Centre Number	Candidate Number

Candidate Name_____

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

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	

For Examiner's Use

Answer **all** the questions.

1 You are provided with specimen **J**. Prepare a clear extract solution of specimen **J** and pour $2cm^3$ in each of the test tubes labelled $\mathbf{N_1}$, $\mathbf{N_2}$ and $\mathbf{N_3}$

(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
$\mathbf{N_1}$	**BIURET REAGENT**			
$\mathbf{N_2}$	**BENEDICTS REAGENT**			
$\mathbf{N_3}$	**IODINE SOLUTION**			

[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 $\mathbf{F_1}$ and $\mathbf{F_2}$.

(a) (i) Make a large labelled drawing of $\mathbf{F_2}$.

[6]

(b) (ii) Measure the diameter of $\mathbf{F_2}$ and record the measurement.

Measurement: ..... [1]

(ii) Calculate the magnification of the drawing of $\mathbf{F_2}$ in **(a) (i)** above.

[3]

For Examiner's Use

(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]