**443/1 - AGRICULTURE - Paper 1**

# January/February 2021

𝟐𝒉𝒐𝒖𝒓𝒔

**Name ……………………………………………… Index Number ………………………...**

**School.…………………………………………… Class ……………………….................**

**Candidates Signature……………………………. Date ……………………………………**

**INSTRUCTIONS TO THE CANDIDATES:-**

1. Write your name and index number in the space provided at the top of this page.
2. Sign and write the date of the examination in the space provided above
3. This paper consist of three section A, B, and C
4. Answer all questions in section A and B
5. Answer any two questions in section C
6. All answers should be written in the spaces provided
7. Candidate should check the question paper to ascertain that all pages are printed as indicated and that no question is missing.
8. Candidate should answer **the question in English**

**FOR EXAMINERS USE ONLY**

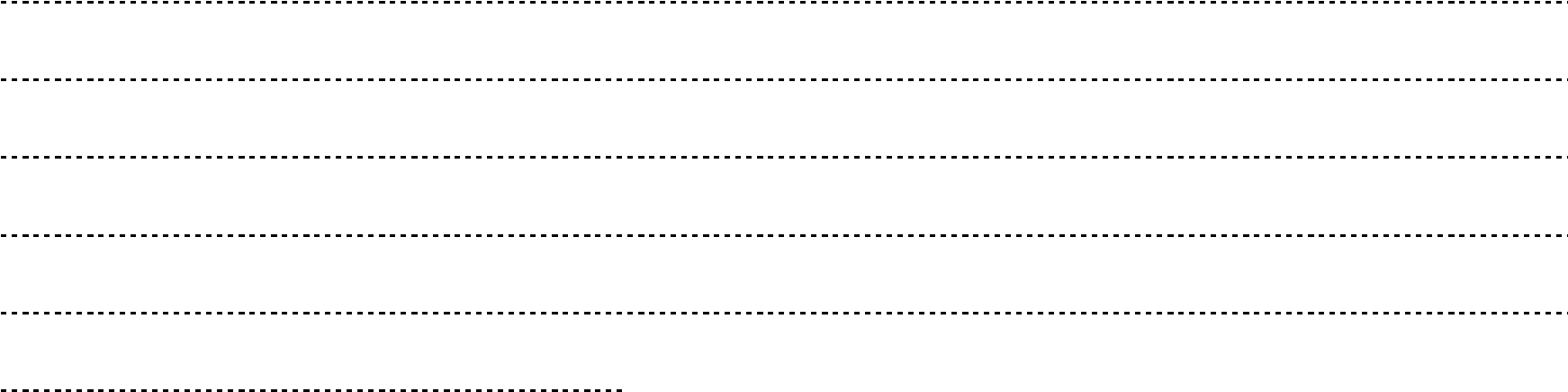
|  |  |  |  |
| --- | --- | --- | --- |
| **SECTION** | **QUESTION** | **MAXIMUM**  **SCORE** | **CANDIDATE**  **SCORE** |
| **A** | **1-16** | **30** |  |
| **B** | **17-20** | **20** |  |
| **C** |  | **20** |  |
|  |  | **20** |  |
|  | **TOTAL**  **SCORE** | **90** |  |

# SECTION A (30marks)

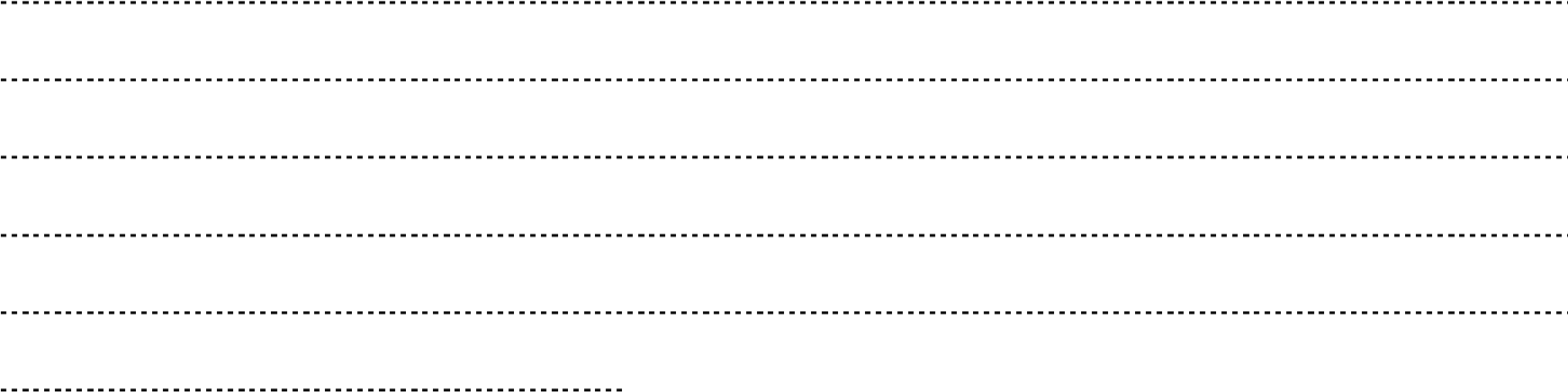
***Answer all questions in this section in the spaces provided***

1. List **four** reasons for early land preparation.

(2mks)

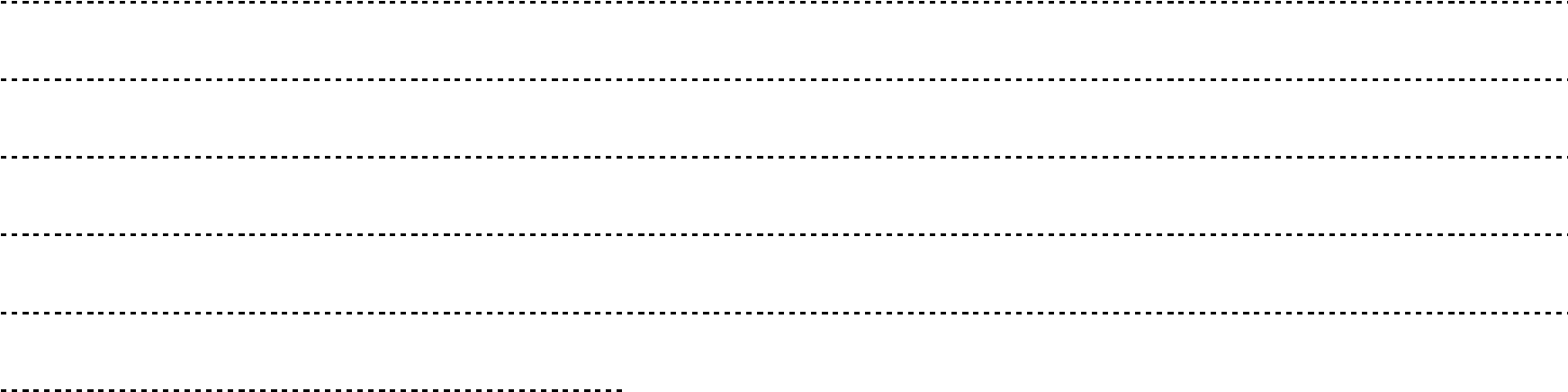


1. State **four** disadvantages of clean weeding in a maize field. (2mks)



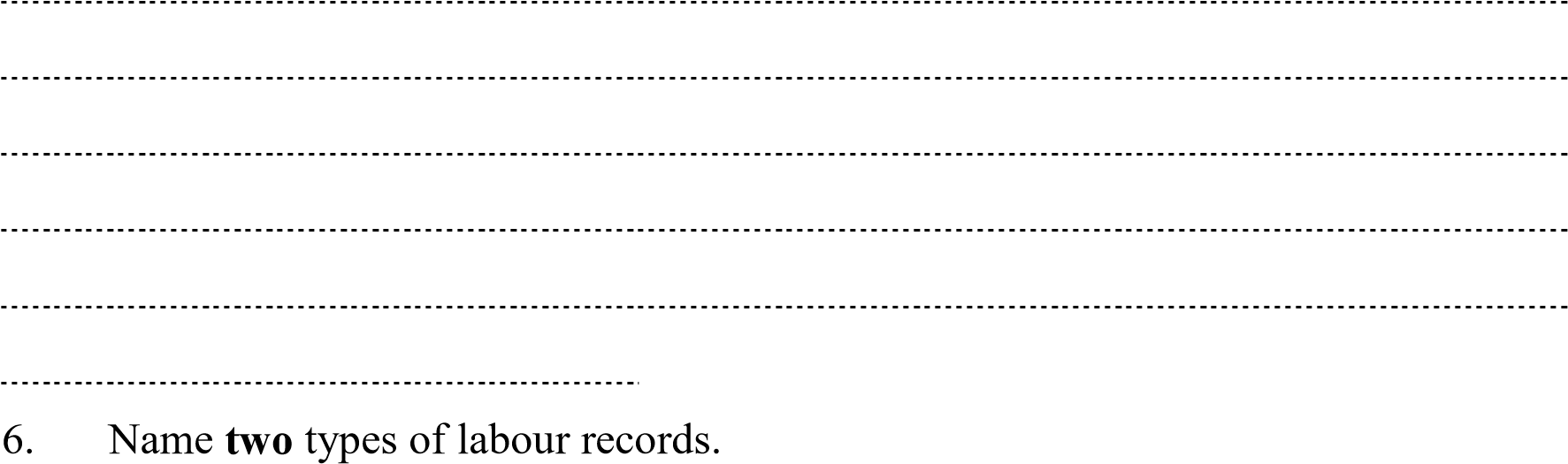
1. State **four** factors that determine the choice of a method of irrigation used in a farm.

(2mks)

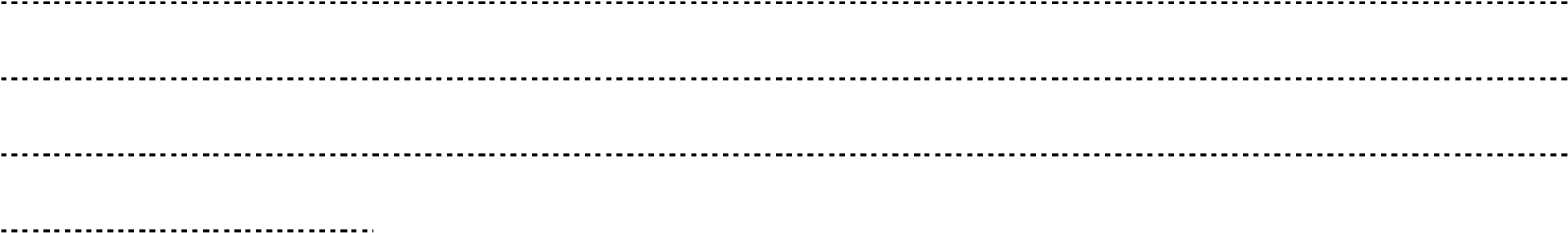


1. Name **two** sources of credit for a group of farmers registered as a cooperative. (1mk)

1. State **four** characteristics of well decomposed farm yard manure. (2mks)

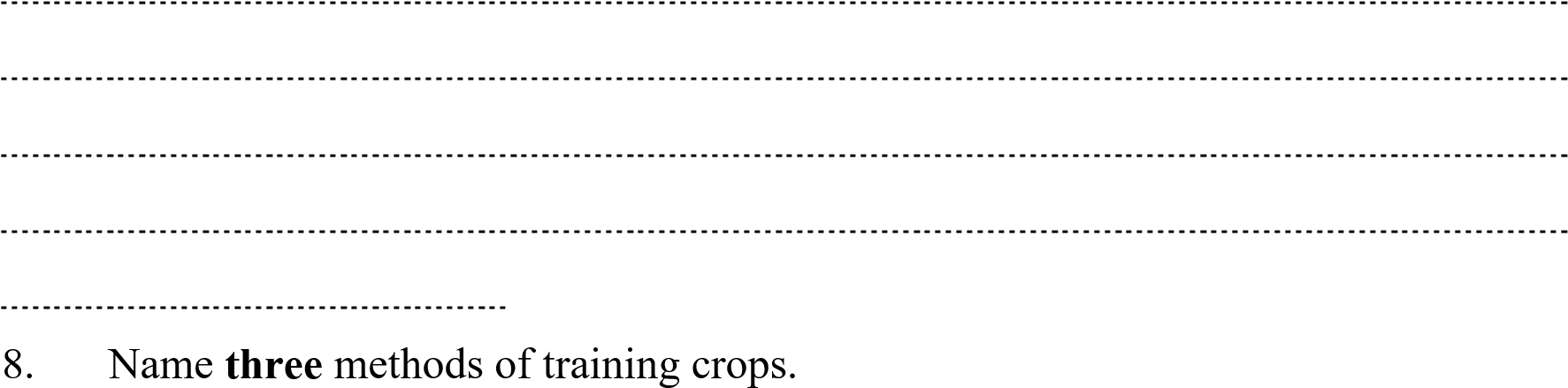


(1mk)

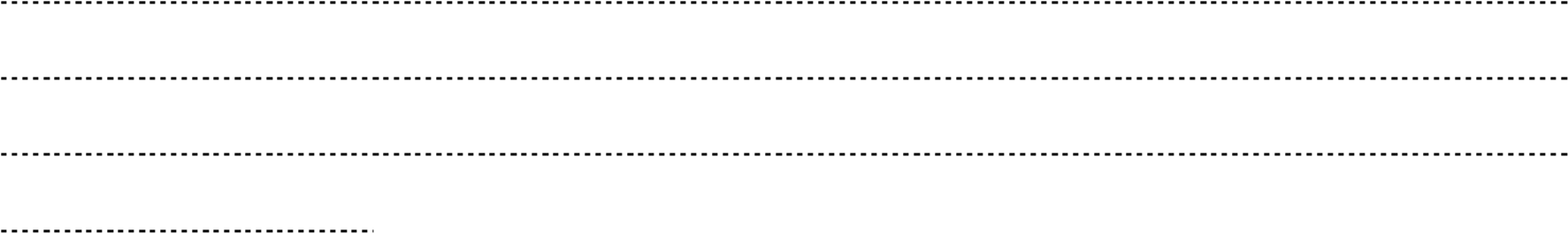


7. State **two** uses of a sales book.

(1mk)

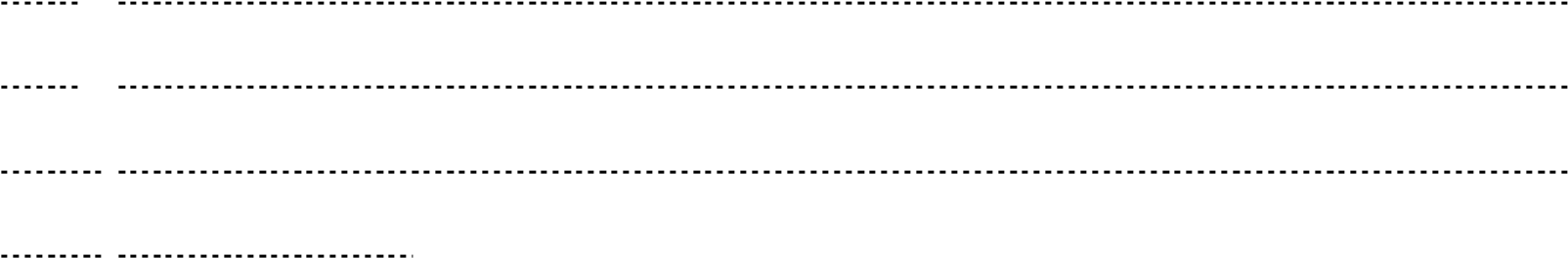


(1½mks)



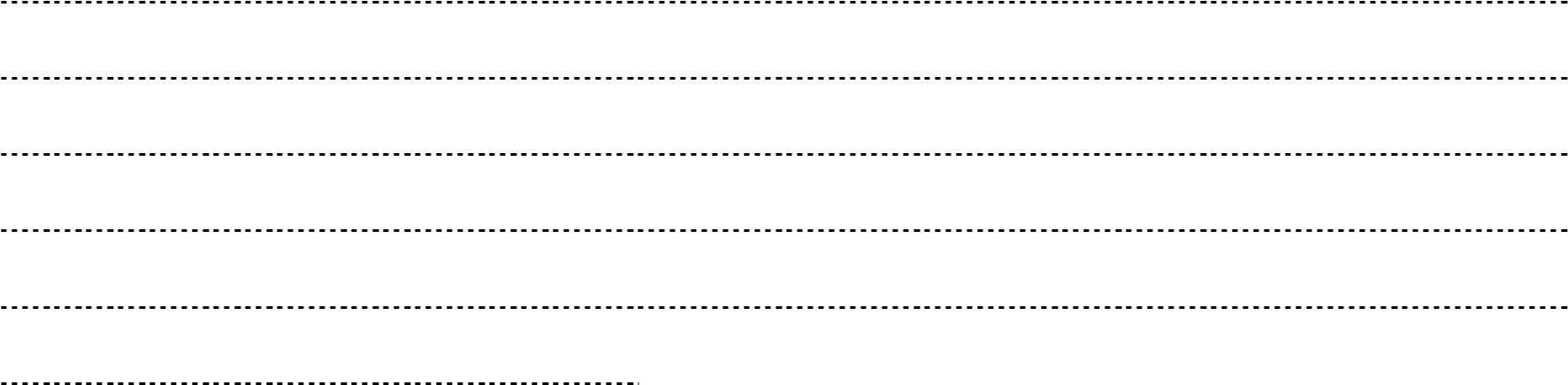
1. Name **three** diseases that affect tomatoes in the field.

(1½mks)



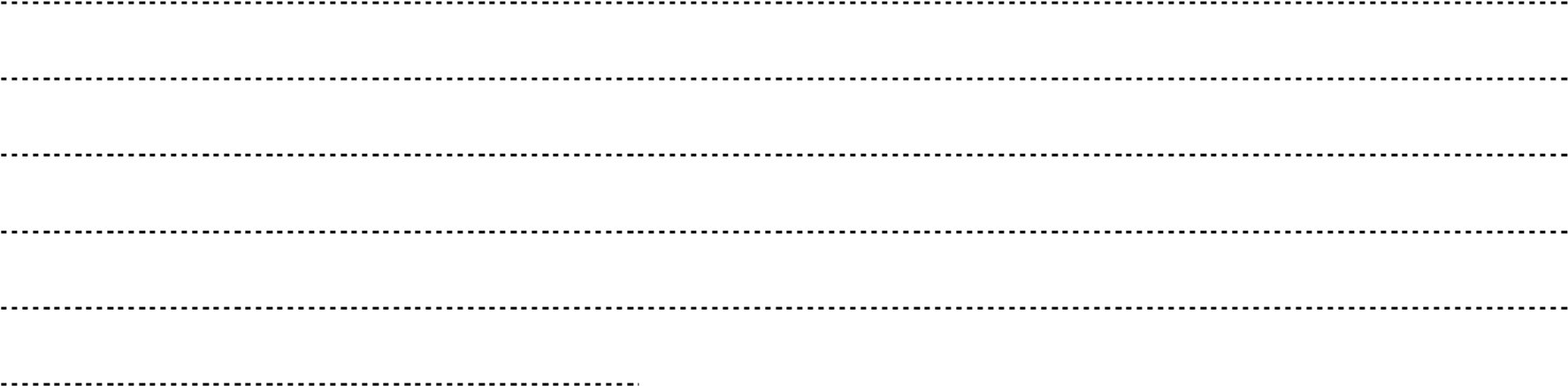
1. State **four** reasons for resettlement and settlement in Kenya.

(2mks)



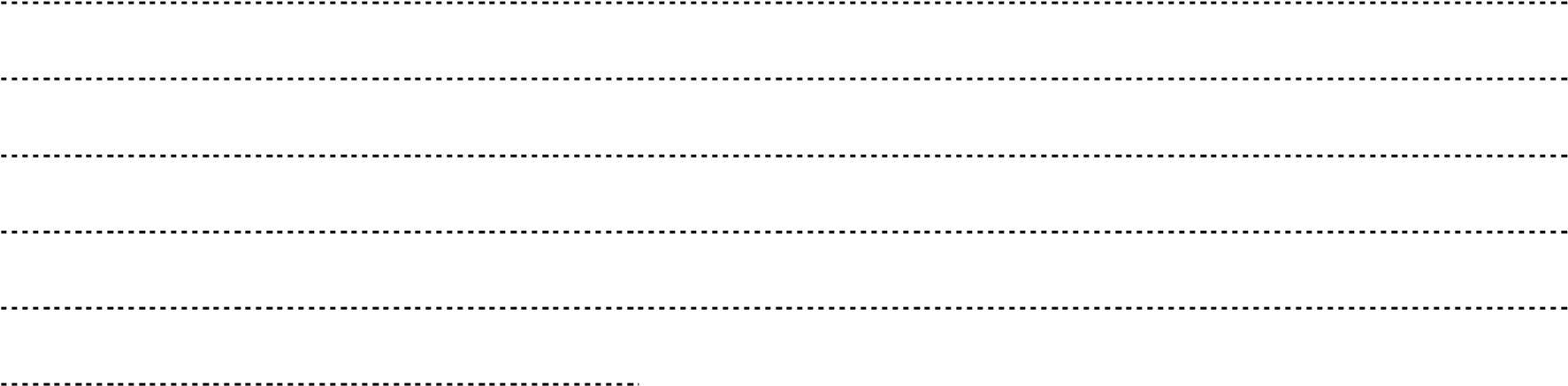
1. State **four** aspects of biological weed control.

(2mks)



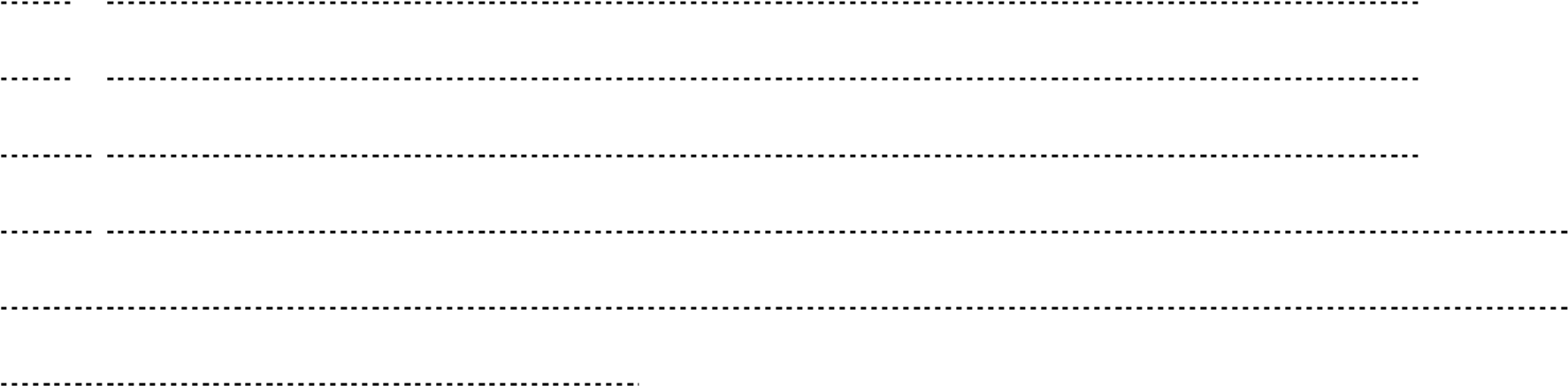
1. State **four** symptoms of attack by the bean fly in bean production.

(2mks)



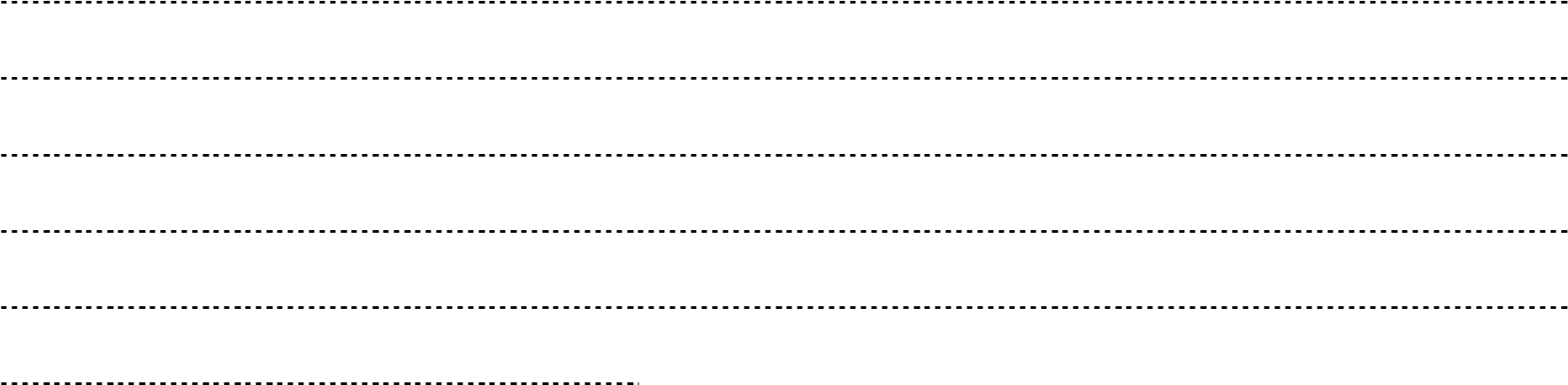
1. Give **three** reasons for flooding when growing paddy rice.

(1½mks)



1. State **four** precautions observed when harvesting cotton.

(2mks)

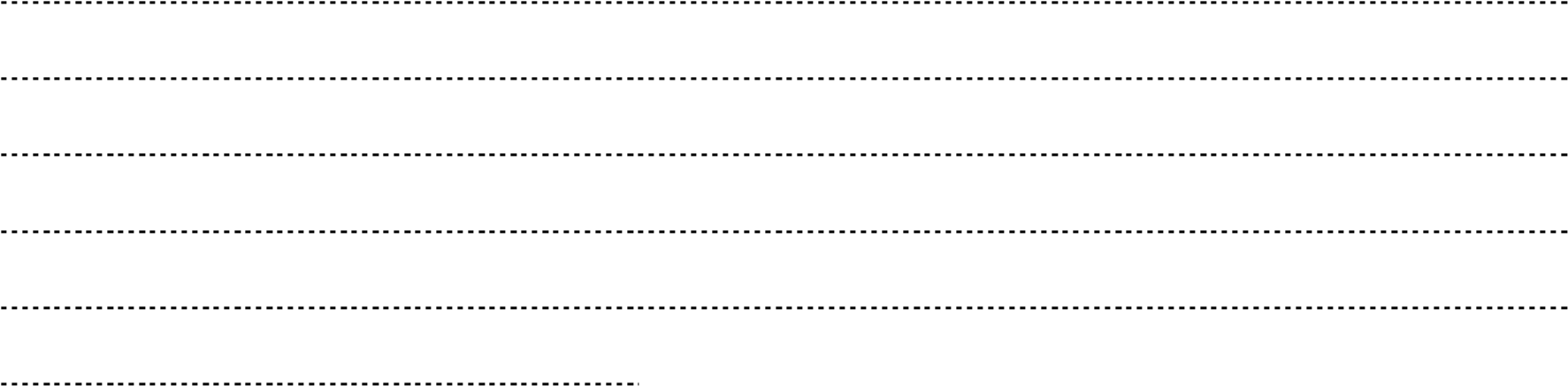


1. (a) State **two** disadvantages of tractor hire services.

(2mks)

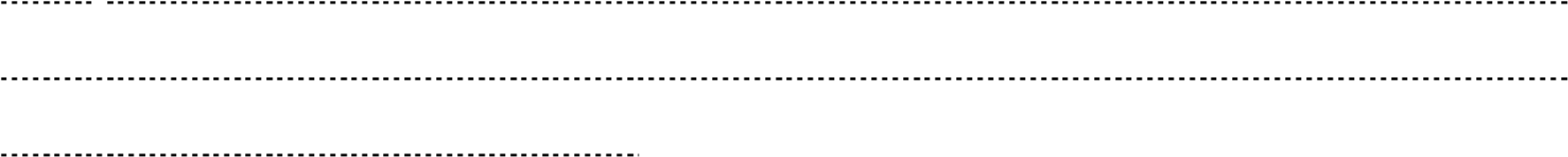


(2mks)



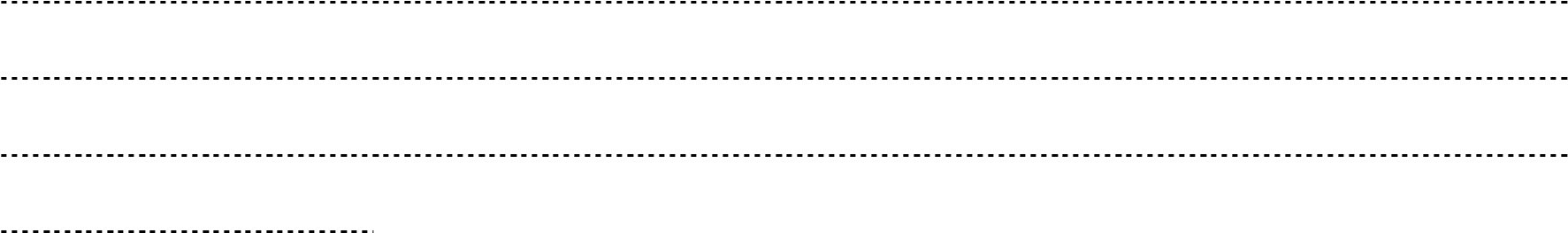
1. State **four** functions of the National Agricultural Commodity Association.

(2mks)



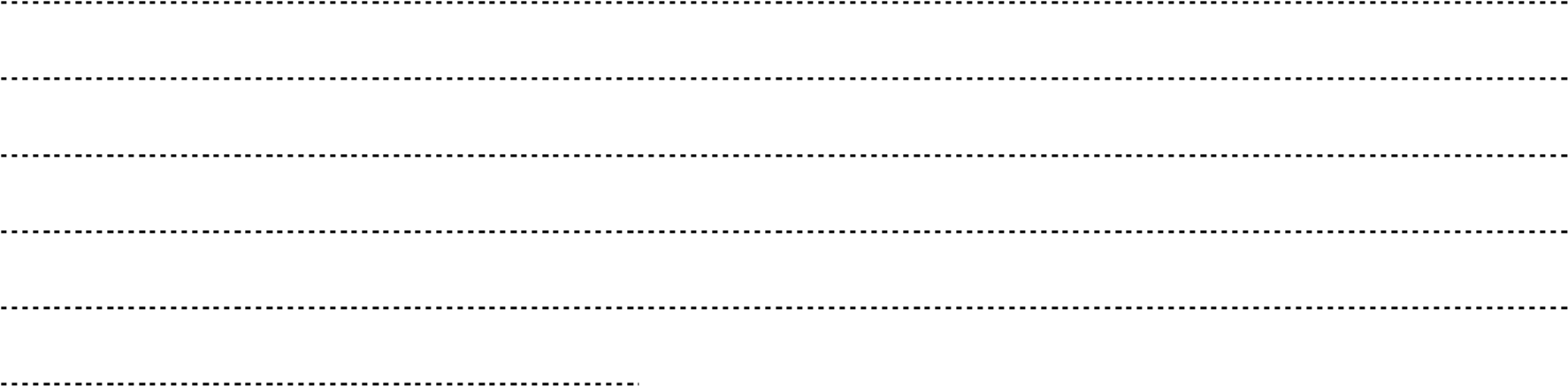
1. (a) What is meant by the term Agroforestry?

(½mk)



(b) State **four** management practices carried out during intensive hedgerow agroforestry.

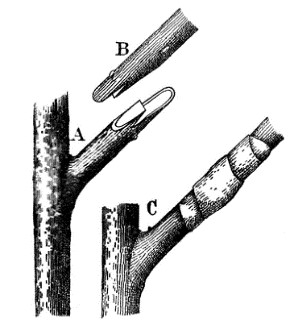
(2mks)



**SECTION B (20marks)**

**Attempt all questions in this section**

1. Identify the following methods of propagation. (1½marks)



C

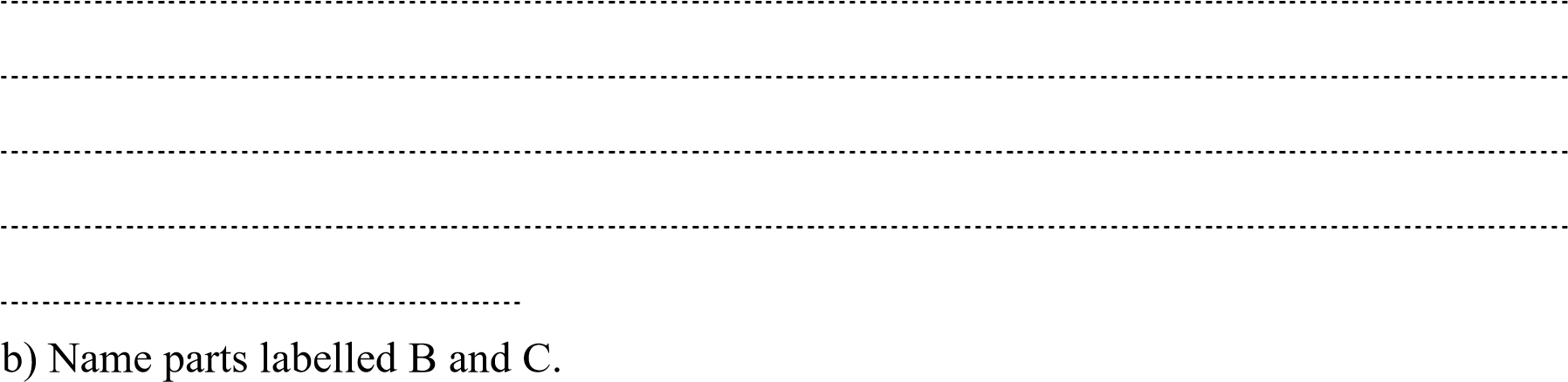
U

S…………………………… T……………………………

V……………………………

a) State **three** factors contribute to the success of method S?

(1½mk)



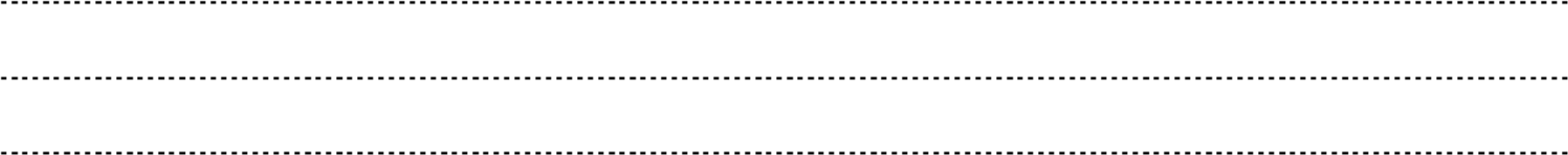
(1mk)

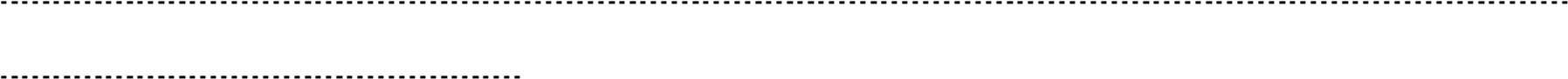
B

C

1. State two importance of the method of propagation in diagram labelled T?

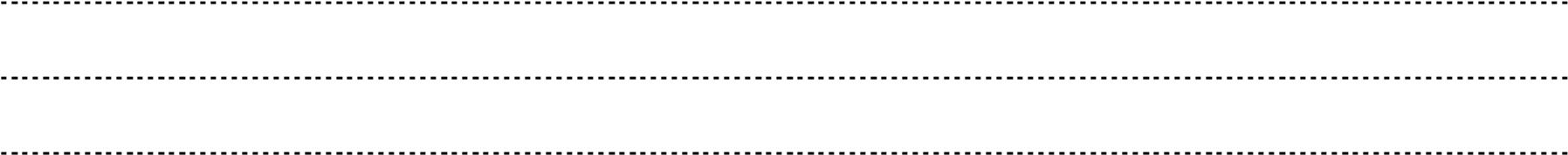
(1mk)





1. Name **two** crops propagated by use of method V.

(1mk)



19. Maina’s farm requires the following items on credit from Kenya farmers association on 30th March 2020

10bags of Unga feeds Bran

18bags of DSP Chapa meli

24kg of Rose Coco Bean seeds simlaw seed

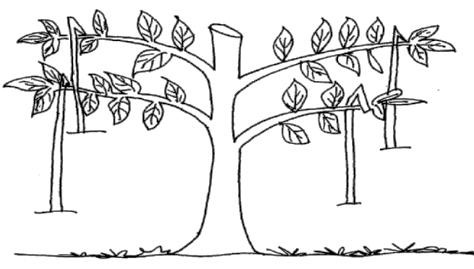
KFA sells the items as follows

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Item no | Item | Company | Price | Quantity in store | |
| 1 | Bran 90kgs/bag | Brookhouse farm supplies | Kshs. 1000/bag | 200 bags |  |
| 2 | Bran 90kgs/bag | Unga feeds Bran | Kshs. 1200/bag | 150 bags |  |
| 3 | Bran 90kgs/bag | EA MAIZE Millers | Kshs. 1230/bag | 400 bags |  |
| 4 | DSP 50kgs each | Chapa meli | Kshs. 1500/bag | 120 bags |  |
| 5 | DSP 50kgs each | Nauru international | Kshs, 1500/bag | 140 bags |  |
| 6 | DSP 50kgs each | Boatmil industries | Kshs. 1500/bag | 150 bags |  |
| 7 | Bean seeds Rose coco | Kenya Seed | Ksh330 / 2kgs packets | 100 -  packets | 2kgs |
| 8 | Bean seeds Rose coco | Western Seed | Ksh290 / 2kgs packets | 400 -  packets | 2kgs |
| 9 | Bean seeds Rose coco | Simlaw Seed | Ksh300 /2kgs packets | 120 -  packets | 2kgs |

a) Prepare a purchase order that KFA made to Maina’s farm.

(3mks)

1. Below is an illustration of a method of frame formation in tea. Answer the questions that follow.

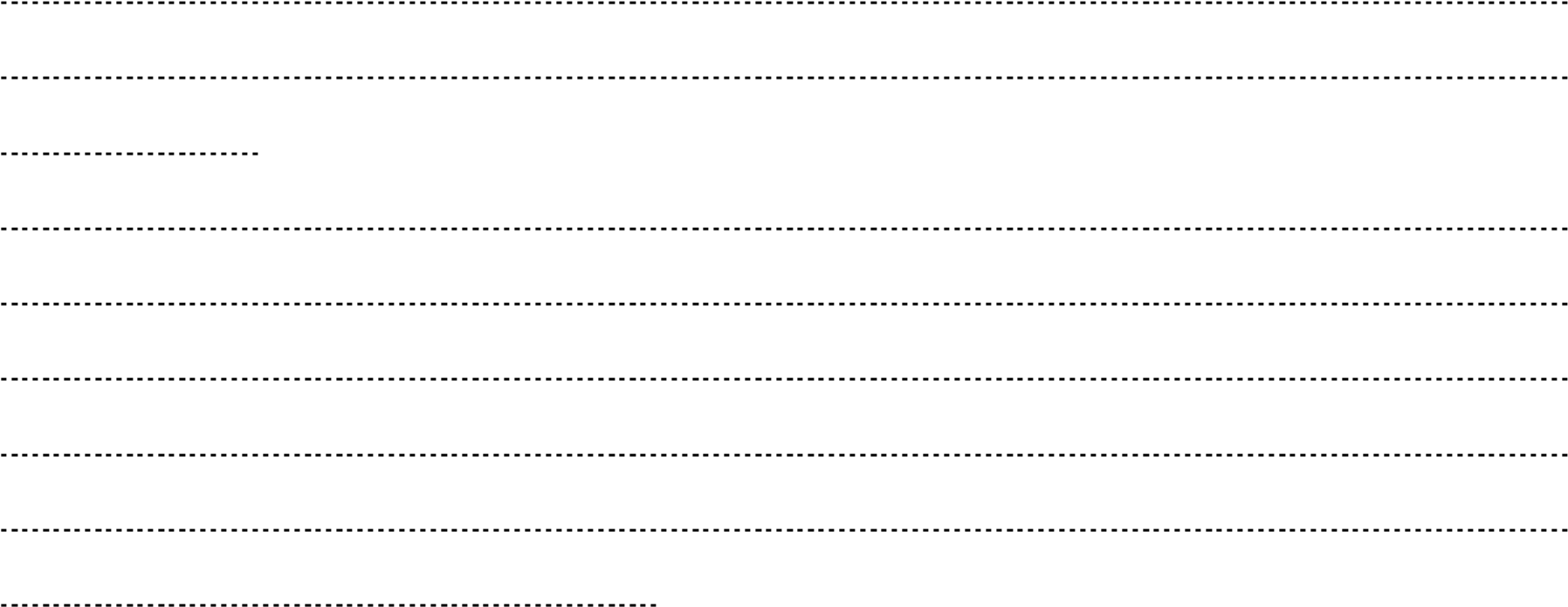


* 1. Identify the above method.

(1mk)

* 1. Describe the procedure followed in (a) above

(4mks)

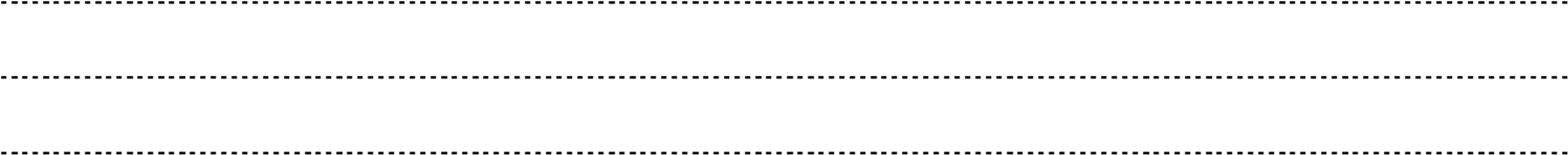


* 1. Apart from the above method name one other method of frame formation

(1mk)

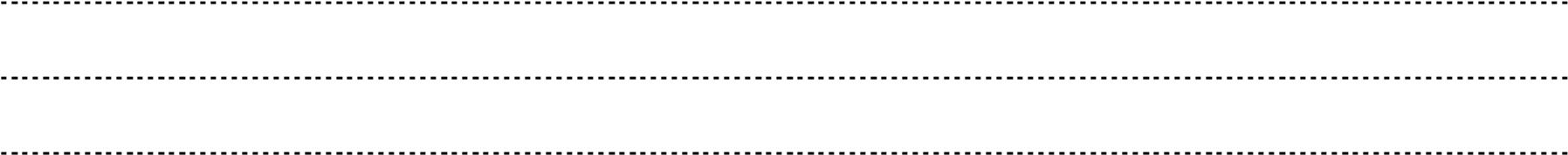
1. Give a reason why the following practises are important when making silage
   1. Wilting crop for 6-12 hours

(1mk)



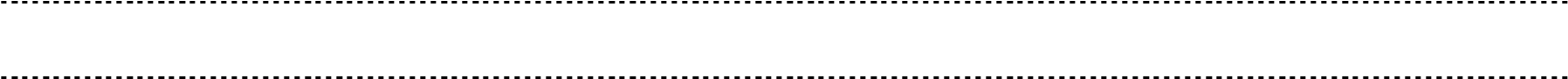
* 1. Compacting the ensiled materials every 10cm-12cm

(1mk)



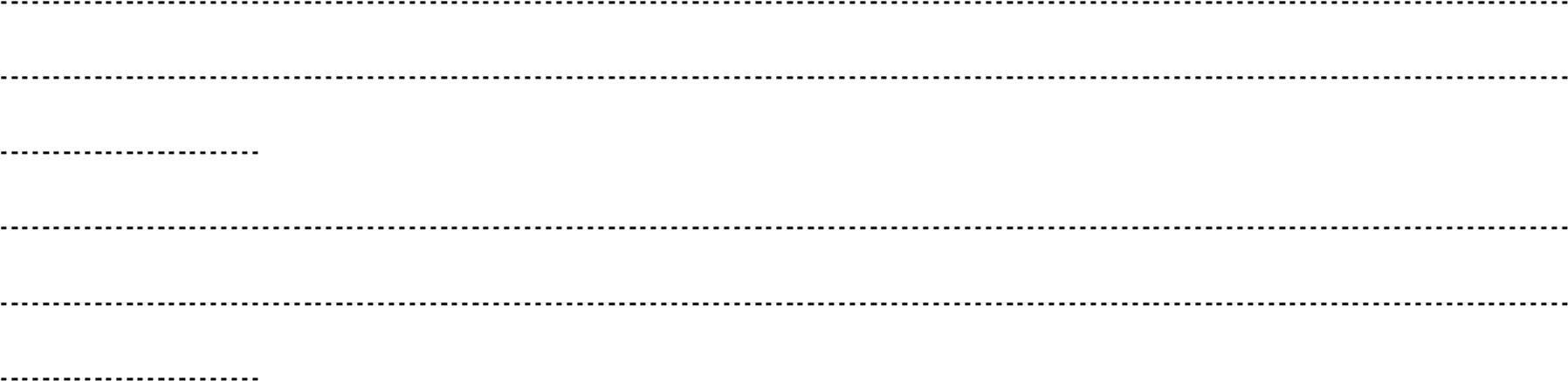
* 1. Checking the temperature regularly

(1mk)



* 1. Ensuring that the soil over the silo maintains a hump shape after covering

(1mk)



# SECTION C (40 marks)

*Answer any* ***two*** *questions from this section in the spaces provided after question 22.*

22. A farmer in Rongai division wishes to change from arable farming to dairy goat production. In arable farming he has been spending kshs.400 on weeding maize and Ksh 200 on weeding cabbages. He spends Ksh 500 and Ksh 300 on harvesting maize and cabbages respectively. He buys the following inputs; DAP fertilizer at Ksh.1000, cabbage seeds for Ksh 400, maize seeds for Ksh 600. Pesticides cost ksh800. He also spends Ksh. 300 on shelling of maize.

The change in enterprise will have the following implications; He will buy 5 dairy goats at ksh.2, 000 each; pay milk man ksh.3, 000; control diseases at a cost of ksh.1500. Fencing of the farm will be done at a cost of ksh.1, 500 .The revenue he gets when growing maize is ksh.10, 000 and cabbages is ksh.4, 000. In dairy goat production, he will get Ksh 20,000 from sale of milk and Ksh 1000 from sale of manure.

1. Prepare a partial budget and advise the farmer whether the change is worthwhile or

not. (12mks)

1. Explain **four** factors that determine the choice of a farming enterprise (8

mks)

…………………………………………………………………………………………

………………………………………………………………………………………… ………………………………………………………………………………………… …………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

………………………………………………………………………………………… ………………………………………………………………………………………… …………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

…………………………………………………………………………………………

………………………………………………………………………………………… …………………………………………………………………………………………

………………………………

23 a) Explain **five** roles of Agricultural based women self-help groups in Kenya. (5 mks)

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

……………………………………………………………………………………………… ……………………………………………………………………………………………… ………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

……………………………………………………………………………………………… ……………………………………………………………………………………………… ………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

……………………………………………………………………………………………… ……………………………………………………………………………………………… ………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

……………………………………………………………………………………………… ………………………………………………………………………………………………

…………………………

b) The inventory of Awilo’s Farm as at 31st December 2020 was as follows In Ksh:

Cash in hand 5,000

Layers 27,000

Dairy cattle 125,000

Maize in store 6,000

Calves 29,000

Buildings 70,000

Land 200,000

Machinery 75,000

On the same day, the following information was obtained from the sales record.

Bank loan 160,000

Egg sale on credit 20,000

Milk sales on credit 25,000

Vegetable sales on credit 10,000

Fertilizer purchased on credit 15,000

Wages payable 8,200

Taxes payable 8000

Interest payable on loan 4,000

1. Prepare a balance sheet (8mks)

1. State with a reason if Awilo’s farm solvent or insolvent

(1mk)

…………………………………………………………………………………………………

………………………………………………………………………………………………… …………………………………………………………………………………………………

……………………………………………

c) State five ways through which agricultural practices pollute water bodies.

(5mks)

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

………………………………………………………………………………………………… ………………………………………………………………………………………………… …………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

………………………………………………………………………………………………… ………………………………………………………………………………………………… …………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

……………………………………………………………………………………………

25. The tables below show the weekly demand and supply for wheat.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Price (Ksh.) | Quantity demand (kg) |  | Price (Ksh.) | Quantity supplied  (kg) |
| 200 | 250 | 200 | 2500 |
| 180 | 350 | 180 | 2250 |
| 160 | 550 | 160 | 2000 |
| 140 | 900 | 140 | 1700 |
| 120 | 1300 | 120 | 1300 |
| 100 | 1850 | 100 | 800 |
| 80 | 2500 | 80 | 100 |

a. (i) Draw a demand and supply curve on the graph attached

(7 mks)

1. Determine the equilibrium price for the wheat

(1mk) …………………………………………………………………………………………………

………………………………………………………………………

1. Calculate the elasticity of demand for
2. Price fall from ksh.20 to ksh.18 per kg. (2mks)

1. (i) If the price increased from kshs.20 to kshs.22 and elasticity of demand is 6.

(2mks)

(ii) Find the quantity demanded at higher price.

(2mks)

1. Explain **two** factors that affect the demand of tomatoes other than price.

(2mks)

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

………………………………………………………………………………………………… ………………………………………………………………………………………………… …………………………………………………………………………………………………

………………………………………………………………………………………………… …………………………………………………………………………………………………

……………………………………

b) Describe four characteristics of variable inputs

(4mks)

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

………………………………………………………………………………………………… ………………………………………………………………………………………………… …………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

………………………………………………………………………………………………… ………………………………………………………………………………………………… …………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………