**NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ADM: \_\_\_\_\_\_\_\_\_\_\_**

**DATE: \_\_\_\_\_\_\_\_\_\_\_**

**SIGN: \_\_\_\_\_\_\_\_\_\_\_\_**

**443/1**

**FORM 4 AGRICULTURE**

**PAPER 1**

**DECEMBER**

**TIME: 2HRS**

**END OF TERM -2-2021 EXAMINATION**

**INSTRUCTIONS TO ALL CANDIDATES:**

1. ***Write your name and admission number in the spaces provided.***
2. ***This paper consists of section A, B and C.***
3. ***Answer all questions in section A and B and any TWO questions in section C in the spaces provided.***

***FOR EXAMINER USE ONLY***

|  |  |  |  |
| --- | --- | --- | --- |
| **SECTION** | **QUESTIONS** | **MAXIMUM SCORE** | **CANDIDATE SCORE** |
| **A** | **1-17** | **30** |  |
| **B** | **18-21** | **20** |  |
| **C** | **22-24** | **40** |  |
|  | **TOTAL** | **90** |  |

**SECTION A (30 MKS).**

**ANSWER ALL QUESTIONS IN THE SPACES PROVIDED**

1. Give four benefits of practicing organic farming.(2mks)
2. Give four reasons why land should be prepared early in readiness for planting.(2mks)
3. List three particulars of the land owner which are included in the land title deed.(1 ½ mks
4. Name three ways of carrying out overhead irrigation in the farm.(1 ½ mks)
5. Outline four indicators of well rotten compost manure.(2mks)
6. Give four advantages of rotational grazing.(2mks)
7. List four ways through which soil PH influences crop production.(2mks)
8. Give two reasons for carrying out each of the following operations in the land.

a) Rolling (1mk)

b) Levelling (1mk)

1. Give four characteristics of variable inputs.(2mks)
2. State three ways by which plant nutrients may be lost from the soil.( 1 ½ mks)
3. Give two activities carried out during hardening off tomato seedlings. (1mk)
4. List down four types of financial books farmers should keep.(2mks)
5. Outline four factors that affect the effectiveness of a pesticide.(2mks)
6. Give four factors that affect the quality of silage.(2mks)
7. Differentiate between soil texture and soil structure.(1mk)
8. Give three reasons why seed selection is important in the establishment of crops.(1 ½ mks)
9. State four factors that affect elasticity of demand.(2mks)

**SECTION B (20MKS)**

. **ANSWER ALL QUESTIONS IN THE SPACES PROVIDED.**

1. The transaction below shows Mr Mukindias financial position in his farm business for the year 2004. Ksh

Purchase of pesticides 3,000

Milk sales - 8,000

Sale of goats 5,000

Closing valuation 16,000

Interest payable 1,750

Veterinary bills 1,400

Opening valuation 12,000

Wages 10,000

Depreciation of machinery 3,000

Sale of one heifer 1,000

Prepare a profit and loss account for Mr Mukindia’a farm.(5mks)

1. The diagram below illustrates crop diseases, study the diagrams carefully and answer the questions that follow.

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1. Identify the crop disease illustrate in the diagrams.

P:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(1mk)

Q:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(1mk)

1. Give the causative agent for each of the diseases illustrated above.

P\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(1mk)

Q\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (1mk)

1. State one cultural method used in the control of disease illustrated by Q.(1mk)

20.Below is an illustration of an activity carried out in agroforestry.

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1. Identify the activity being carried out in the above diagram.(1mk)

1. State two reasons for carrying out the activity identified above.(2mks)

1. Name two tools that may be used to carry out the activity in (a) above.(2mks)

21.The diagrams below illustrate field management practices. Study them carefully and answer the questions that follow.

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1. Identify the field practices.

M\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (1mk)

N\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(1mk)

1. Name a crop that can be managed using management (M) above.(1mk)
2. Give one reason for carrying out each of the management practices above.(2mks)

M\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

N\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**SECTION C (40MKS) ANSWER ANY TWO QUESTIONS IN THE SPACES PROVIDED.**

22a) State and explain any five cultural method of controlling weeds.(10mks)

b) Outline six ways in which wind negatively affects agricultural production. (6mks)

c) Explain four factors that influence the depth of planting crops. (4mks)

23a) Explain eight factors that encourage soil erosion.(8mks)

b) Describe seven management practices that should be carried out on a vegetable nursery after sowing until the seedlings are ready for transplanting. (7mks)

c) Describe the harvesting of sugarcane. (5mks)

24a) Outline the characteristics of ideal agro-forestry tree species.(6mks)

b) Describe the establishment of cabbages under the following subheadings.

i)Land preparation (3mks)

ii)Transplanting (7mks)

c) Explain the harvesting of bulb onions.(4mks)