EXAMINATIONS COUNCIL OF ZAMBIA

Examination for School Certificate Ordinary Level

Biology

Paper 3 Practical Test

Wednesday

22 NOVEMBER 2017

Additional materials:
As listed in Instructions to Supervisors

Time 1 hour 15 minutes

Instructions to Candidates
Write your name, centre number and candidate number in the spaces provided at the top of this page.
There are two questions in this paper.
Answer both questions.
Write your answers in the spaces provided on the question paper.
Information for candidates
The number of marks is given in brackets [ ] at the end of each question or part question.

Cell phones are not allowed in the examination room.
1 (a) Examine specimen D1A and answer the questions that follow.

(i) What part of a plant is specimen D1A?

(ii) Explain why specimen D1A is considered a stem.

(iii) State the functions of D1A in a plant.

(iv) Describe the method used for propagation of specimen D1A.

(b) You are provided with specimen D1B which was taken from D1A. Extract a solution from specimen D1B using the materials provided.

(i) Describe the method used to extract the solution from specimen D1B.

(ii) Using the extract from D1B carry out the following food tests.

<table>
<thead>
<tr>
<th>Specimen</th>
<th>Reagent</th>
<th>Procedure</th>
<th>Observation</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1B</td>
<td>Iodine solution</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Benedict's solution</td>
<td></td>
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<tr>
<td></td>
<td>Biuret Reagent</td>
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</tbody>
</table>
(iii) Explain why specimen D1B is not a good source of food for a malnourished person.

.......................................................................................................................... [1]

[Total: 20 marks]

2 (a) You are provided with specimen W33 and W34. Make a large labelled drawing of the cut surface of W33.

.......................................................................................................................... [8]

(b) (i) Measure the diameter of specimen W33 and record the measurement.

.......................................................................................................................... [1]

(ii) Measure the diameter of your drawing. Draw a line across the diagram where the measurement was taken.

.......................................................................................................................... [1]

(iii) Calculate the magnification of the drawing using the measurements obtained.

.......................................................................................................................... [3]

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(c) State three similarities between W33 and W34.
   (i) .................................................................
   (ii) .................................................................
   (iii) ................................................................. [3]

(d) State three differences between W33 and W34.
   (i) .................................................................
   (ii) .................................................................
   (iii) ................................................................. [3]

(e) State how new plants can be produced from specimen W33.
   ........................................................................ [1]

[Total: 20 marks]
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