

Candidate Name _____

Centre Number	Candidate Number									

EXAMINATIONS COUNCIL OF ZAMBIA

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

BIOLOGY

5090/3

PAPER 3-Practical Test

Wednesday

29 OCTOBER 2014

Additional materials:
As listed in Instructions to Supervisors.

TIME: 1 hour 15 minutes

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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.

Use sharp **HB** 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.

Cell phones are not allowed in the examination room.

FOR EXAMINER'S USE	
1	
2	
Total	

Answer **all** the questions.

- 1** You are provided with specimen **J**. Prepare a clear extract solution of specimen **J** and pour 2cm³ in each of the test tubes labelled **N₁**, **N₂** and **N₃**

- (a)** Using the reagents provided carry out tests to identify the nutrient(s) present in specimen **J** and record the test method, observations and conclusion in the table provided below:

TEST TUBE	REAGENT	TEST METHOD	OBSERVATION(S)	CONCLUSION
N₁	BIURET REAGENT			
N₂	BENEDICTS REAGENT			
N₃	IODINE SOLUTION			

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[13]

- (b)** Explain how you prepared the solution from specimen **J**.

.....

.....

.....

[3]

- (c)** Take a sample from the remains on the filter paper and place it on a clean white tile.

- (i)** Test the sample for starch and record the test method, observation and conclusion in the table below:

TEST METHOD	OBSERVATION	CONCLUSION

[4]

[TOTAL: 20]

2 You are provided with specimens F_1 and F_2 .

(a) (i) Make a large labelled drawing of F_2 .

[6]

(b) (ii) Measure the diameter of F_2 and record the measurement.

Measurement: [1]

(ii) Calculate the magnification of the drawing of F_2 in (a) (i) above.

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[3]

(c) (i) State the method of dispersal for F_1 and F_2

F_1 [1]

F_2 [1]

(ii) Give reasons for answers given in (c) (i) above.

F_1
.....
..... [3]

F_2
.....
..... [3]

(iii) 1 Which one of the **two** specimens is better suited for survival in its environment?

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

2. Give reasons for your answer.

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

[Total 20]

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