**NAME: ……………………………………………….. ADMNO: ………………………………….**

**SCHOOL: ……………………………………………...SIGNATURE: ………………………………**

**DATE: ……………………………**

**Term 1 - 2024**

**BIOLOGY**

**FORM ONE**

**MARCH, 2024 - 2 HOURS**

**INSTRUCTIONS TO CANDIDATES**

1. Write your name, ADMNO and school in the spaces provided above
2. Sign and write the date of the examination in the spaces provided above
3. Answer ALL the questions in the spaces provided on the question paper
4. Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
5. Candidates should answer the questions in English

**FOR EXAMINER’S USE ONLY**

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| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** |
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| **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** | **GRAND TOTAL**  |
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***This paper consists of 11 printed pages***

1. a) What is biology (1 mark)

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b) State four scientific skills imparted to biologists by studying biology (4 marks)

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1. a) What biological knowledge is required in dealing with ticks that infest a cow (1 mark)

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b) State three main branches of biology (3 marks)

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1. List **three** differences between a plant and an animal. (3 marks)

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1. Mention the name given to the study of each of the following: (3 marks)
2. The cell…………………………………………………………………………………………..
3. Microorganisms…………………………………………………………………………………..
4. Insects …………………………………………………………………………………………….
5. State the importance of each of the following in living organisms (2 marks)
6. Excretion

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1. Reproduction

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1. What characteristics of organisms is described below
2. A cat giving birth to kittens and eating them. (2 marks)

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1. A snake hissing at the sight of a cat. (1 mark)

 ……………………………………………………………………………………………………………..

1. A boy running to class at the sound of a bell. (2 marks)

 ……………………………………………………………………………………………………………...

1. The figure below shows one of the characteristics of living things. Identify the characteristic shown.

 (1 mark)



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1. Give four reasons why Biology is studied in schools. (3 marks)

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1. a) What is magnification (1 mark)

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1. a) State two precautions to observe when collecting millipedes, centipedes and spiders. (2 marks)

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b) Name the apparatus used when collecting mosquitos for study. (1 mark)

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1. a) i) Which microscope has a higher resolving power? (1 mark)

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 ii) Give a reason for your answer in 11 (a) (i) above. (1 mark)

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1. The diameter of the field of view of a light microscope is 5.5mm. Plant cells lying across the diameter are 20. Determine the size of one cell in micrometers. (Show your working.) (2 marks)
2. a) Name the organelles that perform each of the following functions in a cell. (2 marks)
3. Synthesis of proteins

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1. Transport of cell secretions

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1. a) What is the Binomial nomenclature? (2 mark)

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b) The scientific names of three animals leopard, wolf and lion in the family carnivore are; *Panthera pardus, Canis lupus* and *Panthera leo* respectively.

i) Why are scientific names given in Latin? (1 mark)

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ii) What does *Canis* refer to? (1 mark)

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iii) Giving a reason, state the organisms that are most closely related. (1 mark)

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1. a) Give reasons for carrying out the following during preparation of temporary slides. (3 marks)
2. Cutting thin sections

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1. Staining

…………………………………………………………………………………………………………

1. Adding a drop of water

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1. Below are some of the common apparatus used to collect the specimen. Use it to answer the questions that follow.

1. i) Name the apparatus. (1 mark)

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 ii) Give two functions of the roof in the apparatus. (2 marks)

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b)



1. Name the apparatus shown in (b) above (1 mark)

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1. Give the role of the apparatus named in (b) (i) above. (1 mark)

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1. Give the procedure of focusing an object using low power objective lens of a light microscope. (3 marks)

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1. a) Define taxonomy. (1 mark)

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1. Name the second taxonomic unit of classification in plants. (1 mark)

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1. Name any three kingdoms of classification. (3 marks)

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1. a) What is the function of centriole in a cell? (1 mark)

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b) Name the cell organelle that would be abundant in a skeletal muscle. (1 mark)

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1. A biology student used a microscope with X40 objective lens and X5 eye piece lens to magnify an object. Calculate the magnification of the object. (2 marks)
2. The outbreak of COVID 19 posed a great threat and untold suffering among human population across the world. State how the importance of biology came out clearly in the following areas as a result of the outbreak of corona virus;
3. International cooperation (1 mark)

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1. Career choice (1 mark)

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1. Solving environmental problems (1 mark)

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1. The diagram below represents a common laboratory equipment.



* 1. Identify the equipment. (1 mark)

…………………………………………………………………………………………………………

* 1. Name the parts labelled E and G (2 marks)

E……………………………………………………………………………………………………..

G……………………………………………………………………………………………………..

* 1. Identify the letters that represent the parts used in;
1. Changing the parts labeled D from one to the other. (1 mark)

…………………………………………………………………………………………………

1. Inclining the equipment to an appropriate position. (1 mark)

…………………………………………………………………………………………………

1. The diagram below shows a certain cell. Use it to answer the questions that follow.

 

1. Identify the cell. ( 1 mark)

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1. Give two reason for your answer in (a) above. (2 marks)

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1. Name the structures labeled 1, 2 (2 marks)

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1. State the function of the part labeled 3 (1 mark)

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1. The diagrams below represents some of the specialized cells in living things.



 **X**



 **Y**

1. Identify the cells labelled X and Y. (2 marks)

 X…………………………………………………………………………………………………………………………........

 Y………………………………………………………………………………………………………………………………

 b) Identify the modification in their structure that is common to both of them. (1 mark)

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