**Name:........................................................................... Stream:............**

**55/2**

**BIOLOGY**

**PRACTICAL**

**PAPER 2**

**2 hours**

**Uganda Certificate Of Education**

**PRE-REGISTRATION EXAMINATIONS 2019**

**BIOLOGY PRACTICAL**

**PAPER 2**

**2 HOURS**

**Instructions to candidates**:

* *Answer* ***all*** *questions.*
* *Drawings must be made in the spaces provided.*
* *Use sharp pencils for your drawings.*

**For Examiner’s use only.**

|  |  |  |
| --- | --- | --- |
| **Question** | **Marks** | **Examiner’s signature** |
| 1 |  |  |
| 2 |  |  |
| 3 |  |  |
| **Total** |  |  |

1. You are provided with suspension S and solution P.

a) Carryout the following tests to identify the food substances present in suspension S. record your tests, observations and deductions in the table below. (11 marks)

|  |  |  |
| --- | --- | --- |
| **TESTS** | **OBSERVATIONS** | **DEDUCTIONS** |
| i) **Test for starch** |  |  |
| ii) **Test for reducing sugars** |  |  |
| iii) **Test for proteins** |  |  |

b) Put 2cm3 of solution S in a test tube and add an equal amount of solution P. Incubate the mixture in a water bath maintained at 35-400C for 20 minutes. After the 20 minutes, carry out the following tests on the mixture and record your observations and deductions in the table below.

(4 marks)

|  |  |  |
| --- | --- | --- |
| **TEST** | **OBSERVATION** | **DEDUCTION** |
| Reducing sugar test |  |  |
| Biuret’s test |  |  |

c) From your results in (a) and (b);

i) Suggest with a reason, the identity of solution P. (2 marks)

Identity....................................................................................................

Reason

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ii) State with a reason, one property of solution P. (3 marks)

Property..................................................................................................

Reason

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2. You are provided with specimens A and B.

a) Examine specimen A and giving two reasons, identify what part of the plant the specimen is. (2 marks)

Specimen A: .......................................................................................................

Reasons:........................................................................................................................................................................................................................................

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b) Cut specimen B transversely and examine it. Giving two reasons, identify specimen B. (2 marks)

Specimen B:.......................................................................................................

Reasons:

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c) State 4 structural differences between specimen A and B. (4marks)

|  |  |
| --- | --- |
| **SPECIMEN A** | **SPECIMEN B** |
| i) |  |
| ii) |  |
| iii) |  |
| iv) |  |

d) Explain how specimen A is adapted to its mode of dispersal. (2 marks)

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e) Draw and label one half of specimen B in the space provided. (8 marks)

3. You are provided with specimens Q and R.

a) Examine the specimens and giving two reasons, state the class to which they belong. (3 marks)

Class:................................................................................................................

Reasons:

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i) Using a hand lens, examine one antenna of specimen Q and describe it.

(2 marks)

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ii) Measure the length of one antenna and length of the body of specimen Q and calculate the ratio of the length of antenna to length of the whole body.

(3 marks)

Length of antenna

.............................................................................mm

ii) Length of body

..............................................................................mm

Ratio of length of antenna to length of body

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iii) State the significance of the ratio obtained in b (ii). (2 marks)

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c) Place the specimens Q and R with the ventral side uppermost and examine their limbs using a hand lens. Write down three characteristics of the limbs of each specimen. (3 marks)

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| --- | --- |
| **Specimen** | **Characteristics of limbs** |
| **Q** |  |
| **P** |  |

d) Place specimen R with the dorsal side upper most. Draw and label its thorax and first segment of the abdomen. (7 marks)

**END**