



EXAMINATION NO.: _____
THE MALAWI NATIONAL EXAMINATIONS BOARD

2019 MALAWI SCHOOL CERTIFICATE OF EDUCATION EXAMINATION

AGRICULTURE

(100 marks)

Subject Number: M012/I

Monday, 24 June

Time Allowed: 2 hours

8:00 – 10:00 am

PAPER I

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. 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			

Section A (70 marks)

Answer **all** the questions in the spaces provided in this section.

1. a. State any **two** ways in which supplying is important in crop production.

(2 marks)

- b. Describe any **one** way of achieving the following in maize production:

- (i) Selfing of parents

(2 marks)

- (ii) Cross – pollinating of in- bred lines

(2 marks)

- c. Explain any **two** ways in which living organisms help to maintain plant nutrients in the soil.

(4 marks)

1. (Continued)

- d. Name any **two** materials used as substrates in mushroom production.

- maize stalk

- banana leaves

(2 marks)

2. a Explain any **one** way in which each of the following farming technologies would improve food security:

- (i) Irrigation

(2 marks)

- (ii) Pest and disease management

(2 marks)

- b Explain any **two** ways in which use of animal power increases food supply in Malawi.

(4 marks)

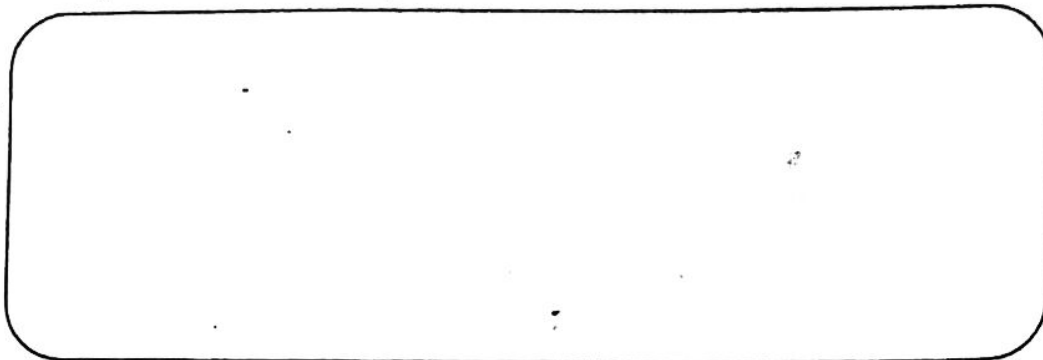
- 3 a State any **one** way of controlling scales in a mango orchard.

(1 mark)

Continued/...

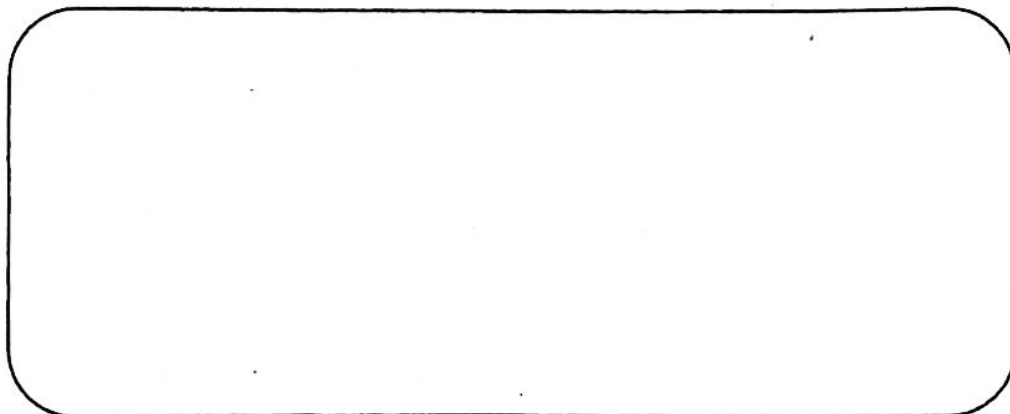
3. (Continued)

- b. Using a well labelled diagram illustrate a **three tire** marketing channel.



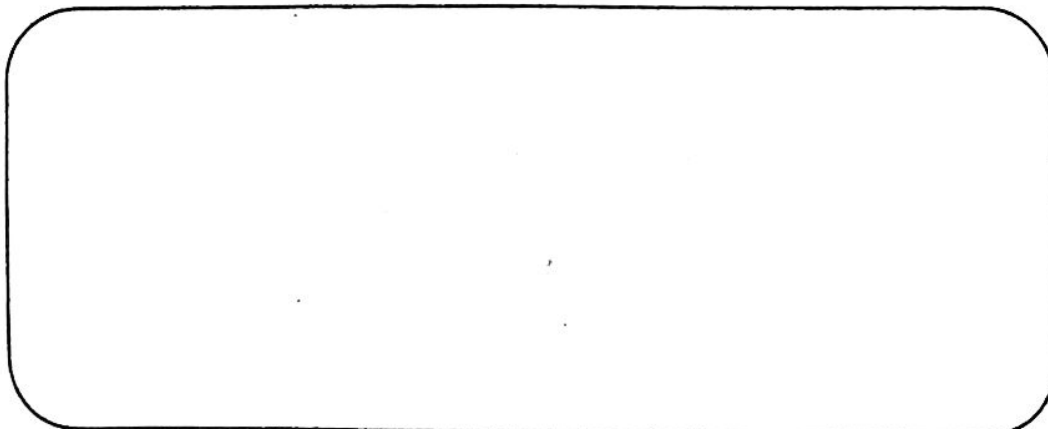
(3 marks)

- c. Calculate the number of maize seeds that will be needed for 3 hectares of land given that 3 seeds are planted per station. The distance between ridges and planting station is 0.9 metres.



(2 marks)

- d. If a farmer planted 800 seeds in his field and only 200 seeds germinated, calculate the germination percentage.



(2 marks)

Continued/...

1. (Continued)

- d. Name any **two** materials used as substrates in mushroom production.

- maize stalk

- banana leaves

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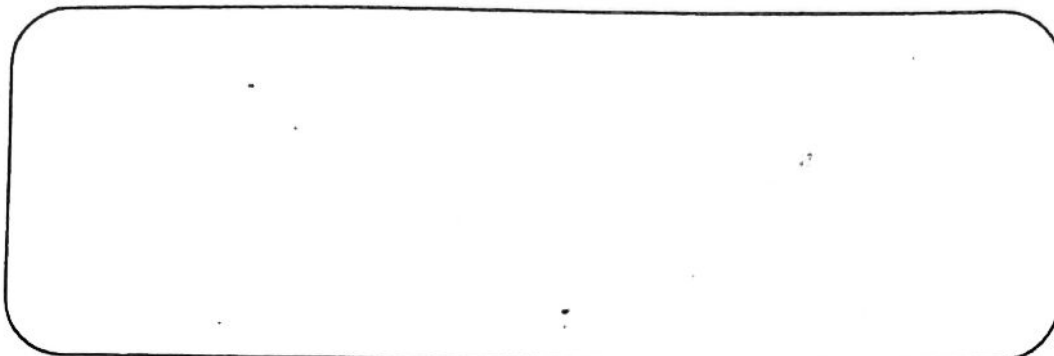
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(1 mark)

Continued/...

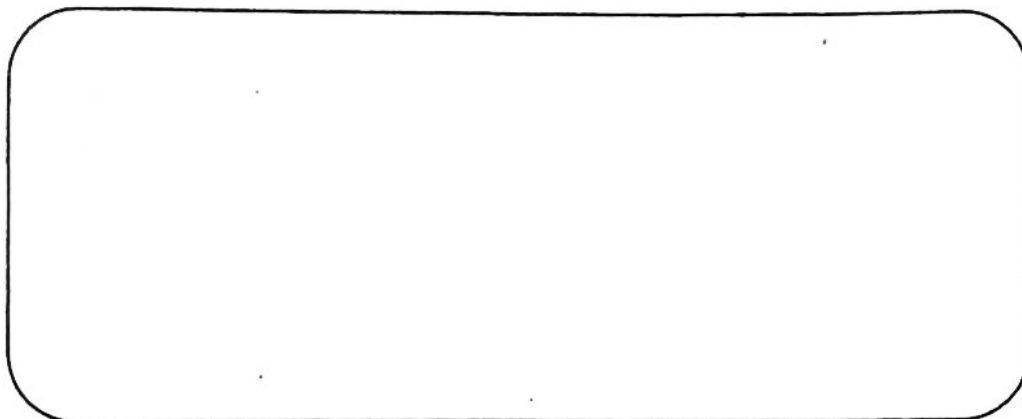
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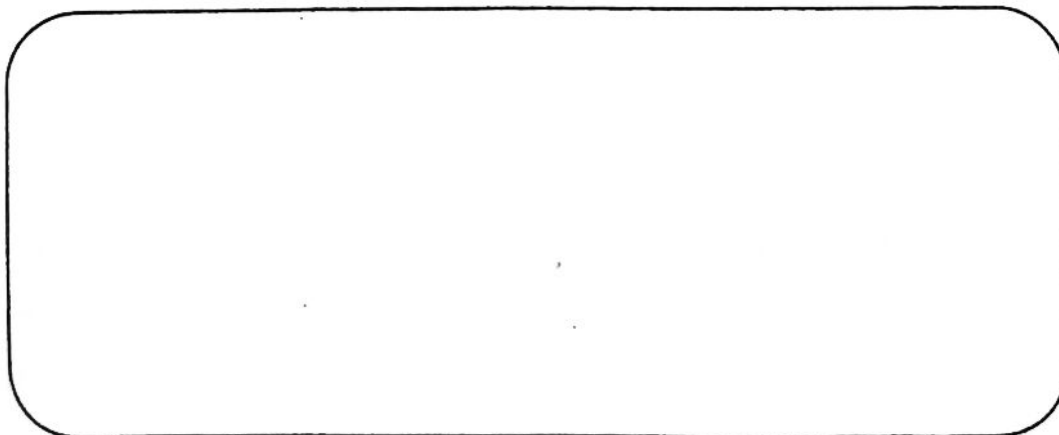
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(2 marks)

Continued/...

4. **Figure 1** is a diagram showing a product of a human activity.

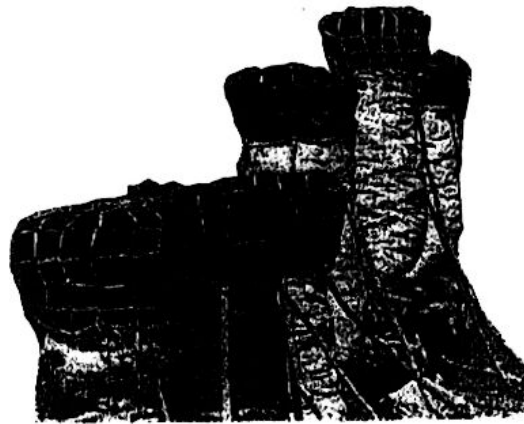


Figure 1

- a. Give any **two** negative effects of the human activity on the environment.

(2 marks)

- b. Explain any **two** ways of overcoming the impact of the human activity on agricultural production.

(4 marks)

5. a In Mchere village the prices of maize were very high but the demand did not change.

(i) Name the degree of demand for maize in Mchere village.

(1 mark)

(ii) Give a reason for the answer in 5 a (i).

(2 marks)

- b. State any **two** ways in which elasticity of demand is important.

(2 marks)

- c. State any **one** way of improving output from each of the following sources of farm power:

(i) Drought animals

(1 mark)

(ii) Solar

(1 mark)

6. a. Explain any **one** way in which knowledge of "signs of heat" in a cow is important to a farmer.

(2 marks)

- b. Name **two** diseases which cause lameness in sheep.

(2 marks)

7. a. State any **two** agricultural development agencies which provide credit Services in Malawi.

(2 marks)

- b. Describe the first **two** stages in the scientific approach to agricultural research.

- Identify a problem for example a problem that can faced by a farmer can be of the so many of fertilizer available so what could be the best types of fertilizer for maize production.

- Propose a hypothesis. This is an answer that will be proved or disapproved.

(4 marks)

8. a. State any **three** conditions for getting a loan from commercial banks.

- (7b) b. clearly state the aims of the experiment. (3 marks)
- d. experimental design (treatment, replication, randomisation)

Agricultural research : is a careful study is done in order to find and report new knowledge in order to increase agriculture knowledge and solve a problem.

Continued/...

8. (Continued)

- b. State the **three** stages of marginal yield in the law of "diminishing marginal returns."

(3 marks)

9. Figure 2 is a diagram showing the digestive system of a farm animal. Use it to answer questions that follow.

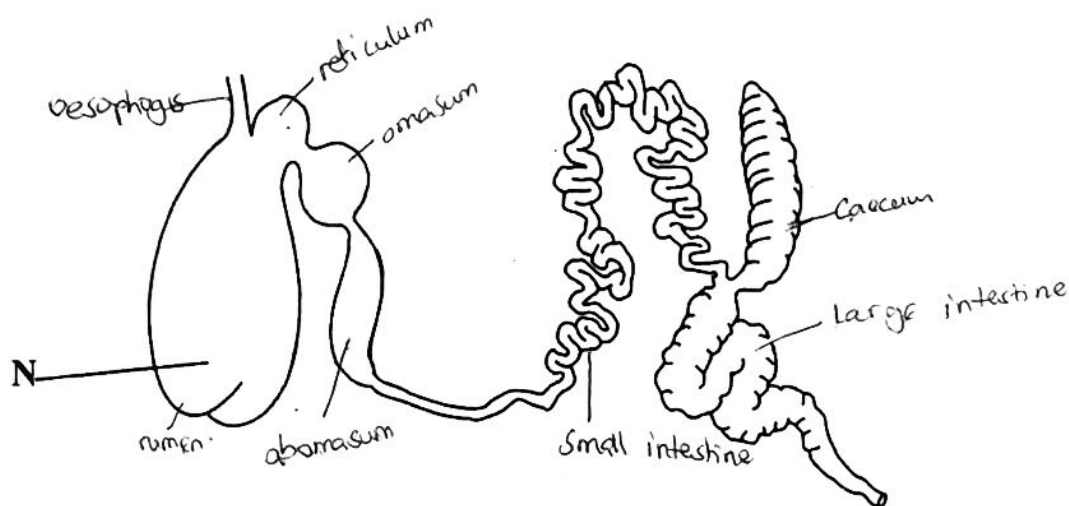


Figure 2

- a. Name the type of farm animals which have this digestive system.

— ruminant animal

(1 mark)

- b. Mention any **two** nutrients digested in the part labelled N.

(2 marks)

Continued/...

9. (Continued)

- c. Explain any **one** way in which the digestive system is suitable for grass as a feed.

(2 marks)

- d. Name **one** disease associated with the digestive system.

(2 marks)

10. a. State any **two** ways in which "steaming up" of the cow during the dry period is important.

(2 marks)

- b. Explain any **two** ways in which Agricultural Research is important to the growing population.

it generates new knowledge through development of new principles in agriculture.

it develops effective ^{many} protecting crop and animals from pest and disease.

(4 marks)

- iii. It leads to improved breeds of livestock.
- iv. It bring about new varieties of crops.
- v. It improves the quality and safety of products.
- vi. It determines best nutrition for the farmer.

AGRICULTURAL PROBLEM ON WHICH CAN O CUR

- i. Land husbandry: land continues to be fertile with our using fertilizer.
- ii. Crops husbandry practice: weeding fertilizer application
- iii. Pest and disease control: livestock: breed in order to find the disease resistant
- iv. crop varieties: and high production breed
- v. Livestock husbandry: New feeding method having

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