

Name.....Stream.....Sign.....

*(Write your name and stream in the spaces provided)*

**BIOLOGY**  
**(Theory)**  
**Paper 1**  
**NOV.2023**  
**2<sup>1</sup>/<sub>2</sub>hours**



**ARUA PUBLIC SECONDARY SCHOOL**  
*Uganda certificate of Lower secondary education*  
**END OF YEAR EXAMINATIONS 2023**  
**S.2 COMPETENCE BASED ASSESMENT EXAMINATION**

**BIOLOGY**  
**(Theory)**  
**Paper 1**  
**2 hours 30 minutes**

**INSTRUCTIONS**

- *This paper consists of two sections **A** and **B**.*
- *Section A consists of **ten** structured questions. Attempt **all** the questions in this section by writing the answers in the spaces provided.*
- *Section B consists of **five** extended questions. Attempt **any four** questions in this section. Answers to this question must be written in a separate sheet of paper provided. All the questions in this section carry equal marks.*
- *Drawings should be made clearly using sharp pencils.*

**For official use only**

<b>SECTION</b>	<b>SCORE</b>	<b>INITIALS</b>
<b>A</b>		
<b>B</b>		
<b>TOTAL</b>		

SECTION A (SCORE 40)

Attempt **all** the items in this section in the spaces provided

1. James is a senior one student who likes studying about plants. One day as he was studying his plant he identified a plant with the leaf as shown in figure 1 below and decided to bring the part of the plant with the leaf to you for identification



Describe how you are going to help James and explain to him why the plant is having such a structure.

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(Score 04)

2. Figure 2 below shows a goat been tired by the owner. Whenever it's becoming dark late in the evening the goat begins to make sounds and also when it's around 11 am in the morning.



Identify the life processes exhibited by the goat and describe how important the life processes are to the goat.

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(Score 04)

3. S.2 class of Apesco made a model a cell as one of their projects assigned by their teacher. The figure 3 below is what they have come up with as their final product.



- a) Giving reasons state the type of the cell these students have modeled

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- b) Describe how this model of the cell is different from other cell types.

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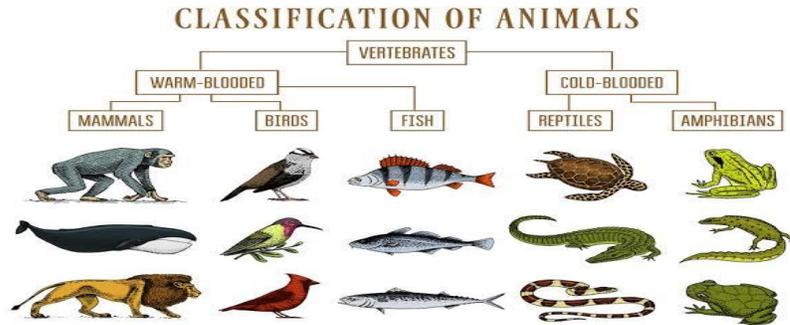
(Score 04)

4. In one of the biology lessons, Mr. James told the students that in classifying living organisms, each organism has scientific names or the botanical names for example he said that the botanical name of honey bee is *Apis mellifera*. Your friend Jane did not understand that concept very well and has come to ask for your help to explain. Explain to her how the teacher has come up with the scientific name of honey bee.

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(Score 04)

5. The new senior one students of your school are having their orientation and the head teacher has directed you to take them out to tour their classrooms. In one stream of S.1 Y the students discovered a chart showing the diversity of living organisms and have asked you on how the organisms are placed in their different groups. Below is the chart found in their classroom.



Describe how you are going to help these students

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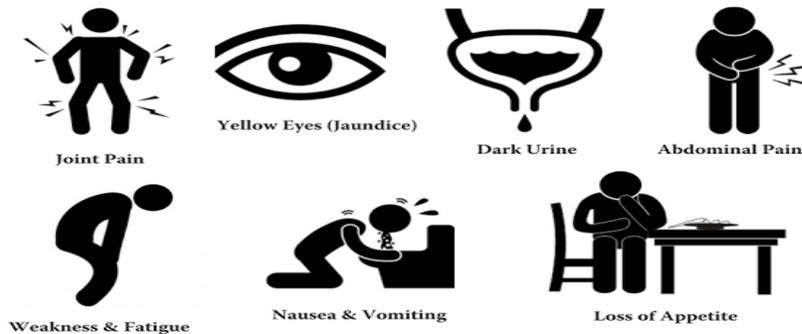
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*(Score 04)*

6. There is an outbreak of a rare disease in Komendako village in Terego with the following signs and symptoms; abdominal pain, passing of dark urine, fever, joint pain, Nausea and vomiting, yellowing of skin and eyes (jaundice) and loss of appetite.



You have being conducted about the possible cause of this disease. Briefly explain to them what this disease is and how it's got and spread from one person to another.

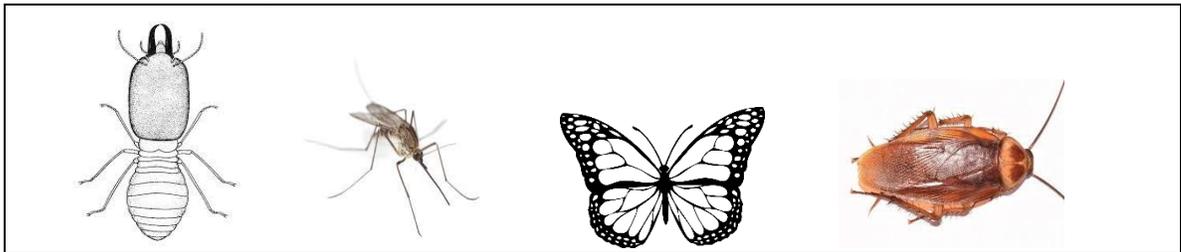
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(Score 04)

7. The biology class was asked to collect a number of organisms for their next lesson among which the teacher said should collect the following. Butterflies, cockroach, mosquitoes and soldier termites.

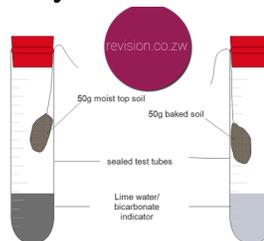


Construct a dichotomous key that can be used to identify these organisms

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(Score 04)

8. The figure below shows the result of experiment carried out by the S.2 about soil components. Study it carefully and answer the questions that follow.



Identify the component of the soil these students were investigating and state the importance of the component under investigation.

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(Score 04)

9. In your village many children seemed to be malnourished with so many signs and symptoms as shown below.



Describe the nutritional deficiency disease these children are suffering from and suggest possible solutions for this disease.

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(Score 04)

10. Cells are said to be the basic unit of life in which materials move in and out. The figure below shows one of the processes responsible for the movement of these materials into and out of the cells.



Explain why the materials move into and out of the cells.

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(Score 04)

**SECTION B (SCORE 60)**

*Attempt any **four** items from this section. Responses to this items should be written in the answer booklets provided*

11. Suzan a wife to James had a caesarean birth in which the baby is delivered through a cut made in the mother’s abdomen and the uterus. During the course of the delivery, the surgeon who worked on her made a mistake and tempered with her ileum and the stomach which led to her death (May her soul rest in peace). As a nutritionist, explain the death of Suzan to her relatives who wanted to kill James that he caused the death of their daughter. (score 15)
12. In small village in Logiri, many farmers are complaining as to why their plants are not doing well despite the fact that their soils are very fertile and had weeded their plants regularly. You have been asked to explain to these people what could have happened and what can be done. Guide the farmers on this matter. (score 15)
13. The village health team (VHT) of your village are conducting a study in which they checked on the health status of each and every member including the children. One of the activities carried out includes recording the ages and heights of the members. They also have with them a chart as seen below.

BMI	Weight status
Below 18.5	Underweight
18.5-24.9	Normal weight
25.0-29.9	Overweight
30.0-34.9	Obesity class I
35.0-39.9	Obesity class II
Above 40	Obesity class III

The samples of results in one of the families is shown in the table below.

S/N	NAME	AGE(YEARS)	HEIGHT(cm)	WEIGHT(Kgs)
1	JOHN	17	125	50
2	MARY	30	160	78
3	CATHY	25	165	66
4	MARK	50	155	70
5	OKAFOR	40	150	70

Explain the significance of this activity to the locals and illustrate to them their health status using the results above. *(score 15)*

14. Your village has been attacked by a rare species of caterpillars and a swarm of locusts that are eating your crops and plants in the field. This has drawn the attention of the locals who are much worried about their future saying that they may face food scarcity in some months to come. Guide the locals on what can be done to eradicate this catastrophe. *(score 15)*

15. Uganda dentists' association conducted a survey about the oral hygiene of pupils in primary schools in Uganda from march to May 2023. In their studies, they found out that most of the pupils in classes from P.1 to P.4 had poor oral health characterized by the pupils having bleeding gums, tooth ache, dental decay and formation of pus around the base of their teeth as well as bad smells of their mouth. As such the head teacher of your former school has organized a one-day health talk for the school and one of the items on the programme list is maintaining good oral hygiene. Guide the pupils on what can be done to improve their oral hygiene. *(score 15)*

**END**

*MERRY CHRISTMAS AND HAPPY NEW YEAR 2024.....EJK*