**EMBU WEST SUB COUNTY EXAMINATION**

**BIOLOGY PRACTICAL**

**PAPER 3**

**TIME: 1 ¾ HOURS.**

**NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_CLASS\_\_\_\_\_\_\_\_\_ADM NO\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**INSTRUCTIONS.**

INSTRUCTION TO CANDIDATES.

* Answer all questions in the spaces provided.
* Spend 15 minutes of the 1 ¾ hours reading the whole paper carefully before commencing work.

Use correct English to answer questions.

|  |  |  |
| --- | --- | --- |
| Question | Maximum score | Candidates score |
| 1 | 14 |  |
| 2 | 14 |  |
| 3 | 12 |  |
| TOTAL | 40 |  |

1. You are provided with specimen labeled X.

Using a scalpel cut two of the specimens X into small pieces on a white tile put them in a boiling tube. Add 10ml of plain clean water and boil for about 1 minute. Allow it to cool, decant the solution into a test tube and label it. Suspension M.

1. With the reagents provided test the food substances found in suspension M. (12mks)

|  |  |  |  |
| --- | --- | --- | --- |
| Food substance | Procedure | Observation | Conclusion |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

1. i) Using the observable features only and state the class to which specimen X belong. (1mk)

ii) Give one reason for your answer in (b) (i) above. (1mk)

1. a) You are provided with plant specimen L1, L2, L4, L5 and L6. A dichotomous key shown below can be used to identify them.
2. a) Leaves parallel veined……………………………….go to 2

b) Leaves not veined…………………………………….go to 3

1. a) Leaves green…………………………………………Maize leaf.

b) Leaves purple………………………………………Tradescantia

1. a) Simple leaves……………………………………….go to 4

b) Compound leaves…………………………………..Gravillea

1. a) Succulent leaves……………………………………..Bryophyllum

b) Non – succelent leaves………………………………go to 5

1. a) Leaves ovate………………………………………...Bougainvillea

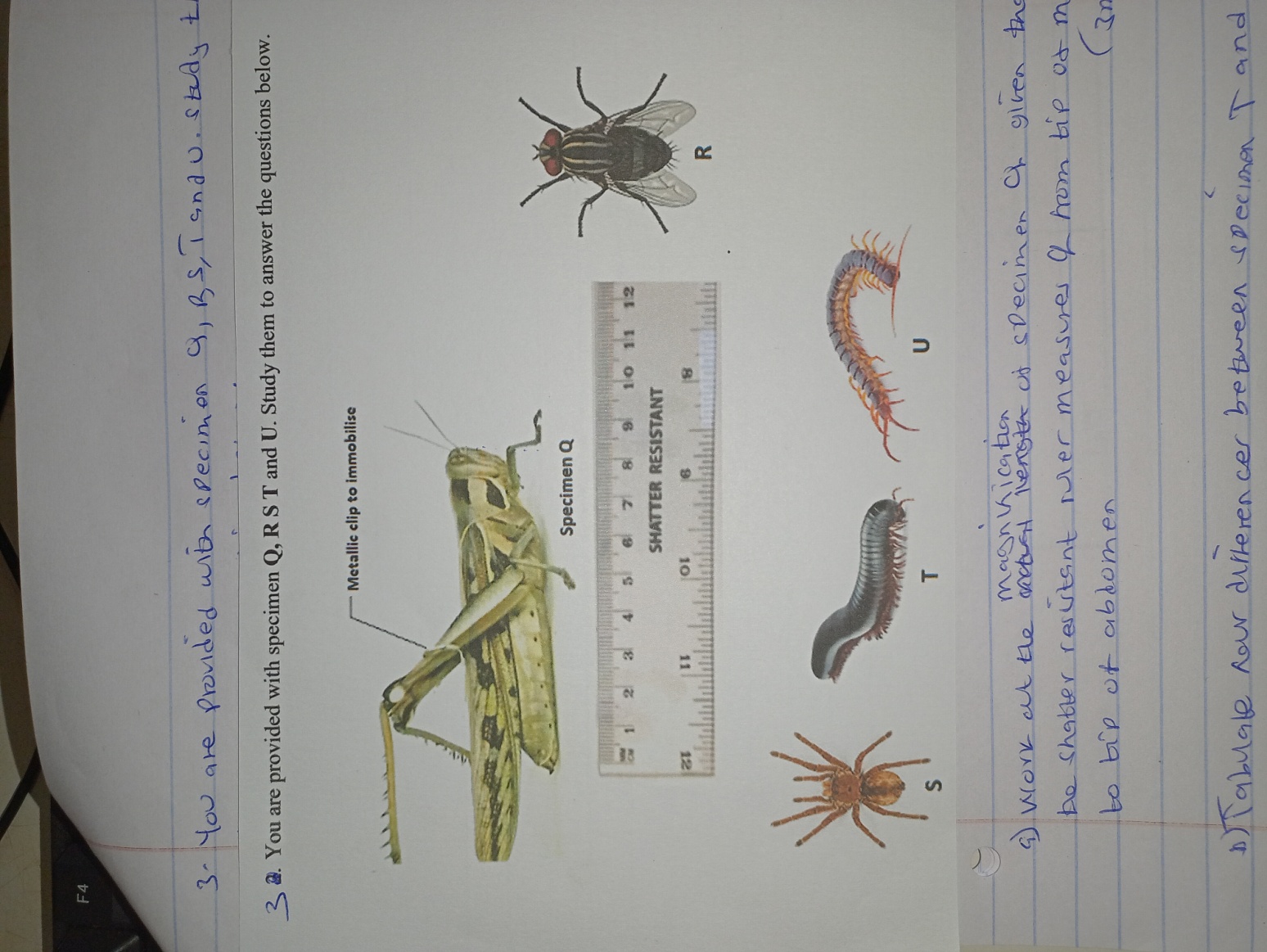
b) Leaves lanceolate……………………………………Mango leaf

Fill in the steps followed to identify the plant specimen. (10mks)

|  |  |  |
| --- | --- | --- |
| Specimen | Steps followed | Identify |
| L1 |  |  |
| L2 |  |  |
| L3 |  |  |
| L4 |  |  |
| L5 |  |  |

b) Using a scapel cut a transverse section of the petiole of L4. Place the thin section on a glass slide and observe it using a handlens. Draw a well labeled diagram of the section. (4mks)

1. You are provided with specimen Q, R, S, T and U. study them



1. Work out the magnification of specimen given that the shatter resistant ruler measures Q fro tip of mouth to tip of abdomen. (3mks)
2. Tabulate **four** differences between specimen T and U. (4mks)
3. State **two** ecological importance of specimen R. (2mks)
4. State **three** ways in which specimen Q is adapted to evade its predators in its ecological niche. (3mks)