**NAME……………………………………………………………………………………ADM NO.…………..**

**CANDIDATES SIGNATURE………………………………… DATE……………………………………………..**

**AGRICULTURE**

**PAPER 1**

**444/1**

**TIME 2 HOURS**

**FORM 4**

**INSTRUCTIONS TO CANDIDATES:**

* Write your name and index number in the spaces provided above.
* Sign and write the date of examination in the spaces provided above.
* This paper consists of **THREE** Sections **A**, **B** and **C**.
* Answer all questions in Section **A** and **B**.
* Answer two questions in Section **C** in the spaces provided.

**FOR EXAMINER’S USE ONLY**

|  |  |  |  |
| --- | --- | --- | --- |
| **Section** | **Question** | **Maximum**  **Score** | **Candidate’s**  **Score** |
| **A** | **1 - 20** | **30** |  |
| **B** | **21 - 25** | **20** |  |
| **C** | **26 - 28** | **20** |  |
|  | **20** |  |
| **Total Score** | | **90** |  |

**SECTION A (30 MARKS)**

**Answer all questions in this section.**

**1.** Give **two** characteristics of plantation farming. **(1 mark)**

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**2.** Name **two** chemical processes of weathering. **(1 mark)**

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**3.** State **three** advantages of organic farming. **(1 ½ marks)**

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**4.** Mention **three** effects of soil organisms which benefit plant growth. **(1 ½ marks)**

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**5.** Give **two** types of labour records in the farm. **(1 mark)**

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**6.** Give **three** ways in which land consolidation helps to improve farm management. **(1 ½ marks)**

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**7.** State **four** importance of raising tomato seedlings in a nursery bed. **(2 marks)**

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**8.** Give **three** ways of controlling weeds in a field of beans. **(1 ½ marks)**

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**9.** Give **four** reasons for earthing up in crops as a field practice. **(2 marks)**

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**10.** State **three** activities the farmer carries out on a store before storing grains. **(1 ½ marks)**

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**11.** Give **four** characteristics of certified seeds. **(2 marks)**

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**12**. **(a)** Name **two** liming element in crop production. **(1 mark)**

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**(b)** Give the forms in which the following elements are available to plants: **(1 mark)**

**(i)** Calcium

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**(ii)** Potassium

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**13.** List **three** general symptoms of viral diseases in crops. **(1 ½ marks)**

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**14.** Give **four** factors that influence the choice of tools and equipment used in Primary cultivation.  **(2 marks)**

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**15.** State **four** factors that contribute to competitive ability of weeds. **(2 marks)**

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**16.** Name **four** physical methods of erosion control.

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**17.** List **four** features of plastic pipes a farmer should consider before buying. **(2 marks)**

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**18.** State **three** causes of blossom end rot disease in tomato crop. **(1½ marks)**

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**19.** State **three** desirable characteristics of agro forestry trees a farmer would consider before planting in the farm. **(1½ marks)**

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**20.** Name **two** items that a maize farmer can enter into his consumable inventory records. **(1 mark)**

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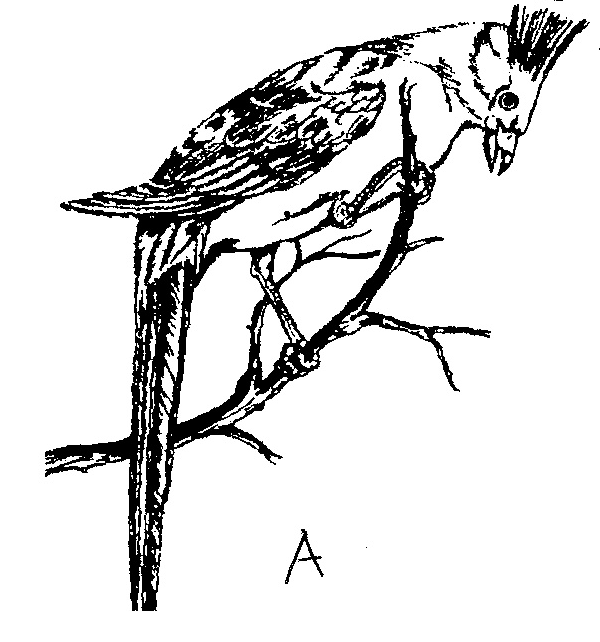
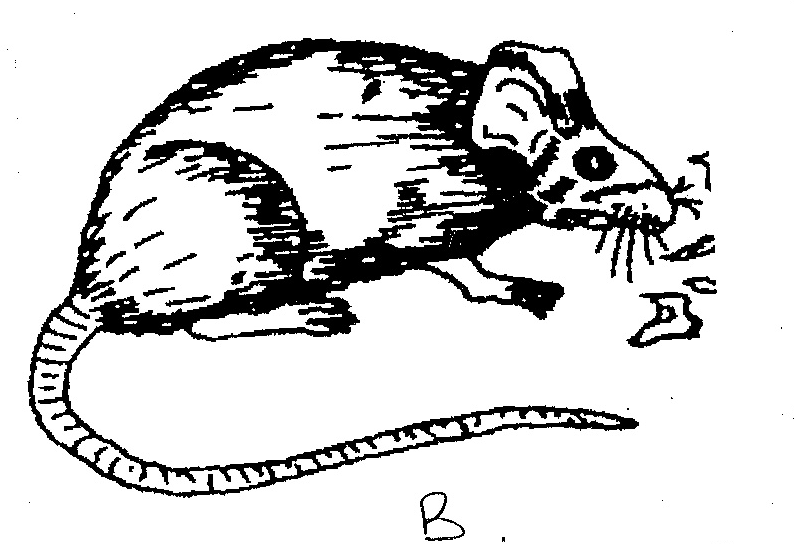
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**SECTION B (20 MARKS)**

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

**21.** Study the diagram **below** carefully and answer the questions that follow.



**(a)** Identify the field pest shown in the illustration **A** and **B** above. **(2 marks)**

**A** -

**B**–

**(b)** State **two** effect the pest expressed in **A** above has on maize plant. **(2 marks)**

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**22.**  The diagram below shows a farm record. Sturdy it and answer the question that follow

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| --- | --- | --- | --- | --- | --- |
| Enterprise…………………………………………………………………………………………  Type of feed……………………………………………………………………………………… | | | | | |
| Date | No. of animal | Amount Received  (Kg) | Amount used  (Kg) | Balance in stock  (Kg) | Remark |
|  |  |  |  |  |  |

**a)** Identify the farm record **(1 mark)**

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**b)** Name **four** other records kept in the farm**. (2 marks)**

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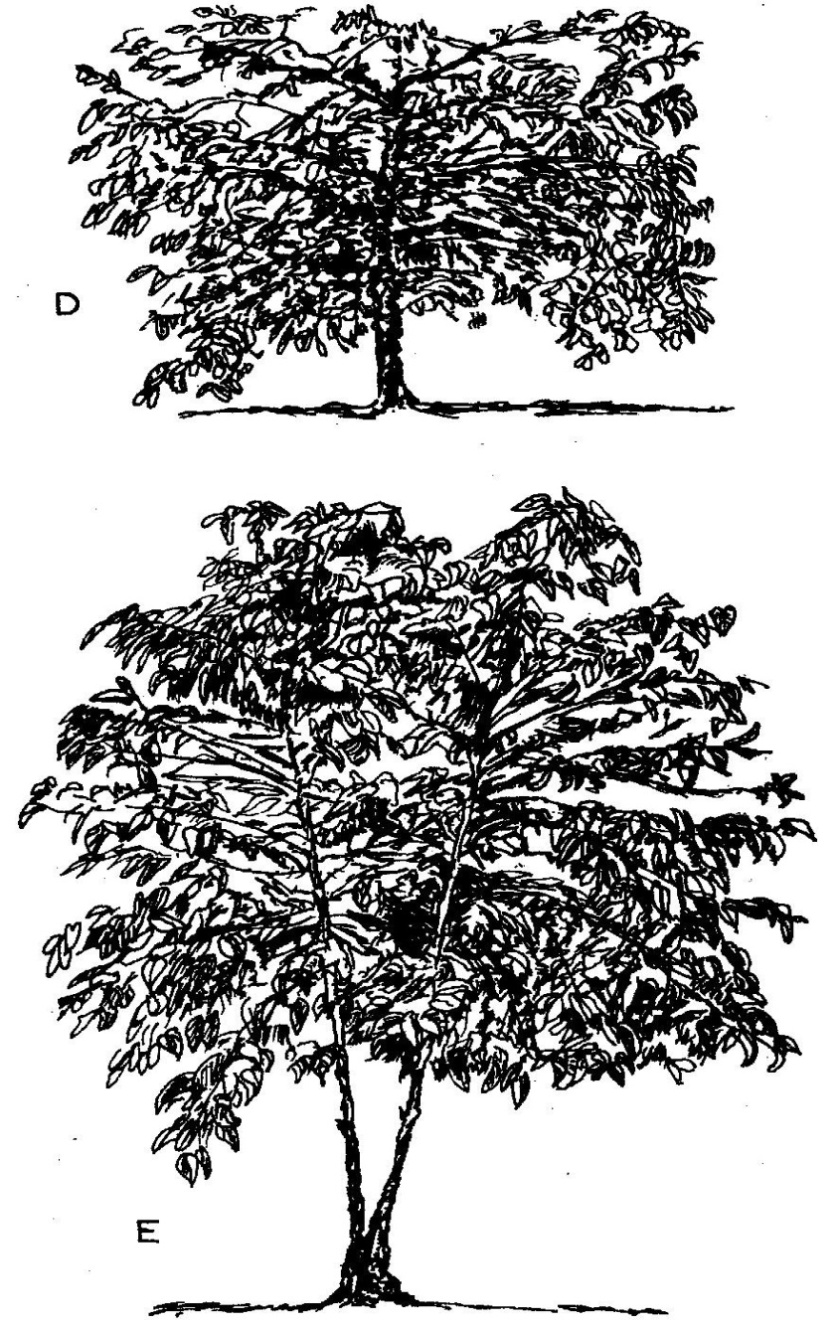
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**23.** The diagram labeled is an illustration of coffee established using a certain formative pruning system. Study it and answer the questions that follow.



**a)** Name the system of pruning illustrated in diagram above **(1 mark)**

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**b)** Explain how the pruning system illustrated above is carried out.  **(2 marks)**

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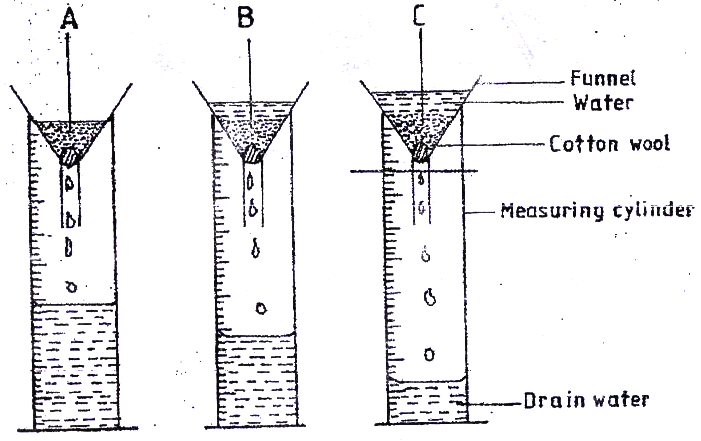
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**24.** The diagram below illustrates an experiment on soil. Study it carefully and answer the questions that follow.



**(a)** State the aim of the experiment **(1 mark)**

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**(b)** If the volume of water illustrated in the measuring cylinders was observed after one hour, identify the

soil samples labeled A and B. **(1 mark)**

A ……………………………………………………………….. B ……………………………………………………………………..

**(c)** State **four** ways in which the soil structure of the soil sample labeled C above can be improved. **(4 marks)**

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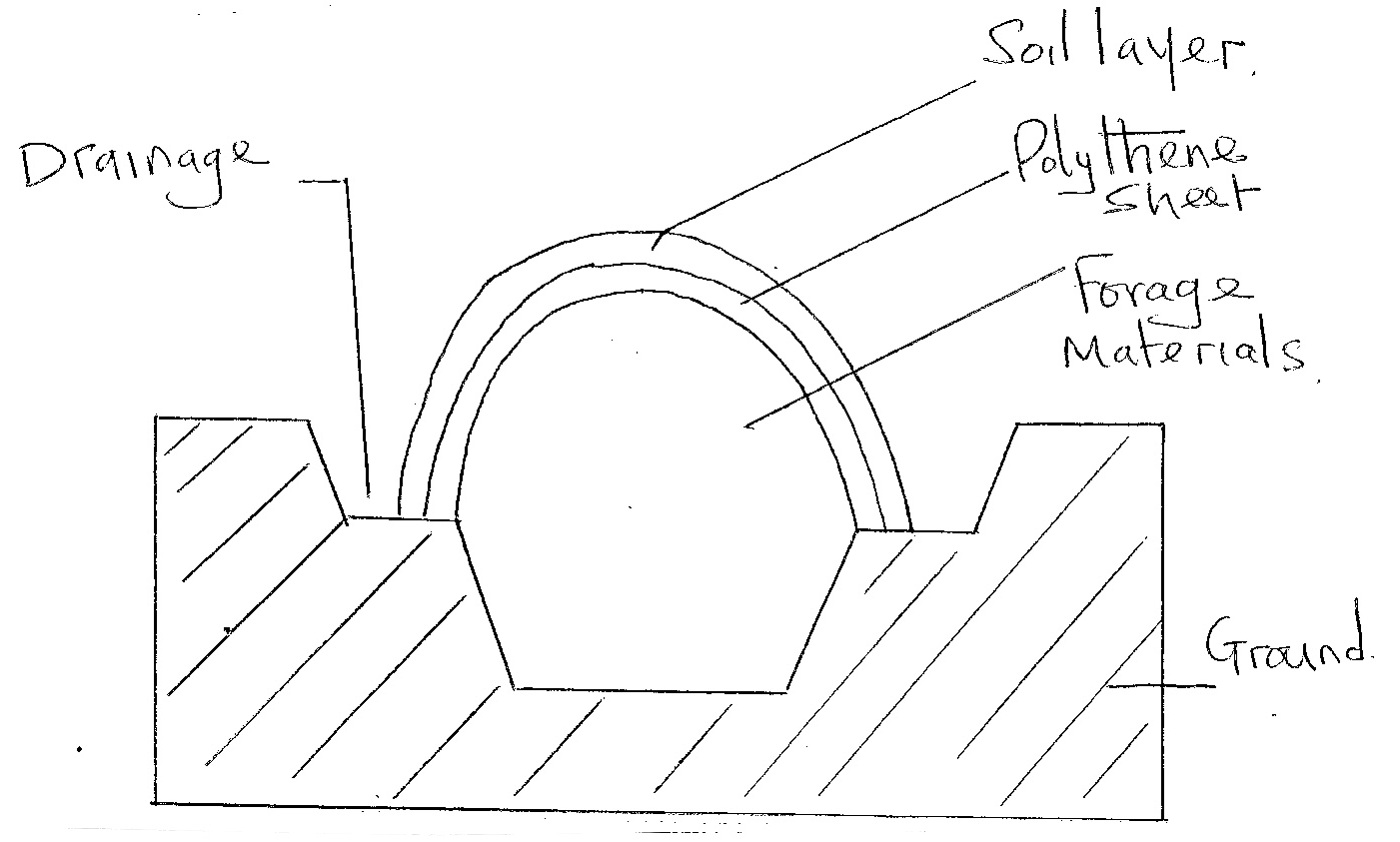
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**25.** The diagram **below** shows a method of forage preservation.



**(i)** Identify the structure illustrated above. **(1 mark)**

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**(ii)** State the form in which forage is conserved as illustrated above. **(1 mark)**

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**(iii)** Give the role of the following in the structure above. **(2 marks)**

1. Polythene sheet.
2. Drainage

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**SECTION C (40 MARKS)**

**Answer TWO questions from this section.**

**26. a)** Describe coffee harvesting procedure. **(5 marks)**

**b) i)** A farmer is supposed to apply a compound fertilizer 20:30:10 on a plot measuring 5m long and 4m wide at the rate of 200kg/ha. What do the figures 20:30 stand for? **(2 marks)**

**ii)** Calculate the amount of fertilizer the farmer will require per plot. Show your working. **(3 marks)**

**c)** Explain **ten** ways of maintaining soil fertility in a farm. **(10 marks)**

**27. a)** Explain **ten** factors to consider when selecting implements for primary tillage. **(10 marks)**

**b)** Explain **five** routine management practices in raising cabbage seedlings. **(5 marks)**

**c)** Calculate the plant population if maize is plant at a spacing of 90 cm by 30 cm in a plot measuring

4 × 3m. ( Show your working**) (3 marks)**

**d)** Explain **five** ways of preventing of water pollution. **(5 marks)**

**28. a)** Explain factors which influence the site selection of a nursery bed. **(12 marks)**

**b)** Explain land preparation and planting in carrot production. **(8 marks)**

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