

NAME _____ SCHOOL _____

THYOLO DISTRICT EXAMINATIONS

2023 MALAWI SCHOOL CERTIFICATE OF EDUCATION MOCK EXAMINATION

AGRICULTURE

(100 Marks)

Monday, 20 March

Subject Number: M012/I

Time Allowed: 2 hours

8:00 – 10:00 am

PAPER I

Instructions

1. This paper contains **11** 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 **NAME** and **SCHOOL** 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			
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9			
10			
11			
12			
13			

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Section A (70 marks)

Answer all the **ten** questions in this section

1(i) Give any **two** types of soil structure.

(2 Marks)

(ii). Explain any **one** way of improving soil structure.

(2 Marks)

2a. Table 1 shows a feeding management on lactating cows. Use it to answer questions 2a (i) and (ii).

Feed	Quantity of feed per day
Fish meal	1 Kg for every 3Kg milk produced
Silage	3Kg per 100Kg live weight

Table 1

(i) Identify a concentrate.

(1 Mark)

(ii). If a cow weighs 400Kg and produces 15Kg milk daily. Calculate total amount of a concentrate named in 2a (i) it will require per day.

(2 marks)

b. The following information is available for pig and beef cattle production enterprises. Use it to answer questions 2b (i), (ii) and (iii).

Pig enterprise

Number of livestock : 5
Selling price per pig : K30000.
Variable costs: Feeds : K40000, vaccine K1000, and Drugs K4000
Fixed costs : Depreciation K5000 and Permanent labour K50000

Beef Cattle enterprise

Number of livestock : 5
Selling price per cattle : K500000.
Variable costs : Feeds K300000, Vaccine K4000, drugs K1000 and Casual labour K100000
Fixed costs : Depreciation K5000 and Permanent labour K50000

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(i) Prepare a complete budget.

(5 marks)

(ii) Which of the two enterprises would be recommended to a farmer.

_____ (1 Mark)

(iii). Give **one** reason for the answer in 2d (ii).

_____ (2 Marks)

3a. State any **one** principle for a cattle production cooperative formation.

_____ (1 Mark)

b. Explain **one** way in which the following practices are important in cattle production.

(i) Selection of good cattle breeds

_____ (2 Marks)

(ii) Feeding calves' colostrum

_____ (2 Marks)

4a. Table 2 shows a record of two cows on a certain farm

Cow	Calving date	Calf sex	Calf Weight (Kg)	Calf No:
1	30/04/2022	Female	15	6
2	30/04/2022	Female	9	7

Table 2

(i). Identify the type of record.

_____ (1 Mark)

(ii). Explain any **one** way in which the record is important in cattle production.

_____ (2 Marks)

5a. (i) Name any **one** example of a tree that can be used in bio drainage.

_____ (1 Mark)

(ii). State **two** characteristics of the tree named in 5a (i) that assist it to be used in bio drainage.

_____ (2 Marks)

b. (i) State **three** steps to be followed when determining salinity of the soil using salinity meter.

(3 Marks)

(ii). Explain any **one** effect of soil salinity on crop production.

_____ (2 Marks)

c. Explain any **one** way in which the following physical properties of soil affect crop production.

(i) Soil consistency

_____ (2 Marks)

(ii) Cation Exchange capacity

_____ (2 Marks)

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6. Figure 1 is a diagram of a cropping system. Use it to answer questions 6 (i), (ii) and (iii).

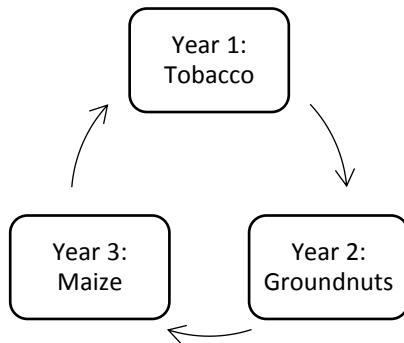


Figure 1

(i). Identify the cropping system.

(1 Mark)

(ii). State **three** activities involved in the cropping system named in 6 (i).

(3 Marks)

(iii). Explain **one** way in which the cropping system named in 6 (ii) can promote high crop yields.

(2 Marks)

7a. Table 3 shows demand for commodity X at different times of the year. Use it to answer questions 7a (i) and (ii).

Month	Price K/Kg	Kg
March	100	5000
December	200	4500

Table 3

(i) Calculate price elasticity of demand for commodity X.

(2 marks)

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(ii) What advice would be given to sellers on pricing for commodity X at this market?

_____ (2 Marks)

b. A marketing agent bought maize from the producer at K3000. He process the maize into flour, transport it to the market and sold it at K10000. Use the information to answer questions 7b (i) and (ii).

(i) Calculate market margin.

_____ (2 marks)

(ii) Mention any **one** role performed by the marketing agent.

_____ (1 Mark)

8a (i) Name any **one** breed of beef cattle.

_____ (1 Mark)

(ii) Give any **two** characteristics of breeds of cattle for beef.

_____ (2 Marks)

b. Table 4 shows dates of service for three cows. Use it to answer questions 8b (i) and (ii).

	Service Date
Cow 1	03/12/2022
Cow 2	14/12/2022
Cow 3	23/12/2022

Table 4

(i). Suppose the cows did not conceive, which cow will be ready for mating again on 24/12/2022?

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(2 marks)

(ii). State any **one** sign that a farmer would observe on a cow named in b (i) to show that it is ready for mating.

(1 Mark)

9a. State the age at puberty for goats.

(1 Mark)

b. A farmer observed the following signs of a disease in goats

- High fever
- Blisters in the mouth and between hooves
- Excessive salivation

(i) Identify the disease.

(1 Mark)

(ii) Name any **one** way of controlling the disease named in 9b (i)

(1 Mark)

10a. (i) State any **one** method of processing mushrooms.

(1 Mark)

(ii) Give any **two** advantages of processing mushrooms.

_____ (2 Marks)

b. Explain **one** way in which the following seed treatment for pasture is important.

(i) Inoculation

_____ (2 Marks)

(ii) Scarification

_____ (2 Marks)

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c. Figure 2 is a diagram which shows an activity in mango production.

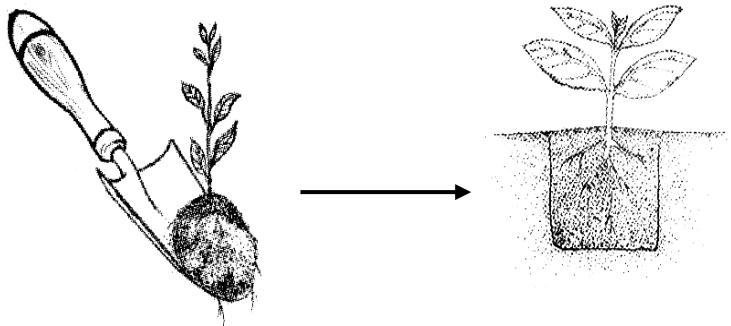


Figure 2

(i). Name the activity.

_____ (1 Mark)

(ii). Give **one** reason why farmers are advised to carry out the activity named in 10c (i) in the morning hours.

_____ (2 Marks)

d. State any **one** factor to consider when choosing a site for mango production.

_____ (1 Mark)

e. A farmer observed the following signs of pest attack in mangoes.

- Shiny white maggots on the flesh.
- Part of the flesh become liquid.
- Premature fruit fall

(i). Name the pest that attack mangoes.

_____ (1 Mark)

(ii). Give any **one** way of controlling the pest named in 10e (i).

_____ (1 Mark)

SECTION B (30 Marks)

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

11. Explain any **five** causes of soil degradation.

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_ (10 Marks)

12. Explain any five roles of channels and agencies in marketing of agricultural commodities.

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(10 Marks)

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13. Farmers in a certain village have a lot of goats, plenty pasture on their communal land and small arable lands with sandy soils. The village has the following agricultural development services at their disposal:

- Rural electrification
 - Processing

Explain any **five** ways in which farmers in the village would use the available resources to ensure food security.

(10 Marks)

END OF QUESTION PAPER

This paper contains 11 printed pages.