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

**DATE…………………………………………........... SIGN……………………………………………………….**

**231/3**

**BIOLOGY**

**PAPER 3**

**PRACTICAL**

**TIME: 1 ¾ HOURS**

 **FORM FOUR MURANG’A EAST EXAMINATION-**

**2021**

*Kenya Certificate of Secondary Education( K.C.S.E.)*

**Instructions to candidate**

* **Answer ALL questions**
* **You are required to spend the first 15 min of 13/4 hours allowed for this paper reading the whole paper before carefully before commencing your work.**
* **Answer must be written in the spaces provided in the question paper**
* **Don’t insert additional page /paper**

|  |  |  |
| --- | --- | --- |
| **QUESTIONS** | **MAXIMUM SCORE** | **CANDIDATE SCORE** |
| **1** | **13** |  |
| **2** | **13** |  |
| **3** | **14** |  |
| **TOTAL** | **40** |  |

1. You are provided with specimens labelled **A** and **B**. Examine the specimens and answer the questions that follow.

(a) With a reason state the type of germination in each of the specimens. (4 marks)

Specimen **A**. Type of germination: ......................................................................................

Reason: ...............................................................................................................................

............................................................................................................................................

Specimen **B**. Type of germination: ......................................................................................

Reason: ...............................................................................................................................

............................................................................................................................................

(b) Draw a well labelled diagram of specimen **B**. (5 marks)

(c) Using observable features only state the class to which each of the specimens belongs. (4 marks)

Specimen **A**. Class: .............................................................................................................

Reason: ...............................................................................................................................

............................................................................................................................................

Specimen **B**. Class: .............................................................................................................

Reason: ...............................................................................................................................

............................................................................................................................................

Q2.You are provided with a specimen labeled **T** which is a fruit. Use it to answer the questions that follow.

1. Make a **transverse** section of the specimen **T**. Draw and label at least 3 parts. 6mks
2. With reasons, state the identity of fruit **T.**

Type of fruit………………………………………………………………………..1mk

Reason …………………………………………………………………………………1mk

1. Suggest the possible agent of dispersal and give **two** reasons

Agent …………………………………………………………………………………1mk

Reason ……………………………………………………………………………………………………………………………………………………………………………………

2mk

1. What is the placentation of **T**? …………………………………………………….1mk
2. Specimen **T** was green in colour before it was treated with a plant hormone.

Suggest the plant hormone.

………………………………………………………………………………………1mk

3. You are provided with a specimen labeled N. Squeeze the contents of N into the test tube. Add $3cm^{3}$ of water and shake the contents. Reserve the piece of intestine for question (b)

a)Use the reagents provided to test for the presence of various food substances in N extract. Record your observations in the table below (6mks)

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

b)Account for the results obtained in (a) above. (2marks)

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

c)Cut specimen N along its length to expose the inner surface (2marks)

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

………i) Compare the inner and outer surface of the specimen. Record your observations. (2marks)

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

ii)Account for your observation of the inner surface. (2marks)

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