**Name: …………………………………………………………Index No: ……………………..……………**

Candidate’s Signature:……………………………….

Date: ……………….……………….…

**443/1**

**AGRICULTURE**

**PAPER 1**

**JULY/AUGUST 2014**

**TIME: 2 HOURS**

***Kenya Certificate of Secondary Education***

**443/1**

**Agriculture**

**Paper 1**

**2 hours**

**INSTRUCTIONS TO CANDIDATES:**

* *This paper contains* ***three*** *sections A, B and C*
* *Answer* ***ALL*** *the questions in section A amd B*
* *Answer any* ***Two*** *questions from section C*
* *All answers should be written in the spaces provided.*

**FOR EXAMINERS USE ONLY**

|  |  |  |  |
| --- | --- | --- | --- |
| **SECTION** | **QUESTIONS** | **MAX SCORE** | **CANDIDATES SCORE** |
| **A** | 1. **17** | **30** |  |
| **B** |  | **20** |  |
|  |  | **20** |  |
|  | **20** |  |
| **TOTAL** |  | **90** |  |

*This paper consists of 8 printed pages. Candidates should check to ascertain that all pages are printed as indicated and that no questions are missing.*

**SECTION A (30 MARKS)**

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

1. List **two** benefits of a deep soil. (2mks)

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……………………………………………………………………………………………………..

1. Under which conditions do farmers use high seed rate. (2mks)

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1. Name **two** factors that dictate a method of fertilizer application. ( 3mks)

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1. Differentiate between nutrient fixation and nutrient toxicity. (2mks)

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……………………………………………………………………………………………………..

1. What is pricking out as used in vegetable crop nursery management. ( 1mk)

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……………………………………………………………………………………………………..

1. State **two** practices of hardening off in vegetable crop nursery. (2mks)

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……………………………………………………………………………………………………..

1. Differentiate between seed inoculation and seed dressing. (2mks)

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1. Give **two** characteristics of certified seeds. (2mks)

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……………………………………………………………………………………………………..

1. Distinguish between concession and tenancy forms of land tenure. (2mks)

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……………………………………………………………………………………………………..

1. Name **two** areas where cut-off drain discharges its water. ( 1 ½ mks)

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……………………………………………………………………………………………………..

1. Name **three** methods of harvesting agro forestry crops. ( 1 ½ mks)

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1. Name a crop that require the following training
2. Propping ( ½ mk)

……………………………………………………………………………………………………..

1. Tralishing ( ½ mk)

……………………………………………………………………………………………………..

1. Staking ( ½ mk)

……………………………………………………………………………………………………..

1. How can agriculture promote industrial growth. (1mk)

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..

1. How does the following practices control crop pests.

(a) close season (1mk)

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..

(b) Use of flood water (1mk)

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..

15 How would each of these methods help the farmer conserve soil and water

1. Mulching (1mk)

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..

1. Bunds (1mk)

……………………………………………………………………………………………………..

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1. What is the negative effects of these weeds in the named enterprises.

(a) Black Jack in merino sheep farm. ( ½mk)

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1. Maxican marigold in a dairy farm. (1mk)

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……………………………………………………………………………………………………..

1. Name **three** types of elasticities of demand in agricultural economics. (1mk)

……………………………………………………………………………………………………..

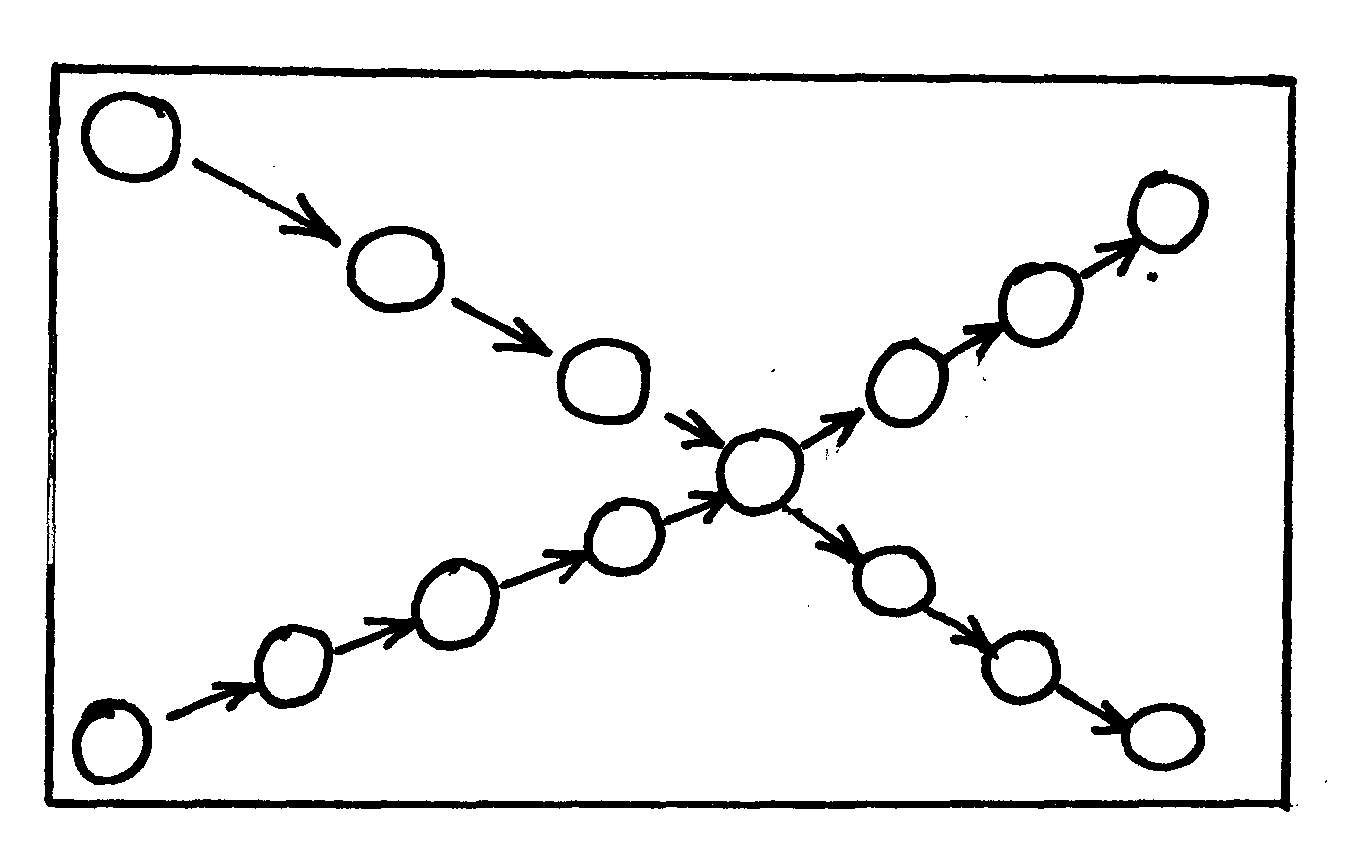
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**SECTION B (20MARKS)**

***Answer ALL Questions in this section***

1. Below is a diagram on a method of soil sampling. Study it and answer the questions that follow.



**1**

**1**

**3**

**2**

**2**

**3**

**11**

**4**

**10**

**5**

**8**

**9**

**7**

**6**

(a) Identify the method shown above. (1mk)

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(b) State **four**steps to be followed when sampling soil. (2mks)

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**B**

**A**

(c)

(i) Identify the fertilizers illustrated above (2mks)

**A**……………………………………………..…………

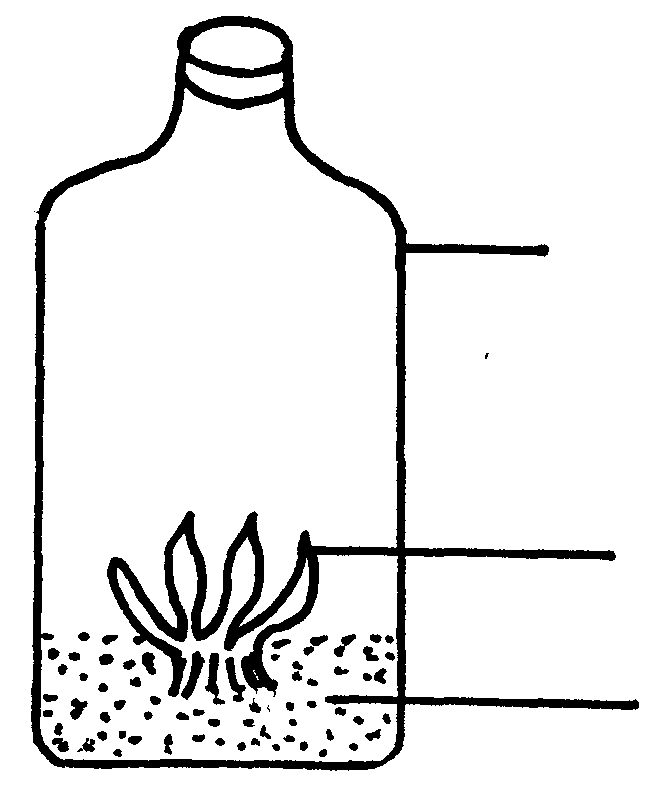
**B**…………………………………………………………

(ii) Give **two** reasons why fertilizer A is not applied during planting. (2mks)

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..

1. The diagram below illustrates materials and a method of vegetative propagation. Study it and answer the questions that follow.



**Glass container**

**Plantlets**

**Growth medium**

1. Identify the methods of propagation illustrated above (1mk)

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..

1. Give **one** advantage associated with the above method of propagation. (1mk)

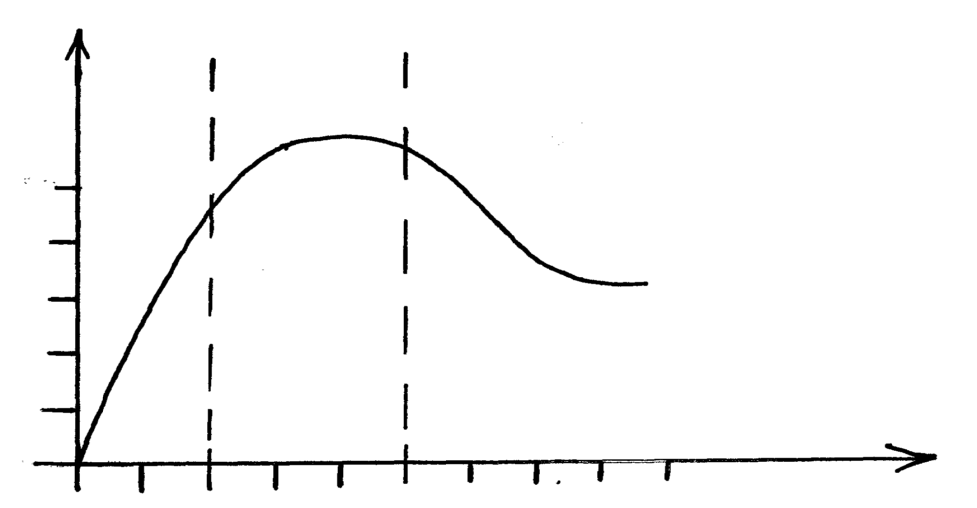
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1. State **one** reason why the above method is rarely practiced by farmers. (1mk)

……………………………………………………………………………………………………..

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1. Below is a graphical representation of the law of diminishing return.

Zone ZoneZone

I II III

50

40

30

20

10

1 2 3 4 5 6 7 8 9

1. Explain what happens in each of the zoneslabelled I,II, and III (3mks)

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..

1. Which of the **three** is arationalzone of production. (1mk)

……………………………………………………………………………………………………..

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1. What is journal as use din farm accounts. (1mk)

……………………………………………………………………………………………………..

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1. The diagram below shows some common weeds found in arable land. Study them and answer questions that follow.





1. (i) Identify the weeds **D** and **E** (1mk)

**D**……………………………………………..

**E**……………………………………………….

(ii) Give **one** difficulty encountered when controlling each of the weed. (1mk)

……………………………………………………………………………………………………..

……………………………………………………………………………………………………..



(b)

1. Identify the disease above. (1mk)

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……………………………………………………………………………………………………..

1. State **two** causes the above disease. (2mks)

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……………………………………………………………………………………………………..

**SECTION C (40MARKS)**

***Answer any two Questions in this section***

1. (a) State **five** ways of improving productivity of a framlabour. (5mks)

(b) Identify **seven** ways of adjusting t o risks and uncertainitiesi in the farm. (7mks)

(c) Outline eight effects of land fragmentation (8mks)

1. (a) Describe maize production under the following headigns
2. Land preparation (3mks)
3. Planting (4mks)
4. Field management practices (3mks)

(b) State and explain **five** factors that influence crop rotation. (10mks)

1. (a) Outline qualities of a good farm manager (5mks)

(b) Outline **six** activities that may be undertaken in organic farming. (6mks)

(c) (i) give **five** reasons for pruning. (5mks)

(ii) describe**four** disadvantages of chemical pest control. (4mks)

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