

Candidate Name \_\_\_\_\_

Centre Number				Candidate Number									

## EXAMINATIONS COUNCIL OF ZAMBIA

### Examination for School Certificate Ordinary Level

## Agricultural Science

5037/3

### Paper 3 Practical Test

Candidates answer on the question paper

Additional materials

As listed in instructions to supervisors.

**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.

There are **four (4) questions** in this paper. Answer **all** questions.

You should show the essential steps in any calculation. Record all experimental results and observations in the spaces provided on the question paper.

Use sharp pencils for your drawings. Coloured pencils or crayons should not be used.

### Information for Candidates

The number of marks is shown 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	
3	
4	
TOTAL	

**Answer all questions**

**Question 1**

(a) You are provided with **AS1** in a Petri dish.

**AS1** is a stock feed.

Carry out the test for **starch** and **proteins** to determine its nutritional value. Use half a spatula for each of the required tests.

Write your methods, observations and conclusions in the table below.

Test	Method	Observation	Conclusion
Starch			
Protein			

[8]

(b) State the functions of the nutrient present in **AS1** to livestock.

.....

.....

.....

.....

[2]

**[Total: 10 marks]**

## Question 2

You are provided with **AS2**.

- (a) (i) Draw a large labelled diagram of **AS2** in the tray below to show its position during storage.



[3]

- (ii) Why should a farmer ensure that **AS2** is placed in that position during storage?

.....

.....

.....

[3]

- (b) Examine **AS2** and give **three** visible qualities a farmer should consider in order to select it for incubation.

.....

.....

.....

[3]

- (c) Give **one** reason why **AS2** is turned during incubation.

.....

.....

[1]

[Total: 10 marks]

Question 3

**AS3** is a structure used in Agriculture.

(a) What is the identity of **AS3**?

..... [1]

(b) (i) What is the **main** product made in the structure **AS3**?

..... [1]

(ii) State **two** uses of the product you have mentioned in **b(i)** above.

..... [2]

(c) (i) What is the **by-product** made during the production of the main product?

..... [1]

(ii) State **three** ways in which the by-product is used in industry.

..... [3]

(d) (i) Name the organism which produces the products named in **(b)(i)** and **(c) (i)** above.

..... [1]

(ii) What is the other importance of the organism in agriculture?

..... [1]

**[Total: 10 marks]**

# Question 4

You are provided with specimens **AS4** and **AS5** which are equipment used on livestock.

(a) (i) Identify the specimens **AS4** and **AS5**.

**AS4** ..... [1]

**AS5** ..... [1]

(ii) What operations are **AS4** and **AS5** used for on a farm?

**AS4** ..... [1]

**AS5** ..... [1]

(iii) Give **one** reason in each case why the operation you mentioned in (a) (ii) above should be carried out on livestock.

**AS4** ..... [1]

**AS5** ..... [1]

(b) State **two** other methods which could be used for the same purpose in place of **AS4** and **AS5**.

**AS4** (i) ..... [1]

(ii) ..... [1]

**AS5** (i) ..... [1]

(ii) ..... [1]

[Total: 10 marks]