SCHOOL NAME _____ EXAMINATION NO:_____

SHIRE HIGHLANDS EDUCATION DIVISION

2024 MALAWI SCHOOL CERTIFICATE OF EDUCATION MOCK EXAMINATION

AGRICULTURE

Subject Number: M012/I

Monday,18th March

Time Allowed: 2 hrs

8:00 - 10:00 am

PAPER I
(100 marks)

Instructions

1. **This paper contains 9 printed pages. Please check.**
2. This paper has **two** sections A and B. Section A has ten questions and section B has three questions.
3. Answer all questions in the spaces provided.
4. Write your **school name and examination number** 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			
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11			
12			
13			

Turn over…../

SCHOOL NAME _____ EXAMINATION NO:_____

SECTION A (70 marks)

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

1. a. Define the term land drainage.

_____

_____(1 mark)

b. Give any **two** methods of land drainage.

_____

_____(2 marks)

c. Explain any **two** biological ways of controlling soil degradation.

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_____(4 marks)

2.a. A farmer observed the following symptoms in Mango orchard.

- Withering and dying of flowers before formation of fruits.
- Irregular black spots on the leaves.

(i) Identify the disease that attacked mangoes.

_____(1 mark)

(ii) Give any **one** way of controlling the disease mentioned in question 2a(i) above.

_____(1 mark)

b. Explain any two economic importance of mango production.

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_____(4 marks)

3**. Table 1** shows the demand schedule of tomatoes at a certain market. Use it to answer questions that follow.

Table 1

Price in kwacha	**Quantity demanded (kg)**
100	200
80	300
60	400
40	500
20	600

(i) Calculate price elasticity of demand for tomato when demand changes from K60 to K80.

(5 marks)

(ii) State the degree of the price elasticity of demand for tomato calculated in 3(i).

_____(1 mark)

4. a. **Figure 1** is a diagram of a farm implement. Use it to answer the questions that follow

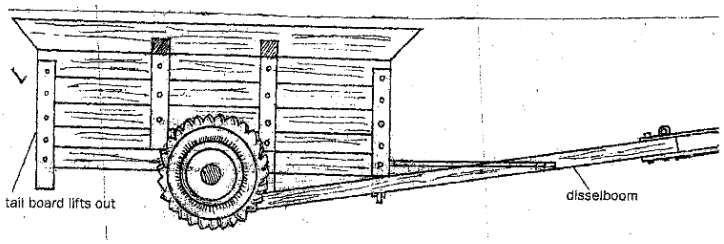

Figure 1

(i) State the source of power that would be used to operate the farm power.

_____ (1 mark)

(ii) Give **one** limitation of the source of farm power mentioned in 4(i)**.**

_____ (1 mark)

(iii) Give **two** ways of improving power output from the source named in 4(i)

_____

_____(2 marks)

(iv) State **one** way in which the use of the farm implement would improve crop production.

_____

_____(1 mark)

(v) State any **two** ways of maintaining the farm implement.

_____

_____(2 marks)

5. a. Give any two aims of crop improvement that would increase quality of crops.

_____

_____(2 marks)

b. A farmer imported seeds of a high yielding cotton variety. However the seed did not perform well despite receiving adequate care.

i. Name the method of crop improvement used.

_____(1 mark)

ii. What could be the reason why the seed did not perform well?

_____

_____(1 mark)

6.a. Explain two ways in which pasture production is important.

_____

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_____(4 marks)

b. Explain **any** two advantages of improved pasture over natural pasture

_____

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_____(4 marks)

c. Give one importance of each of the following method of pasture treatment in pasture production

(i.) Hulling

_____(1 mark)

(ii) Pelleting

_____(1 mark)

7. a. Calculate the seed rate for pasture X given the following specifications:

Expected plant population = 800,000 plants

Seed size = 400,000 seeds / kg

Purity = 40%

Germination = 80%

(2 marks)

b.(i) State what would happen to the seed rate if the purity of the seed is lower than 40%.

_____(1 mark)

(ii)Give one reason for the answer to 7b(1)

_____

_____(2 marks)

8.a **Figure 2** below is a diagram of livestock parasite, study the figure and answer the question that follows

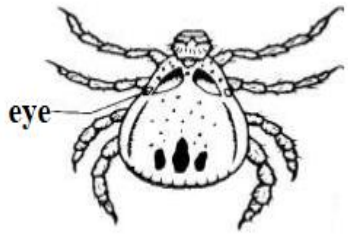

Figure 2

a. Identify the parasite

_____(1 mark)

b. Explain two harmful effects of the parasite named in 8a(i).

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_____(4 marks)

c. Give any one cultural way of controlling the parasite

_____(1 mark)

9. (a) State the meaning of the term cation exchange capacity

_____

_____(1 mark)

(b) Give any two ways of improving cation exchange capacity.

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_____(2 marks)

c. State the relationship between bulk density and porosity of the soil.

_____

_____(1 mark)

d.(i) Explain any one effect of a highly consistency soil in maize production.

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_____(4 marks)

10.(a) **Figure 3** below is a mushroom, use the diagram to answer the question that follows

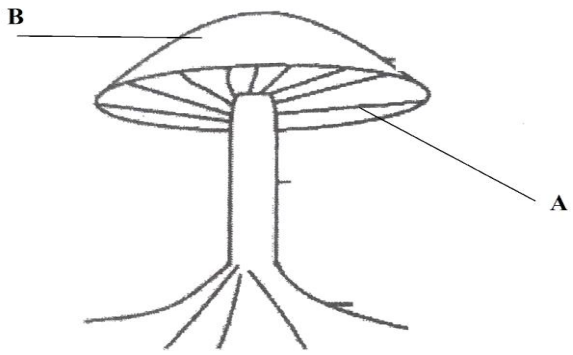

Figure 3

(i) Name the part labeled **B**

_____(1 mark)

(ii) State one function of part labelled A.

_____(1 mark)

b. Give any two substrates used in mushroom production

_____

_____(2 marks)

c. Explain any **one** factor to consider when selecting suitable site for mushroom production

_____

_____(2 marks)

d.Give any **one** way in which casing is important in mushroom production.

_____(1 mark)

SECTION B
Essay Questions 30 marks

11. Explain five aims of livestock improvement

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_____(10 marks)

12. Explain five factors to consider when mechanising a farm.

(10 marks)

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13. Farmers in a certain area grow maize every year and they are privileged with the following resources:

- Soil testing unit.
- Credit cooperatives (SACCO).
- Extension office nearby
- A big river passing through the village

Despite having the above resources, they face hunger every year. Explain **any five ways** in which farmers can utilize resources to ensure food security.

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_____(10 marks)

END OF QUESTION PAPER

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