. (10 scores)

ITEM 3

Learners at Karinju secondary school, conducted an ecological study in October. They discovered organisms that had features similar to those on the bodies of the specimens **A, B, C** and **D** provided to you.

Suppose the learners, contacted you for assistance on how to identify specimens **A, B, C** and **D**.

- (a) Make a suitable table summarizing the features on the thorax of each specimen and then construct a dichotomous key used for classifying specimens **A, B, C** and **D**. (10 scores)

- (b) How do the features on the thorax of specimen **D** enable it to carry out pollination? (2 scores)

ITEM 4

Some residents in Rukunyu, a village located on SESE island exhibited the following symptoms of an unknown infection;

- Low resistance to diseases.
- Rapid loss of body weight;
- Generalized skin infections.
- Silky hair (alopecia)
- Diarrhea.
- Lymph node swellings.

(a) What could these people be suffering from?

(1 scores)

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(b) What cause the disease (a) above?

(1 scores)

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(c) How is the infection above transmitted form one person to another?

(4 scores)

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(d) Suggest measures of controlling the spread of the above disease.

(4 scores)

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ITEM 5

During orientation of S.1 students in term 1, S.1 learners come across a reading material concerning the five kingdoms of organisms. Unfortunately, they could not ably utilize this material because they knew that only two kingdoms existed. Correct their misconception by filling table 3 below. In your response give at least one example and one characteristic of organisms in each kingdom.
(10 scores)

Table 3

Kingdom	Characteristics	Example(s)
Plantae		
Fungi		
Animalia		
Monera		
Protoctista		

SECTION B (30 SCORES)

ITEM 6

In a classroom discussion, learners highlighted out the following observations.

- (i) Both birds and aeroplanes can move from one place to another by flying.
- (ii) Both aeroplanes and birds require energy for flight.
- (iii) On burning fuel, the aeroplanes eliminate exhaust gases to the environment including gases like carbon dioxide.

Basing on the above observations, some learners concluded that both birds and aeroplanes are living things while others insisted that its only birds that are living things.

You have been approached by members of the group that made the above observation for guidance. Write an essay explaining to them which one of the two objects is a living thing.(15 scores)

ITEM 7

A group of scientists conducted a study about the diversity of arthropods in Kasharaba village. The most diverse groups of arthropods they found had the following features in common; three main body parts, three thoracic segments and three pairs of legs.

They also asked the residents about the impacts of these arthropods on the environment. Their responses were quite contrasting, as some residents reported only benefits, majority reported the destructive nature of their developmental stages. Residents that found these arthropods beneficial wanted them eliminated. This led to a hot conflict in the whole village.

Suppose, you were sent to that village as an entomologist, write an awareness message to the residents of Kasharaba village about the benefits of these arthropods and how best their destructive stages can be controlled.

(15 scores)

END

MERRY X-MASS AND HAPPY NEW YEAR