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

**Candidate’s Signature** …………..………………

**Date** ………………..

**Starehe Boys’ Centre, School and Institute**

**Kenya Certificate of Secondary Education**

**MOCK EXAMINATIONS, 2014**

**443/1**

**Agriculture**

**Paper 1**

2 hours

*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*** *the questions in sections* ***A*** *and* ***B****, in the spaces provided.*

*Answer* ***ANY TWO*** *questions in section* ***C*** *in the spaces provided after question* ***27***

**For Examiner’s Use Only**

|  |  |  |  |
| --- | --- | --- | --- |
| **Section** | **Question** | **Maximum Score** | **Candidate’s**  **Score** |
| **A** | **1 - 17** | **30** |  |
| **B** | **18 - 24** | **20** |  |
| **C** |  | **20** |  |
|  | **20** |  |
| **Total Score** | | **90** |  |

**This paper consists of 12 printed pages.**

**Candidates should check the question paper to ascertain that**

**all the pages are printed as indicated and no questions are missing.**

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**SECTION A (30 marks)**

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

1. Mention **one** form in which nitrogen is taken in by plants **(½ mark)**

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1. **(a)** What is meant by a **perennial** crop? **(1 mark)**

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**(b)** Name **one** perennial fruit crop **(½ mark)**

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1. State **two** practices carried out on stored hay to lower the risk of fire **(2 marks)**

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1. **(a)** Give the term used to describe the process of harvesting each of the following crops

**(1½ marks)**

**Sugarcane** …………………………………………………………………………………….

**Tea** …………………………………………………………………………………………….

**Coffee** …………………………………………………………………………………………

**(b)** Why should harvested cotton lint **not** be packed in gunny bags? **(1 mark)**

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1. **(a)** Define **land tenure (1 mark)**

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**(b)** Give **one** advantage of **communal** land tenure **(½ mark)**

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1. State **two** possible causes of wilting in tomato plants when the water supply is otherwise adequate

**(1 mark)**

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1. **(a)** Define **ley farming (1 mark)**

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**(b)** State **one** reason for carrying out ley farming **(½ mark)**

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1. State **one** shortfall of crop rotation **(1 mark)**

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1. List **three** field practices carried out in a crop to obtain optimum plant population **(1½ marks)**

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1. Give **two** possible meanings of **root stock (2 marks)**

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1. Define **gross domestic product (½ mark)**

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1. State **two** positive effects of soil organisms **(1 mark)**

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1. **(a)** What is the source of power for a tractor-drawn rotary cultivator? **(½ mark)**

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**(b)** State **two** ways in which the rotary cultivator kills the weeds in a growing crop **(2 marks)**

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1. **(a)** Give **two** reasons for adding water onto a compost heap, during the preparation of manure

**(1 mark)**

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**(b)** What **three** other practices are carried out to improve the quality of the manure obtained?

**(1½ marks)**

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1. List **four** factors that speed up soil erosion **(2 marks)**

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1. Write down **four** maintenance requirements of a metallic watering can **(2 marks)**

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1. Give **three** possible meanings of **production (3 marks)**

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**SECTION B (20 marks)**

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

1. In the table below, indicate with a tick **(√)** whether the cost given is **variable** or **fixed** **(3 marks)**

|  |  |  |
| --- | --- | --- |
| **Cost** | **Fixed** | **Variable** |
| **Rent** |  |  |
| **Maize seed and fertilizer** |  |  |
| **Wages** |  |  |
| **Fuel and electricity bill** |  |  |
| **Salaries** |  |  |

1. Study the illustration of a cabbage leaf damaged by the cabbage sawfly (Athalia spp.) and answer the questions that follow

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1. At what stage of development of the pest does the cabbage sawfly cause the damage illustrated in the diagram above? **(1 mark)**

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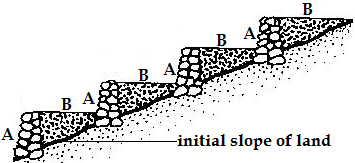
1. Name **three** other cultivated plants that are attacked by the cabbage sawfly **(1½ marks)**

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1. Shown below is a diagrammatic section through a hillside, illustrating terracing

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**KEY**

**A** “Bank” of stone and earth

**B** Soil built up behind “bank”

1. Identify the type of terrace shown in the diagram above **(1 mark)**

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1. How does the terrace in **(a)** above conserve soil and water? **(1 mark)**

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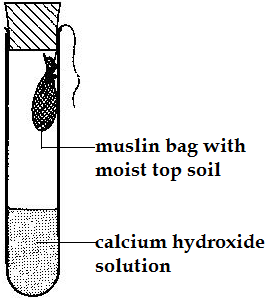
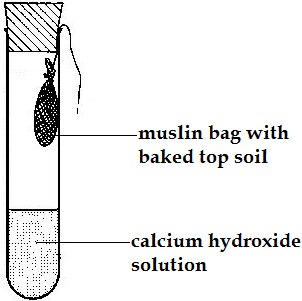
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1. Students at Kaputiei school set up the apparatus shown in the diagrams below (on page **7**)

The set ups were allowed to stand for a period of seven days

1. What was the aim of the experiment? **(1 mark)**

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**A B**

1. State the results that were obtained, at the end of the experiment, in set up **A (1 mark)**

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1. How was the “baking” in set up **B** carried out? **(1 mark)**

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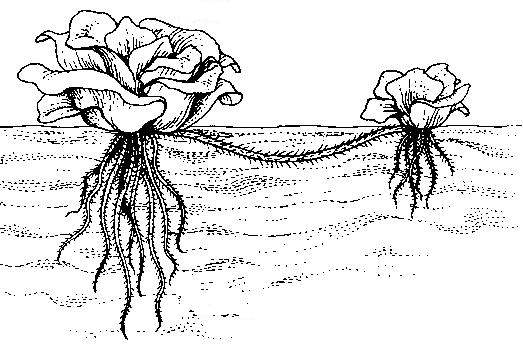
1. Give reason why bags made of muslin, rather than polythene, were used in the experiment

**(2 marks)**

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1. Carefully study the diagram of a water weed shown below and answer the questions that follow

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1. Identify the weed in the diagram above **(1 mark)**

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1. The weed in **(a)** above has been referred to as an **indicator** organism. Explain **(1 mark)**

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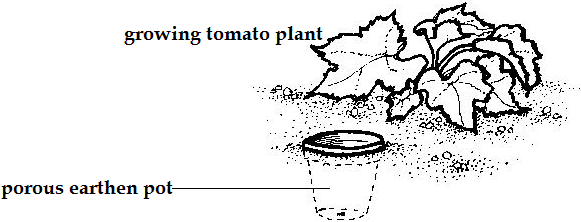
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1. Give **two** “commercial” uses of the weed identified in **(a)** above **(1 mark)**

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1. Illustrated below is a method of applying water to a tomato crop. Study the illustration carefully and answer the questions that follow

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State **three** reasons why a farmer would carry out the practice illustrated, in preference to conventional irrigation of the crop **(1½ marks)**

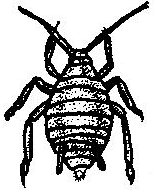
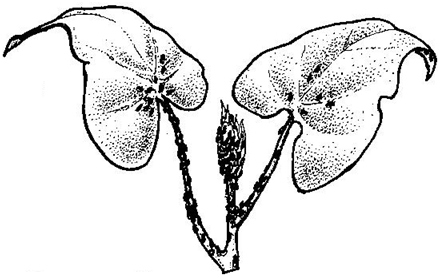
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1. Shown below (on page **9**) is the diagram of a pest and a bean plant infested by the same pest. Study the diagrams carefully and answer the questions that follow
2. Name the pest in the diagrams **(1 mark)**

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1. State **four** effects of the pest named in **(a)** above **(2 marks)**

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**SECTION C (40 marks)**

***Answer ANY TWO questions in this section in the spaces provided after question 27***

1. **(a)** Mr. Korir- a farmer in Narok county has 16 hectares of land, 0.6ha being under permanent

pasture. The farmer intends to grow beans on 6 hectares of land. In the previous seasons, he

hired casual workers at the rate of 80 man-days per hectare. The cost was ksh30.00 per man–day.

This season, he intends to hire a tractor to open the land at a cost of ksh.600.00 per hectare. In the

farmer’s estimation, using a tractor will increase bean production from 800kg/ ha to 1 200kg/ha.

Harvesting will cost kshs6.00 per kg of bean seeds and the price of beans is forecasted at

ksh60.00/kg. Draw up a partial budget to show whether the change would be worthwhile

(**5 marks)**

1. Sigma supplies agency supplied the following goods to Ukulima farm, at 7.5% discount

20 bags of Layers mash @ sh2 200.00

5 bags of dairy meal @ sh2 150.00

10 bags of maize seed @ sh1 350.00

2 bags of DAP fertilizer @ sh2 100.00

Prepare an invoice detailing this transaction **(15 marks)**

1. **(a)** What is meant by a **concession**? **(2 marks)**
2. Give examples of concessions, in Kenya **(4 marks)**
3. Outline the **benefits** and **demerits** associated with concessions **(14 marks)**
4. **(a)** Define drip irrigation **(3 marks)**
5. Outline the factors that would make a farmer choose drip irrigation in preference to other methods of irrigation **(17 marks)**

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