

Candidate Name

Centre Number

Candidate Number



**ZIMBABWE SCHOOL EXAMINATIONS COUNCIL**  
General Certificate of Education Ordinary Level

**BIOLOGY**

**4025/3**

PAPER 3 Practical Test

**NOVEMBER 2019 SESSION**

1 hour 30 minutes

Candidates answer on the question paper

Additional materials:

As listed in Instructions to Supervisors

Electronic calculator

Ruler (cm/mm)

Pencil (B or HB is recommended)

Soft clean eraser

**TIME** 1 hour 30 minutes

**INSTRUCTIONS TO CANDIDATES**

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer **all** questions.

Write your answers in the spaces provided on the question paper.

Use a sharp pencil for your drawings.

Coloured pencils and crayons should **not** be used.

**INFORMATION FOR CANDIDATES**

The number of marks is given in brackets [ ] at the end of each question or part question.

FOR EXAMINER'S USE	
1	
2	
<b>TOTAL</b>	

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**[Turn over]**

1. (a) You are required to investigate a property of water.  
You are provided with two samples of water, **S1** and **S2**, at different temperatures.

1. Label two beakers **A** and **B**.
2. Measure the temperature of **S1** and record the temperature in **Table 1.1**.
3. Measure the mass of beaker **A** and record the mass in **Table 1.1**.
4. Measure 20 cm<sup>3</sup> of **S1** and place it into the beaker labelled **A**.
5. Measure the mass of **S1** and beaker **A** and record the mass in **Table 1.1**.  
Complete **Table 1.1** by calculating the mass of **S1**.
6. Repeat using **S2** and beaker **B**.

(i) **Table 1.1**

	<b>S1</b>	<b>S2</b>
<b>temperature / °C</b>		
<b>mass of beaker and water/g</b>		
<b>mass of beaker/g</b>		
<b>mass of water /g</b>		

[8]

(ii) Calculate the density of S1 and S2.

S1

S2

[4]

(iii) Name the property of water investigated.

..... [1]

(iv) Explain how living organisms benefit from this property of water.

.....

.....

..... [3]

(b) Describe a method to demonstrate the capillary action of water.

.....

.....

.....

.....

..... [4]

[Total: 20]

2. (a) You are provided with two specimens, **A** and **B**, of plant reproductive organs.  
Examine the two specimens.

1. Cut specimen **A** longitudinally.
2. Examine the cut specimen **A** using a hand lens.  
Make a labelled drawing of specimen **A**.
3. Examine specimen **B** with hand lens.  
Make a labelled drawing of specimen **B**.

- (i) Drawing of specimen **A**.

Drawing of specimen **B**.

[8]

- (ii) State the type of reproduction by specimen A and specimen B.

A

B

[2]

- (iii) Complete Table 2.1 by stating the functions of any **two** labelled parts of each diagram.

Table 2.1

	name of part	function
specimen A	1	
	2	
specimen B	1	
	2	

[4]

- (iv) Describe any **two** structural differences between specimen A and specimen B.

1

2

[2]

(v) State any **four** advantages of reproduction using specimen **B**

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

4 \_\_\_\_\_

[4]

[Total 20]

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