

Name:..... Index no

Candidate's sign.....

Date:.....

443/1
AGRICULTURE
Paper 1
JUNE 2014
TIME: 2 HOURS

COMA JOINT EXAM 2014

Kenya Certificate of Secondary Education (K.C.S.E.)

Agriculture
Paper 1
JUNE 2014
Time: 2Hours

INSTRUCTIONS TO CANDIDATES:

- Write your name and index number in the spaces provided.
- Sign and write the date of examination in the spaces above.
- This paper consists of three sections; A, B and C.
- Answer all questions in section A and B and any other two questions in section C in the spaces provided.

For Examiner's Use Only:

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1-17	30	
B	18-22	20	
C		20	
		20	
	TOTAL	90	

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

SECTION A (30MARKS)

Answer all questions in this section in the spaces provided

1. State **four** ways by which plant nutrients may be lost from the soil (2mks)

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2. Give **two** harmful effects of high population density in a maize crop grown for grain production. (1mk)

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3. State **three** conditions under which the opportunity cost is zero in a farming enterprise (1½mks)

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4. (a) Name **three** product relationship in agriculture economics (1½mks)

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(b) Explain the following terms as used in agricultural economics (1mk)

(i) Production function

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(ii) Equi – marginal returns

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5. State **four** objectives of land settlement which have been undertaken in Kenya. (2mks)

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6. (a) State **two** factors that influence the supply of casual labour in a farm. (1mk)

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(b) State **three** ways in which a farmer can adjust to risks and uncertainties. (1½mks)

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7. (a) Give **two** roles of micro-organisms in the soil that are beneficial to crops. (1mk)

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(b) State **three** properties of soil that are influenced by its texture. (1½mks)

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8. What is meant by the term “changing the cycle” in coffee growing? (1mk)

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9. State **four** functions of calcium in plant growth and development. (2mks)

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10. State **four** factors that contribute to the competitive ability of the weeds. (2mks)

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11. State **two** non - chemical methods of controlling storage pests in a maize granary. (1mk)

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12. Name **three** branches of horticulture. (1½mks)

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13. Give **three** advantages of tissue culture in crop production. (1½mks)

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14. State **four** ways in which burning of vegetation may lead to loss of soil fertility. (2mks)

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15. Give **two** ways in which pastures are classified. (1mk)

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16. State **four** financial documents that should be kept on a farm. (2mks)

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17. State **four** disadvantages of using organic manure in crop production. (2mks)

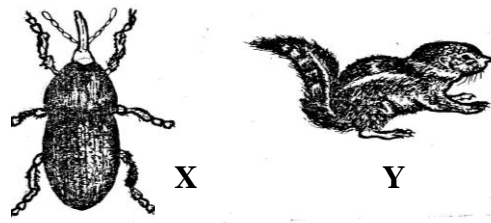
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SECTION B (20MARKS)

Answer all the questions in this section in the spaces provided

18. If the recommendation is to apply 42kg of N/ha and the farmer owns two hectares of land, how much would it cost him to provide sulphate of ammonia (21%N) at a rate of Kenya shillings 1,500 per 50kg bag. (3mks)

19. Two maize pests are shown in the diagram below. Study them and answer the questions that follow.



- a) Identify the pests in the diagrams labeled X and Y (1mk)
 - X.....
 - Y.....
- b) At what stage of maize production does each pest damage the crop. (2mks)
 - X.....
 - Y.....
- c) Give **one** way of controlling each of the pests in the field. (2mks)
 - X.....
 - Y.....

20. The diagram shows a management practice carried out on certain crops



- (a) Identify the practice. (1mk)
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- (b) Name **three** examples of crops in which the above practice can be applied. (1½mks)
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- (c) State **three** reasons for carrying out above practice. (1½mks)

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21. The following account of information is from Mr. Ongoros farm for the year ended 31/12/2012.

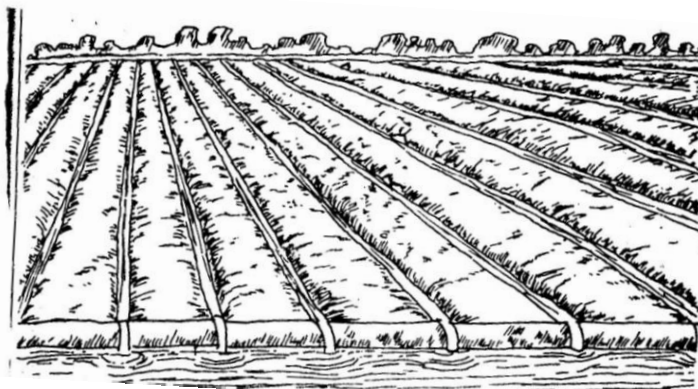
Opening valuation	Ksh. 6,000
Paid wages	Ksh. 5,000
Bought equipments worth	Ksh. 4,000
Sold mature pigs worth	Ksh. 7,000
Bought drugs worth	Ksh. 3,200
Sold maize worth	Ksh. 3,000
Closing valuation	Ksh. 4,000

(i) Using the information above, prepare a profit and loss account for Mr. Ongoro's farm. (4mks)

(ii) From the calculation in (i) above, state whether Mr. Ongoro made a profit or loss. (1mk)

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22. The diagram below illustrate a method of irrigation carried out on the farm



(i) Identify the type of irrigation shown above. (1mk)

(ii) Name **two** advantages of the above method. (2mks)

SECTION C (40ARKS)

Answer any two questions from this section

- 23.(a) Explain the precautions that should be observed during the harvesting of pyrethrum (4mks)
- (b) Outline **four** advantages of raising tomato seedlings in a nursery (4mks)
- (c) Describe field production of dry maize under the following sub headings
- (i) Ecological requirements (2mks)
 - (ii) Selection and preparation of planting materials (2mks)
 - (iii) Land preparation (3mks)
 - (iv)Field practices (3mks)
 - (v) Harvesting (2mks)
24. (a) Explain **four** factors that should be considered when selecting seeds for planting (8mks)
- (b) State and explain **four** advantages of minimum tillage in crop production (8mks)
- (c) List various methods of harvesting water in farm (4mks)
25. (a) Discuss **ten** cultural methods of crop pest control (10mks)
- (b) Explain **five** practices that maintain good soil structures (5mks)
- (c) Describe **five** factors that effect the rooting of sugarcane cuttings (5mks)

ANSWERS:

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