**MOCK EXAMS**

**Kenya Certificate of Secondary School**

**FORM 3 BIOLOGY**

**231/3 - BIOLOGY -Paper 3**

**(PRACTICAL)**

**END TERM 1 2021 – 1 ¾ hours**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name .............................................. Adm Number................. Class: ………….

**Instructions to Candidates**

1. Write your name and admission number in the spaces provided above.
2. Sign and write the date of examination in the spaces provided above.
3. Answer **all** the questions in the spaces provided.
4. You are required to spend the first 15 minutes of the 1 ¾ hours allowed for this paper reading the whole paper carefully before commencing your work.
5. Additional pages must **not** be inserted.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**For Examiner’s Use Only**

|  |  |  |  |
| --- | --- | --- | --- |
| **Question** | **Maximum score** | **Candidate’s score** | |
| **1** | **14** |  | |
| **2** | **13** |  | |
| **3** | **13** |  | |
| **Total Score** | **40** |  |

**1.** You are provided with 10% glucose solution and substance **labeled Y**. Also provided is a solution labeled **X.** You are to investigate the reaction between the glucose solution and **substance Y**. Measure 20.00cm3 of the glucose solution and transfer it to the boiling tube provided. Transfer all the **substance Y** provided into the solution in the boiling tube. Tightly fit the rubber bung carrying a delivery tube to the boiling tube. Place the boiling tube in a water bath kept between 35 – 400 c. Measure about 1.0. cm3of **solution X** and transfer to a test tube. Connect the delivery tube so that the open end enters the **solution X**. Allow the set – up to stand for about 30 minutes and during this time observe the changes occurring in the boiling tube and in the test tube having **solution X.**

a) Fill the table below **(2 marks)**

|  |  |
| --- | --- |
| **Tube** | **Observations** |
| **Boiling Tube** |  |
| **Test Tube** |  |

b) What conclusions can your draw from your observations in the test tube? (**2 marks)**

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

c) Name the process that took place in the test tube (**1 mark)**

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

d) Shake the contents of the boiling tube and using a dropper remove a little of the

contents. Transfer a drop to a glass slide; add two drops of methylene blue stain. Cover with a cover slip and observe using a microscope of x10 or x15 eye piece lens.

(i) Draw and label the **substance Y** which is in the slide **(2 marks**)

ii) What is the possible identity of **substance Y (1 mark)**

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

e) Why was the temperature of the water bath kept between 35 – 380c **(1 mark)**

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

f) If the experiment was done under the following conditions, suggest, giving reasons the expected results.

(i)Water bath was kept at 1000c

|  |  |
| --- | --- |
| Observations **( 1mark)** | Reasons **(1mark)** |
|  |  |

g) From the microscope

(i) Name the part **labeled A.** **(1 mark)**

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

(ii) Give the function of part **labeled B.** **(1 mark)**

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

h) Name the form in which **substance Y** stores its excess glucose **(1 mark)**

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

2. You are provided with **specimen K** and **specimen L**, use them to answer the questions that follows.

1. State with reasons the sub divisions to which the specimens belong.

|  |  |  |
| --- | --- | --- |
|  | **Sub division** (2 mark) | **Reason** (2 mark) |
| **K** |  |  |
| **L** |  |  |

1. State two reasons that proofs specimen **L** is more advanced compared to specimen **K.** in plant Kingdom (2 marks)

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

1. Name the likely habitat of specimen K and give an adaptation that suit K to its habitat (2 marks)

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

1. Describe the leaf of specimen L (3 marks)

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

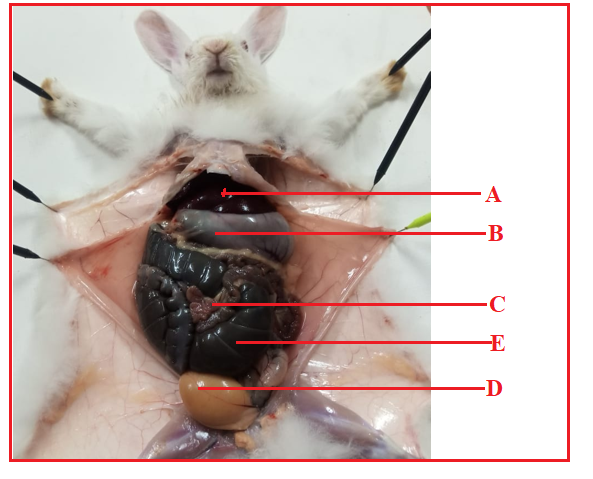
1. Study the stem of specimen L.
2. State the structural modification observed ( 1mark)

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

1. What is the importance of this modification? (1mark)

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

3. You are provided with the following illustration, use it to answer the questions that follow.



1. Name the parts labeled C and E (2marks)

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

1. Classify the organism into Phylum (1mark)

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

1. With reason identify the Class of the organism (2marks)

|  |  |
| --- | --- |
| Class | Reason |
|  |  |

1. State the digestive function of the part labeled B (2 marks)

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

1. State two adaptation of the part labeled C (4 marks)

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

1. State two homeostatis function of structure labeled A (2marks)

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