

Candidate Name _____

Centre Number	Candidate Number

EXAMINATIONS COUNCIL OF ZAMBIA

Joint Examination for the School Certificate
and General Certificate of Education Ordinary Level

BIOLOGY

PAPER 3 Practical Test

Tuesday

29 OCTOBER 2002

1 hour 15 minutes

5090/3

Additional materials:
As listed in Instructions to Supervisors.

TIME: 1 hour 15 minutes

INSTRUCTIONS TO CANDIDATES

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Write your name, centre number and candidate number in the spaces 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.

Use sharp pencils 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	

1. (a) Take a sample of powdered groundnuts and press it against one end of a strip of paper labelled **S1**.

Repeat this action on a second strip of paper labelled **S2**.

- (i) State what happens to both strips of paper.

.....
.....
.....

[1]

- (ii) What food test have you just carried out?

.....
.....

[1]

- (b) (i) Immerse and shake the part of **S1**, where the groundnut powder was pressed, in alcohol for 20 minutes. Remove excess liquid.

Observation (S1)

.....
.....

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[1]

Reason:

.....
.....

[1]

- (ii) Immerse and shake the part of **S2** where the groundnut powder was pressed in distilled water for 20 minutes. Remove excess liquid.

Observation (S2)

.....
.....
.....

[1]

Reason:

.....
.....

[1]

(iii) Why was it necessary to shake strip **S1** and strip **S2** in the liquids?

.....

.....

.....

[1]

(iv) What was the purpose of using distilled water in the experiment?

.....

.....

.....

[1]

(c) (i) Where in the human body is the nutrient you have identified digested?

.....

[1]

(ii) Name the enzyme involved in the digestion of the nutrient.

.....

[1]

(iii) Name the products of the digestion in c (ii) above.

.....

[2]

(iv) State three functions, in the human body, of the nutrient you have identified.

1.

.....

2.

.....

3.

.....

[3]

(d) Describe another method you would use to confirm the presence of the nutrient you have identified.

Procedure:

.....

.....

.....

.....

[4]

Observation:

.....

.....

[1]

[Total: 20]

2. You are provided with specimen **P**.

Using a razor blade, carefully cut a longitudinal section of specimen **P**. Examine the section using a magnifying hand lens and make a large labelled drawing to show the internal features.

(a)

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[7]

- (b) (i) Measure the length of specimen **P**. (Draw a line along the length measured.)

Length [1]

- (ii) Calculate the magnification of your drawing.

Calculation:

Magnification:

..... [3]

- (c) (i) Name the agent of pollination of specimen P

 (ii) Give three reasons for the answer.
 1.....

 2.....

 3.....

[3]

- (d) Complete the table given below:

FLOWER PART	FUNCTION
Anther	
	Develops into a seed
Sepal	
	It is the passage of pollen tubes and their nuclei to the ovary
Ovary	

[5]

[Total: 20]