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553/4

**BIOLOGY**

**PAPER 4**

JULY/AUGUST 2016

2HOURS

WESTERN JOINT MOCK EXAMINATIONS

Uganda Certificate of Education

**BIOLOGY PRACTICAL**

**Paper 4**

2 hours

**INSTRUCTIONS TO CANDIDATES:**

* *Answer all questions*
* *Drawings should be made in spaces provided*
* *Use sharp pencils for your drawings*
* *Coloured pencils or crayons should not be used*
* *No additional sheets of writing paper are to be inserted in the booklet.*
* *Work on additional sheets will not be marked.*

**1**. You are provided with specimen T which is a plant part, suspension K and solution Q. Use them to answer the questions that follow.

(a) Examine specimen T provided.

(i) What part of the plant is specimen T.  *(1mk)*

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(ii) Give a reason for your answer. *(1mk)*

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1. Suspension K is an extract from specimen T, using the reagents provided,

test K for starch and reducing sugar. Record the tests, observations and

deductions in the table provided.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Test | Observation | Deduction |
| Starch |  |  |  |
| Reducing sugar. |  |  |  |

(c) To about 1cm3 of K in a test tube add 1cm3 of solution Q- Place the test tube

in a water bath maintained between 35-400C, Leave to stand for 10 minutes.

Remove the test tube, add 1cm3 of Benedict’s solution to the mixture and

boil for about 1 minute.

(i) Record your observation  *(1mk)*

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(ii) What do you deduce from the observations made in (c)(i) above?  *(2mks)*

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1. Boil 2cm3 of Q in a test tube for 3-5 minutes. To 1cm3 of K, add 1cm3 of the

boiled solution Q. Allow to stand in a water bath at 35-400C for 10 min. Add 1cm3 of Benedict’s solution and boil for one minute. *(2mks)*

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1. (i) With reasons suggest the nature of substance in solution Q. *(1mk)*

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(ii) Suggest the name of the substance present in solution Q. *(1mk)*

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2 (a) You are provided with specimens M, N, O and P, carefully examine the body

of each specimen and record their features in the table given below. *(12mks)*

|  |  |
| --- | --- |
| Specimen: | Features of the body |
| M |  |
| N |  |
| O |  |
| P |  |

(b) Using the characteristic features of the body of each specimen you have observed,

construct a simple biological (dichotomous) key to identify each specimen. *(6mks)*

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**3**. You are provided with specimens R and S. Examine them and answer the questions that follow.

1. Record in the table below the difference and similarities between R and S

Differences

|  |  |
| --- | --- |
| R | S |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Similarities *(2mks)* ……………………………………………………………………………………………………………

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(b) How is specimen R, pollinated. State the reasons for your answers. *(2mks)* …………………………………………………………………………………………………………… ……………………………………………………………………………………………………………

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(d) Carefully bisect specimen R longitudinally in order to obtain two identical

halves. Draw a labeled one half. State your magnification. *(14mks)*

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