NAME: _____ SCHOOL: _____

2024 M012/I

NSANJE DISTRICT MOCK

MALAWI SCHOOL CERTIFICATE OF EDUCATION EXAMINATION

AGRICULTURE

Subject Number: M021/I

Monday, 18 March

Time Allowed: 2 hours

8:00-10:00 am

PAPER I

(100 marks)

Theory

Instructions

1. **This paper contains 13 printed pages. Please check.**
2. This paper contains **two** sections, **A** and **B.** Section **A** has **ten** questions and section **B three** questions.
3. Answer **all** questions in the spaces provided. The maximum number of marks for each answer is indicated against each question.
4. Write your **Name and School Name** at the top of each page of your question paper in the spaces provided.
5. In the table provided on this page, **tick** against the question number you have answered.

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. Name any **two** cultivated species of mushroom.

_____

_____

(2 marks)

b. Explain any **one** effect of soil texture on crop production.

_____

_____

(2 marks)

c. State **two** main forms of soil degradation.

_____

_____

(2 marks)

d. Name any **one** way of modifying acidic soils to promote crop production.

_____

_____

(1 marks)

e. Explain **one** way in which cation exchange capacity affects crop production.

_____

_____

(2 marks)

2. a. Explain **one** way in which each of the following physical properties of soil are important in crop production:

i. soil colour

_____

_____

(2 marks)

ii. soil temperature

_____

_____

(2 marks)

b. Explain any **two** factors to consider when selecting a site for mango production.

_____

_____

_____

(4 marks)

Continued/...

3. a. **Table 1** below shows a health record on cattle production for the 2022/23 farming season. Use it to answer questions that follow.

Date	Symptom of disease	Drugs used	Cost of treatment
07/05/23	• High fever • Excessive salivation • lameness	___	___
15/06/23	• Loss of appetite • Coughing • Difficulty in breathing • Nosal discharge	antibiotic	K500.00
20/08/23	• Swollen udder • Clots in milk	Tetracycline	K700.00

(i) Name the disease that attacks cattle on 07/05/23

_____

(1 mark)

(ii) What is the cause of the disease in (i)

_____

(1 mark)

b. Give a reason for not administering drugs to the diseased cattle on 07/05/23.

_____

_____

(1 mark)

c. Calculate the cost treatment incurred during the 2022/23 farming season.

(2 marks)

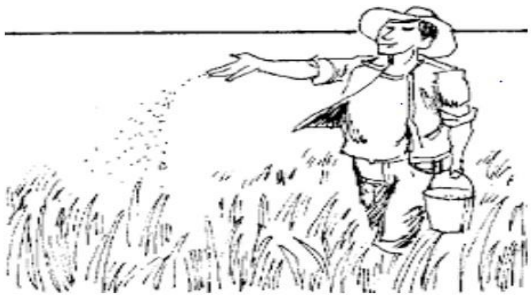
d. State any **one** way of preventing the disease shown by the symptom on 20/08/23.

_____

_____

(**1 marks)**

4. **Figure 1** shows a farm planting Rhodes grass in a pasture field



a. Name the method of pasture establishment shown in the figure 1.

_____

(1 mark)

b. Explain **one** limitation of the method named in 'a' above.

_____

_____

(1 mark)

Continued/...

c. Explain any **two** aims of crop improvement.

_____

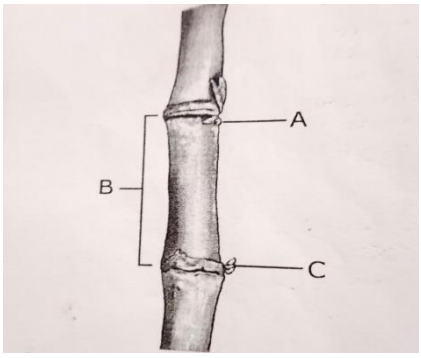
_____

_____

_____

(4 marks)

5. **Figure 2** shows a vegetative material. Use it to answer questions that follow.



a. What name is given to this type of vegetative planting material?

_____

(1 mark)

b. Name the parts labelled **A**, **B** and **C**.

A:

_____

(1 mark)

B:

_____

(1 mark)

C:

_____

(1 mark)

Continued/...

c. State **two** characteristics that the planting material must have in in order to be effective for vegetative propagation

_____

_____

(2 marks)

6. a. (i). Mrs Mughogho has 1 hectare and has a choice growing either millet or groundnuts. The following information is available for use in decision making:

Millet
Yield 3000Kg/ha, price K150/ Kg
Variable costs: seeds K5000, Fertilizer K80,000, pesticides k50,000, Casual labour K100,000
Fixed costs: Depreciation K5000, Permanent labour K80,000

Groundnuts
Yield 3000Kg/ha, price K100/ Kg
Variable costs: seeds K10,000, Fertilizer K40,000, Casual labour K30,000
Fixed costs: Depreciation K2000, Permanent labour K50,000

Use the information to answer questions 3a. i, ii and iii

Prepare a complete budget for Mrs Mughogho.

(5 marks)

ii. Which enterprise will be recommended to the Mrs Mughogho?

_____

_____

(1 mark)

iii. Give **one** reason for the answer to question 6. a. ii

_____

_____

(2 marks)

b. Describe seed treatment

_____

_____

_____

(2 marks)

c. Explain **one** way in which soil structure can be destroyed.

_____

_____

(2 marks)

7. a. Describe any **two** importance of land drainage.

_____

_____

_____

(4 marks)

b. State any **two** economic principles in farm business decision making.

_____

_____

(2 marks)

c. Explain any **one** way in which the following factors can affect nutrient status of soil.

i. Leaching

_____

_____

(2 marks)

ii. Parent material

_____

_____

(2 marks)

Continued/...

8. a. Calculate the seed rate for a pasture species using the following information:

Seed size: 400,000 seeds/Kg
Purity: 80%
Germination: 60%
Expected plant population: 800, 000 plants

(4 marks)

b. Explain the importance of each of the following:

i. Seed scarification

_____

_____

(1 mark)

ii. Seed inoculation

_____

_____

(1 mark)

c. State any **two** signs of heat in ewe.

_____

_____

_____

(2 marks)

9. a. Differentiate between progeny testing and sib selection as used in livestock breeding

_____

_____

_____

_____

(2 marks)

b. Explain **one** importance of feeding livestock.

_____

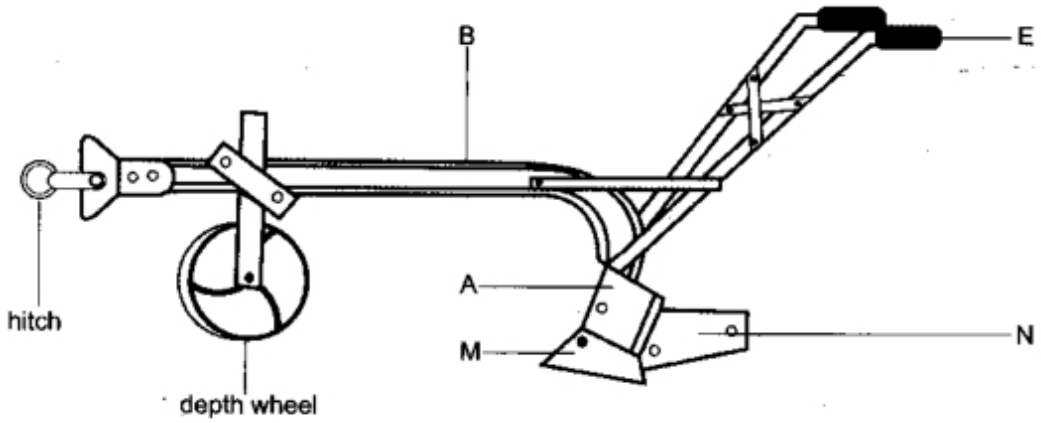
_____

_____

_____

(4 marks)

4. **Figure 3** is a diagram of farm machinery. Use it to answer questions that follow



a. Name the farm machinery.

_____

(1 mark)

Continued/...

b. Name the parts labelled **M, A** and **N**.

M:

_____

(1 mark)

A:

_____

(1 mark)

N:

_____

(1 mark)

c. State **one** function of the part labelled **B**.

_____

(1 mark)

d. Give **one** form of power that can be used to operate the farm machinery.

_____

(1 mark)

e. Name other **two** common machines and implements that are commonly used by subsistence farmers in Malawi.

_____

_____

(2 marks)

f. Explain any **one** way of maintaining the farm implement.

_____

_____

(2 marks)

Continued/...

Section B (30 marks)

Answer all the **three** questions in this section. Your answer should be in an essay form.

11. Explain any **five** ways in which mixed cropping increases food supply in Malawi.

(10 marks)

Continued/...

12. With the aid of a diagram, describe how cross breeding is done in crop improvement.

(10 marks)

Continued/...

13. Explain any **five** effects of population distribution on marketing.

(10 marks)

END OF QUESTION PAPER

NB: This paper contains 13 pages