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
Pencil (B or HB is recommended)
Soft clean eraser
Ruler (cm/mm)

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	
TOTAL	

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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^3 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**

	S1	**S2**
temperature / ^{o}C		
mass of beaker and water/g		
mass of beaker/g		
mass of water /g		

[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]