**NAME…………………………………......………………ADM. NO…………....……CLASS………**

**BIOLOGY**

**FORM 1**

**END TERM 1 2024**

**TIME: 2 HRS 15 MINUTES**

**Instructions: Answer all question in the spaces provided.**

1. a) Define biology. (1mk)

b) State and explain the three main branches of biology. (3mks)

1. a) state three importances of studying biology. (3mks)

b) Name 3 careers that require biology. (3mks)

1. List three environmental problems solved by studying biology. (3mks)
2. Complete the table below about sub divisions of biology. (11mks)

|  |  |
| --- | --- |
| **Branch** | **Definition** |
| Entomology |  |
| Genetics |  |
|  | Study of cells |
|  | Study of birds |
|  | Study of fish |
| Anatomy |  |
| Ecology |  |
|  | Study of external structure. |
| Physiology |  |
|  | Study of tissues; |
|  | Study of viruses; |

1. a) State eight characteristics that make an organism be called a living organism. (8mks)
2. How does nutrition differ in plants and animals? (2mks)

1. A car/ Aeroplane is able to move from one place to another and give out exhaust gases but it is snot classified as a living organism. List other characteristics of living things that do NOT occur in motor vehicles. (3mks)

1. State the characteristic illustrated by the photos below. (2mks)

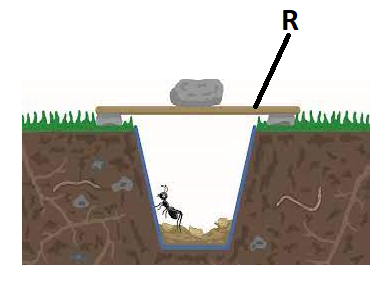
|  |  |
| --- | --- |
| Photo | Characteristics. |
|  |  |
|  |  |

1. Name the most suitable apparatus used to collect the following specimens for study in the laboratory.

(5mks)

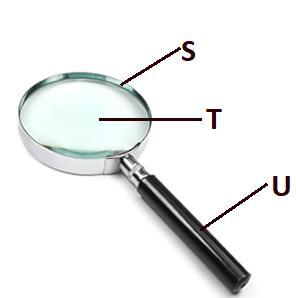
|  |  |
| --- | --- |
| **Organism** | **Apparatus.** |
| Grasshopper. |  |
| Rat. |  |
| Fish. |  |
| Ants. |  |
| Stinging nettle. |  |

1. Below is an apparatus used to trap specimen.
2. Identify the apparatus. (1mk)



1. State the purpose of the part labelled R. (1mk)

1. What is a specimen. (1mk)
2. List three precautions made during collection and observation of specimen. (3mks)
3. Below is a drawing of an apparatus used during the study of biology.
4. Identify the apparatus. (1mk)

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1. Name the parts labelled S, T, and U. (3mks)

S –

T -

U –

1. State the function of the apparatus. (1mk)

1. A student observing a head of an insect using a hand lens.
2. Write the formular used to calculate magnification of a specimen using a hand lens.(1mk)

1. She made a drawing of the head whose length was 3 cm. If the magnification was X2, calculate the actual length of the drawing. (3mks)
2. State three main differences between plants and animals. (3mks)

|  |  |
| --- | --- |
| **Animals** | **Plants** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

1. Define the following terms.
   * 1. Taxon. (1mk)
     2. Species. (1mk)
2. State two reasons that make scientific names to be written in Latin language. (2mks)
3. State three importances of classification of living organisms. (3mks)
4. State all the taxonomic units in descending order. (7mks)
5. Apart from Plantae and animalia, name the three other kingdoms of classification and give an example for each. (6mks)

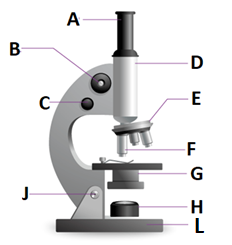
|  |  |
| --- | --- |
| Kingdom | Example |
|  |  |
|  |  |
|  |  |

1. a) what is binomial nomenclature. (1mk)

b) State three rules of binomial nomenclature. (3mks)

1. The scientific name of paw paw is *carica Papaya.*
2. Which taxonomic unit is represented by the name *carica. (*1mk)

1. State two mistakes made in writing the name. (2mks)
2. Write the name correctly. (1mk)
3. The scientific name of a tiger is *Panthera tigris* and that of Jaguar is *Panthera onca.* State a reason why a tiger and Jaguar cannot interbreed yet they belong to the same genus. (1mk)
4. Study the light microscope below and answer the questions that follows.



1. Name the parts labelled A – L. (10mks)

A –

B –

C –

D –

E –

F –

G –

H –

L –