**Name...........................................................................................Index No.................................../......**

**Candidate’s Signature............................................... Date......................................................**

**443/1**

**AGRICULTURE**

**2 Hours**

**FORM 4**

**Instructions to candidates**

1. *Write your name and index number in the spaces provided above.*
2. *Sign and write the date of examination in the spaces provided above.*
3. *This consists of* ***three*** *sections:* ***A, B*** *and* ***c.***
4. *Answer* ***all*** *the questions in sections* ***A*** *and* ***B.***
5. *Answer any* ***two*** *questions from section* ***C.***
6. *Answers should be written in the spaces provided.*
7. *This paper consists of 12 printed pages.*
8. *Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.*

**For Examiner’s Use Only**.

|  |  |  |  |
| --- | --- | --- | --- |
| **Section** | **Question** | **Maximum score** | **Candidate’s Score** |
| **A** | **1 – 19** | **30** |  |
| **B** | **20 – 23** | **20** |  |
| **C** |  | **20** |  |
|  | **20** |  |
| **Total Score** | |  |  |

**SECTION A – (30 Marks)**

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

1. State **two** ways through which agriculture contribute to directly to development of industries.

**(1 mark)**

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**2.** State **two** effects of soil organisms which benefit crop growth. **(1 mark)**

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**3.** Name **two** processes of rock wearing. **(1 mark)**

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**4.** Give **four** activities involved in land preparation. **(2 marks)**

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**5.** Give **two** types of water pumps. **(1 mark)**

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**6.** Give **two** symptoms of potassium deficiencies in maize**. (1 mark)**

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**7.** Give **four** variable costs in the production of maize. **(2 marks) ………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………**

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**8.**  State **four** factors that determine the stage at which a grain crop is ready for harvesting. **(2 marks)**

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**9.**  Give f**our** reasons for earthing up in crop production. **(2 marks)**

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**10.** State **four** advantages of applying lime as a measure of improving soil condition. **(2 marks)**

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**11.** Name **two** forms of gulley erosion. **(1mark)**

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**12.** State any **three** any three stages of land adjudication. **(1½marks)**

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**13.** State **four** precautions a maize farmer would take to minimize risks in the production.

**(2 marks)**

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**14.** Give **four** sources of agricultural credit to a farmer. **(2 marks)**

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**15.** Differentiate the term partial budget and complete budget. **(1 mark)**

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**16. a)** Define the term market **(1 mark)**

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**b)** List **two** types of market in agricultural economics. **(1mark)**

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**17.** State **four** examples of leguminous fodder crops. **(2 marks)**

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**18.** State **three** ways in which labour peak constraints can be overcome in the farm. **(1 ½ marks)**

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**19.** How are the following conditions prevented in carrot production? **(2 marks)**

**i)** Forking-avoid organic manure during planting

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**ii)** Greening of carrots tuber- earthing up tuber.

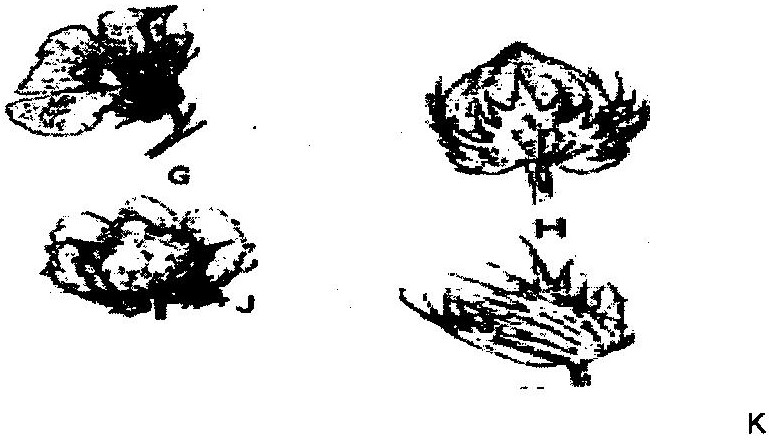
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**SECTION B – (20 Marks)**

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

**20**. The diagram below labeled G, H, J and K shows different stages of cotton fruit.



**i)** Rearrange the label G, H, J, and K to show the correct sequence in which the cotton fruit

develops. **(1 mark)**

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**ii)** What would be the effect of attack by cotton boll worms atthe stage labeled K? **(1 mark)**

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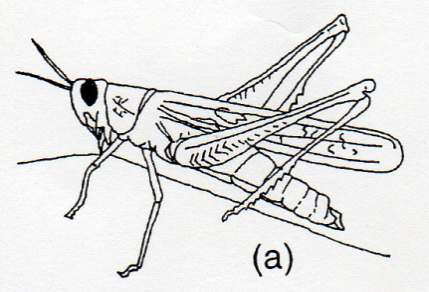
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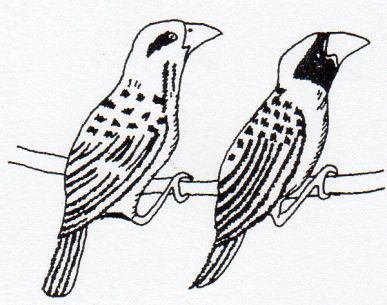
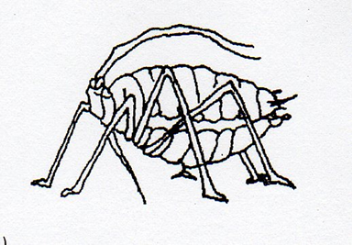
**iii)** State **two** conditions that should be observed when harvesting toensure that cotton picked is of

high quality. **(2 marks)**

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** 21.** The illustration below are crop pests. Study them and answer the questions that follow.



(b) (c)

**i)** Identify each of the pest labeled as (a),(b) and (c) **( 2 marks)**

**(a)**

**(b)**

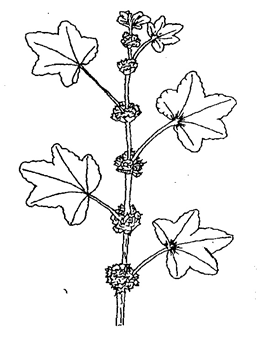
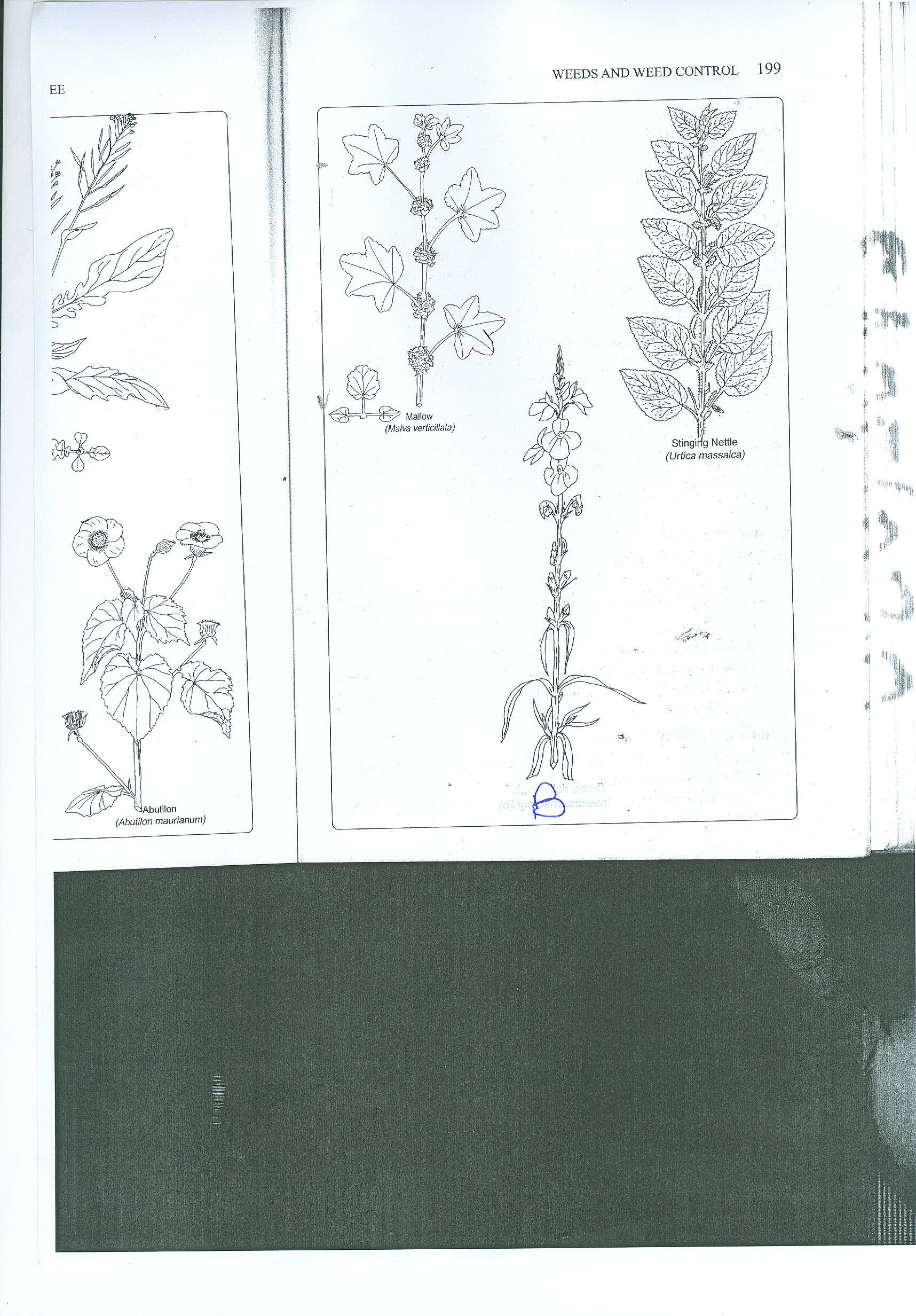
**(c)**

**ii)** State **two** types of damage caused by pest (c) in the crops infested**. (2 marks)**

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**22.** The diagram below shows two types of weeds A , B ,C and D. Study and answer the questions that follow.



A B C D

**a ) i)** Identify the above weeds.  **(2 marks)**

A………………………………………………………………………

B…………………………………………………………………………

C…………………………………………………………………………

D………………………………………………………………………

**ii)** Why is it difficulty to control the weed in diagram A **(1 mark)**

**………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………**

**iii)** State **one** harmful effect of B. **(1 mark)**

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**b) i)** Why is it difficult to control weed C in the crop of cereals? **(1 mark)**

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**ii)** State **one**  negative effect of weed C in a field of cereal crops. **(1 mark )**

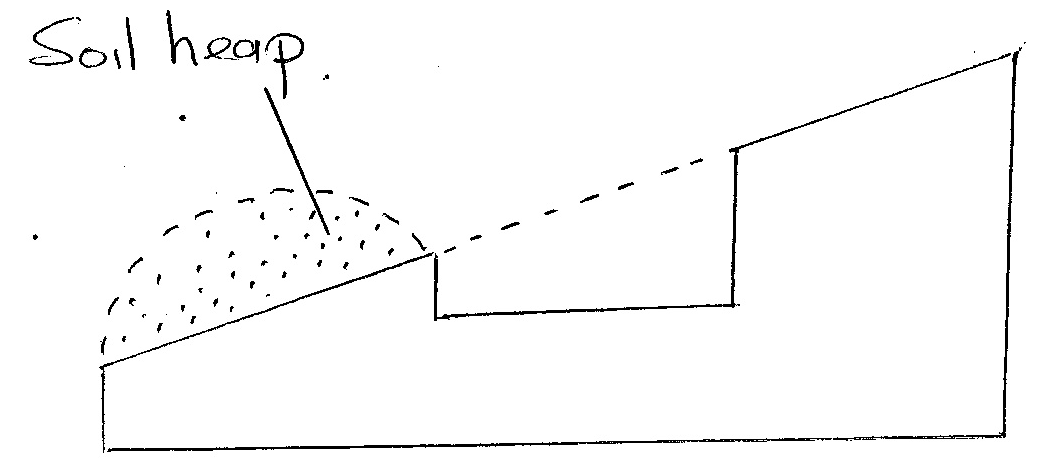
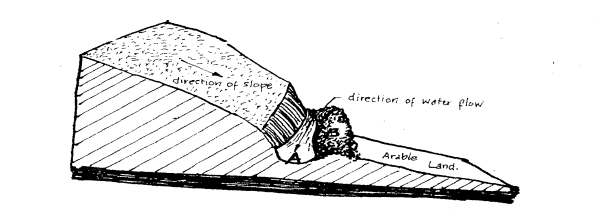
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**c)** State **one** harmful of effect of weed D in a crop of cotton. **(1 mark)**

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**23.** The diagrams labeled F and G below represent physical measures in conservation soil and water. Study them carefully and answer the questions that follow.



F G

**a)** Identify the illustration F and G above. **(2 marks)** F-

G-.

**b)** Why is it that the embankment of F should not be cultivated with crops. **(1 mark) ………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………**

**d)** Name **two** other physical measures a part from F and G that can be used to conserve water. **(2marks)**

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**SECTION C: (40 marks)**

**Answer two questions from this section**

**24. (a)** Describe **four** components of well-developed soil profile. **(8 marks)**

**(b)** Describe the disadvantages of herding in livestock production. **(5 marks)**

**(c)** Explain how a maize farmer may overcome risks and uncertainties in a farming business.

**(7 marks)**

**25. (a)** Describe field production of Napier elephant grass under the following sub-headings.

**(i)** Seedbed preparation **(5 marks)**

**(ii)** Planting **(5 marks)**

**(iii)** Fertilizer application **(3 marks)**

**(iv)** Weed control **(3 marks)**

**(v)** Utilization **(4 marks)**

**(b)** State and explain five factors to consider when siting a nursery bed. **(10 marks)**

**26. (a**) The following accounts information is from Mrs. Mangs’s farm for the year ended 31 – 12 – 2010.

Opening valuation Ksh. 6,0007/=

Paid wages Ksh. 5000/=

Bought equipment worth Ksh. 8,000/=

Bought pig feeds worth Ksh. 4,000/=

Sold mature pigs worth Ksh. 7,000/=

Bought drugs worth Ksh. 3,200/=

Sold maize worth Ksh. 3,000/=

Closing valuation Ksh. 4,000/=

1. Using the information above, prepare a profit and loss account for Mrs. Mangu’s farm. **( 2 ½ marks)**
2. From the calculations in (i) above, state whether Mrs. Mangu made a profit or a loss**.**

**(1/2 mark)**

**(b)** Describe **four** advantages of mulching in crop production. **(4 marks)**

**(c)** Explain **three** farming practices which may lead to soil erosion. **(3 marks)**

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