EXAMINATION NO.:__

THE MALAWI NATIONAL EXAMINATIONS BOARD

2023 MALAWI SCHOOL CERTIFICATE OF EDUCATION EXAMINATION

AGRICULTURE

Subject Number: M012/II

Tuesday, 27 June

Time Allowed: 1 h 30 min sessions
10 am onwards

PAPER II

Practical

(40 marks)

Instructions

1. **This paper contains 6 printed pages. Please check.**
2. This paper has two sections: **A** and **B.**
3. Answer **all** questions in the spaces provided.
4. Write your **Examination Number** on **all** pages in the spaces provided.
5. In the table provided on this page, **tick** against the question number you have answered.
6. At the end of the examination, hand in your paper to the invigilator.

Question Number	Tick if answered	Do not write in these columns	
1			
2			
3			
4			

Section A (20 marks)

1. The **Table below** shows results of an experiment on production of eggs produced from 50 layers that were exposed to different duration of light.

Duration of light (h)	Number of eggs produced
4	10
8	30
12	50
14	60
20	80
24	80

a. Using a graph paper provided on **page 3**, plot a graph of number of eggs produced against the duration of light. **(4 marks)**

b. Use the graph to estimate the following:

(i) Number of eggs laid when light duration was 10 hours.

____ **(1 mark)**

(ii) Duration of light for the chicken to lay 20 eggs.

____ **(1 mark)**

c. Identify the recommended duration of light for egg production.

____ **(1 mark)**

d. Give a reason for the answer in **c.**

____

____ **(2 marks)**

e. State the economic principle being demonstrated by the graph.

____ **(1 mark)**

Continued/...

2. A teacher brought the following materials to a form four class:

- prepared substrate
- water in a bucket
- strings
- drum
- platform with holes
- plastic sheet
- 3 stones
- firewood
- matches
- water

Describe the procedure that should be followed to treat the substrate for mushroom production.

Section B (20 marks)

3. You are provided with soil samples labelled **X** and **Y.**

Procedure

1. Take the soil sample labelled **X** and place it in between your thumb and forefinger.
2. Rub the soil in between the thumb and forefinger.
3. Feel the texture of the soil as you rub.
4. Repeat procedure 1 to 3 with soil sample **Y**.

a. (i) Which soil sample would be ideal for establishing surface irrigation?

______

(1 mark)

(ii) Give a reason for the answer in **3 a (i).**

______

______

(2 marks)

b. Give any **one** way in which manure application would improve:

(i) structure of soil sample **X**.

______

______

(2 marks)

(ii) pH of soil sample **Y**.

______

______

(2 marks)

c. (i) Which soil sample would be recommended for application of inorganic fertilisers.

______

(1 mark)

(ii) Give a reason for the answer in **c (i).**

______

______

(2 marks)

Continued/...

4. You are provided with the following specimens labelled **P, Q, R** and **S.**

a. Identify specimens which are concentrates.

____

____

____

____

(2 marks)

b. Identify a feed which is an additive.

____

(1 mark)

c. Give any **two** ways in which the additive identified in **(b)** is important.

____

____

(2 marks)

d. Name any **two** nutrients found in feed **R.**

____

____

____

(2 marks)

e. Identify any **two** feeds which could be used for steaming up a cow.

____

____

(2 marks)

f. Identify a feed which is not suitable for non-ruminant animals.

____

(1 mark)

END OF QUESTION PAPER

NB: This paper contains 6 printed pages