



EXAMINATION NO.: _____

THE MALAWI NATIONAL EXAMINATIONS BOARD

2022 MALAWI SCHOOL CERTIFICATE OF EDUCATION EXAMINATION

AGRICULTURE

Subject Number: M012/I

Time Allowed: 2 hours

8:00 – 10:00 am

Monday, 5 September

PAPER I

(100 marks)

Theory

Instructions

1. This paper contains 12 printed pages. Please check.
2. This paper has two sections, A and B. Section A has ten questions and Section B, three questions.
3. Answer all questions in the spaces provided.
4. Write your Examination Number on all pages.
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 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
| 11 | | |
| 12 | | |
| 13 | | |
| Total | | |

Section A (70 marks)

Answer all questions in this section in the spaces provided.

1. a. Give any **one** limitation of solar power on a farm.

(1 mark)

- b. State any **two** ways in which agricultural infrastructure agencies support livestock farmers in Malawi.

(2 marks)

- c. State any **two** ways in which land drainage is important in crop production.

(2 marks)

- d. State any **two** functions of living organisms in the soil.

(2 marks)

- e. Explain any **two** ways in which trading of agricultural commodities at community level is important.

(4 marks)

2. a. Describe **one** way of achieving each of the following fruiting management in mushroom production:

(i) monitoring spawn

(2 marks)

(ii) watering

(2 marks)

- b. Explain any **one** way in which soils with good consistency influences crop production.

(2 marks)

3. a. State any **two** factors that make a machine reach the scrap value earlier.

(2 marks)

3. (Continued)

- b. A farmer purchases a ridger amounting to K240,000 with a provisional annual depreciation of 20%.
- (i) Calculate the value of the ridger after 3 years using reduced balanced method.

(4 marks)

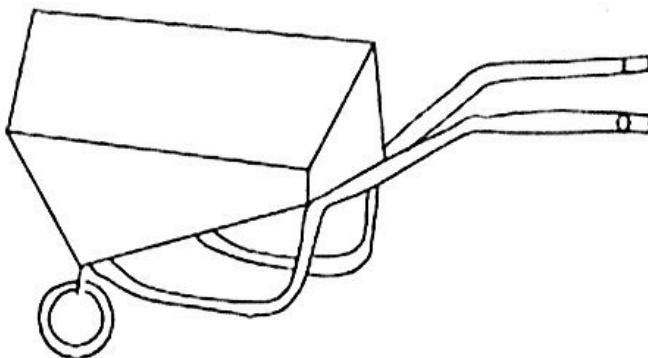
- (ii) State any **two** benefits of knowing depreciation rate of the ridger to a farmer.

(2 marks)

4. a. Describe the first **two** steps that are followed when establishing furrow irrigation.

(4 marks)

- b. The **figure below** is a diagram showing a farm implement.



- (i) Name the farm implement.

(1 mark)

- (ii) Give any **one** use of the farm implement in crop production.

(1 mark)

- (iii) State **one** reason for commonly using the farm implement in Malawi.

(2 marks)

5. a. State any **two** steps that are involved when preparing a site for transplanting mango seedlings.

(2 marks)

- b. A farmer observed the following symptoms of mango disease more in wet weather than in dry weather.

- White powder growth on leaves and young fruits.
- Curled young leaves.

- (i) Identify the disease.

(1 mark)

- (ii) Give **one** way of controlling the disease.

(1 mark)

- (iii) Give **one** reason for the appearance of more symptoms of the disease in wet weather than in dry weather.

(2 marks)

6. a. Give any **two** aims of chicken improvement.

(2 marks)

- b. Describe the relationship between demand and supply in a market.

(2 marks)

7. a. Explain any **one** way in which farm budgeting is important.

(2 marks)

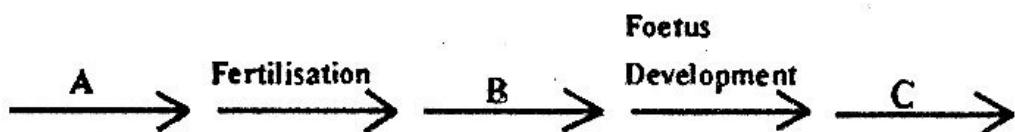
- b. State **one** disadvantage of inbreeding in livestock.

(1 mark)

- c. Name any **two** examples of goat breeds used for milk production.

(2 marks)

8. a. The **flow diagram** below shows some processes in the reproduction of cattle.



- (i) Name the processes **A** and **B**.

A _____ (1 mark)

B _____ (1 mark)

- (ii) State any **two** signs of process **C** in a cow.

(2 marks)

8. (Continued)

- b. State any **two** ways in which agro based industries encourage farmers to produce high quality produce.

(2 marks)

9. a. The **Table below** shows results of an experiment on maize yield using different systems of irrigation.

| Plot | System of Irrigation | Maize Yield (kg) |
|------|----------------------|------------------|
| 1 | overhead | 3500 |
| 2 | drip | 4000 |
| 3 | surface | 3200 |

- (i) Identify the type of irrigation that would be recommended to a farmer.

(1 mark)

- (ii) Give a reason for the answer in b (i).

(1 mark)

- (iii) State any **two** variables that were kept constant in the experiment.

(2 marks)

- (iv) Explain **one** way in which results from the experiment would be evaluated.

(2 marks)

9. (Continued)

- b. Explain any **two** factors to consider when feeding cattle.

(4 marks)

- 10. a.** A farmer observed a sudden colour change of mycelium from white to green during mushroom fruiting.

- (i) Give any **two** causes of the colour change of the mycelium.

(2 marks)

- (ii) Mention any **two** ways of controlling the situation.

(2 marks)

- b. State any **two** activities which are done in crop improvement.

(2 marks)

Section B (30 marks)

Answer all the **three** questions in this section.

Your answers should be in an essay form.

- 11.** Explain any five characteristics of cows to be selected for breeding.

(10 marks)

Continued/...

12. Explain any five ways in which conservation agriculture would deal with climate change.

(10 marks)
Continued/...

13. Describe any five factors that affect pasture seed rate.

(10 marks)

END OF QUESTION PAPER

This paper contains 12 printed pages.