

Name..... Index No.....

Candidate's Signature ..... Date.....

**443/ 1**  
AGRICULTURE  
PAPER 1  
JULY/ AUGUST 2009  
TIME: 2 HOURS

**KIRIMA JOINT EVALUATION TEST - 2009**  
*Kenya Certificate of Secondary Education (K.C.S.E)*

**443/ 1**  
AGRICULTURE  
PAPER 1  
JULY/ AUGUST 2009  
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**INSTRUCTIONS**

- Write your name and Index No. on the spaces given above
- This paper has three sections **A**, **B** & **C**.
- Answer **ALL** questions in section **A** & **B**.
- Answer any **Two** questions in section **C** in the spaces provided.

**FOR EXAMINER'S USE ONLY**

SECTION	QUESTION	MAX. SCORE	CANDIDATE'S SCORE
<b>A</b>	1 – 19	<b>30</b>	
<b>B</b>	20 – 23	<b>20</b>	
<b>C</b>		<b>20</b>	
		<b>20</b>	
	<b>TOTAL SCORE</b>	<b>90</b>	

*This paper consists of 12 printed pages .Candidates should check the question paper to  
Ensure that all the pages are printed as indicated and no questions are missing*

**SECTION A (30 marks)**

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

- 1** Name **three** branches of horticulture. (1½ marks)  
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- 2** List **two** advantages of mixed farming. (1 mark)  
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- 3** State **two** advantages of metal water pipes over plastic pipes in piping water in the farm. (1 mark)  
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- 4** List **two** ways in which a soil of pH 3 can be raised to pH 5. (1 mark)  
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- 5** State **Two** field practices that can ensure efficient utilization of Urea fertilizer in a field of maize. (1 mark)  
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- 6** Give **three** advantages of tissue culture in crop propagation. (1½ mark)  
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- 7** List **three** advantages of grass – legume mixture. (1 ½ mark)  
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- 8** State **four** sources from which a farmer would obtain capital for farming activities. (2 marks)  
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- 9** State **four** factors that can affect the efficiency of pesticides. (2 marks)  
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**10** List **four** ways of improving labour productivity. (2 marks)

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**11** Give **two** ways in which afforestation help in land reclamation. (1 mark)

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**12** Give **five** reasons for processing of farm produce. (2½ marks)

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**13** Differentiate between a perfect market and an imperfect market. (2 marks)

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**14** State **three** effects of weeds in a pasture crop. (1½ marks)

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**15** State **four** disadvantages of land fragmentation. (2 marks)

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**16** Name **three** ways in which a cropping system help in controlling soil erosion. (1½ marks)

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**17** Name any **two** crops propagated through suckers. (1 mark)

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**18** Give **four** advantages of minimum tillage. (2 marks)

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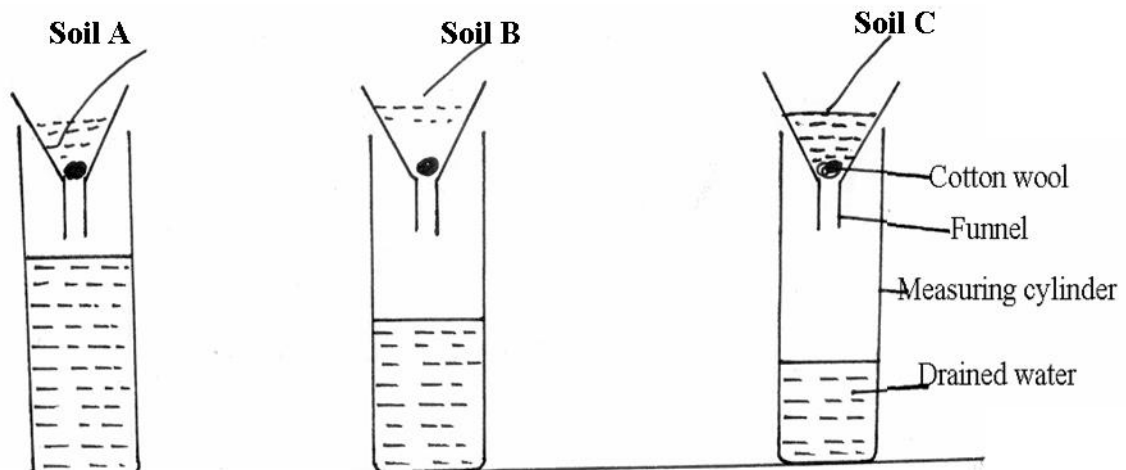
**19** State **four** precautions a farmer should observe when harvesting pyrethrum. (2 marks)

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**SECTION B (20 marks)**

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

**20** The diagram below shows an experiment set up using three different sets of soil, and the observations made after 24hrs. Study the diagram and answer the questions that follow.



(a) What is the experiment set up above designed to study. (1 mark)

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(b) Name the three soil types **A**, **B** and **C**. (1½ marks)

**A** .....

**B** .....

**C** .....

(c) What are the characteristic textures of the soil type **A** and **C** (2 marks)

**A**

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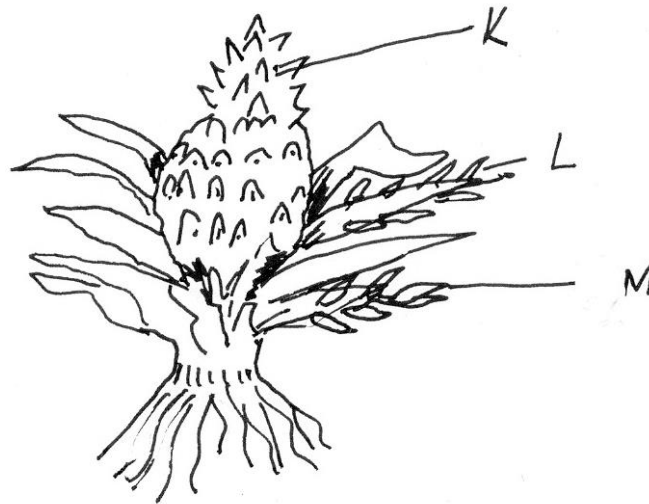
**C**

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(d) State how a farmer would improve the structure of the soil type **C**. (1 mark)

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21 The diagram below illustrates a crop. Study it and answer the questions below.



(a) Identify the parts labeled **K**, **L** and **M**. (3 marks)

**K** .....

**L** .....

**M** .....

(b) Apart from the parts mentioned above, list down five other vegetative materials used for crop propagation. (2½ marks)

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22 (a) What is opportunity cost? (1 mark)

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(b) A farmer has a piece of land on which he can produce maize and barley. The yields and the selling prices of the crops are as shown below.

Crop	Yield (90 kg bags)	Selling Price (Kshs/ bag)
Maize	2500	800
Barley	2000	1500

The farmer decides to produce maize. Assuming the cost of producing any of the two crops is the same.

(i) Calculate the farmer's opportunity cost. Show your working. (2 marks)

(ii) Which crop should the farmer grow. (1 mark)

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(c) Give two circumstances under which opportunity cost may not arise. (2 marks)

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23 The diagram above illustrates a bird labeled A which is a crop pest.



(i) Identify the crop pest. (1 mark)

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(ii) State two ways by which the bird causes losses in crops. (2 marks)

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**SECTION C (40 marks)**

Answer any **TWO** questions from this section in the spaces provided.

- 24** (a) Describe the establishment of Napier grass from the time land is prepared to the time the grass is ready for first defoliation. (15 marks)

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(b) Explain the effects of early defoliation in pasture management. (5 marks)

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**25** (a) Describe five factors which influence demand of a commodity in a perfect market situation. (10 marks)

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(b) State and explain five marketing functioning. (10 marks)

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**26** (a) Give two agents of soil erosion. (2 marks)

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(b) Briefly explain how the following soil erosion types occur. (4 marks)

(i) Splash erosion.

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(ii) Sheet erosion

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(iii) Rill erosion

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(iv) Gully erosion

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