

NAME:.....

INDEX NO:.....

SCHOOL:.....

CANDIDATE'S SIGN:.....

DATE:.....

443/1
AGRICULTURE
PAPER 1
JULY/AUGUST - 2014
TIME: 2 HOURS

MERU COUNTY JOINT EVALUATION EXAM - 2014

Kenya Certificate of Secondary Examination K.C.S.E

443/1
AGRICULTURE
PAPER 1
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INSTRUCTIONS TO CANDIDATES

1. Write your name and index number in the spaces provided.
2. This paper consists of *three* sections *A*, *B* and *C*.
3. Answer *ALL* questions in section *A* and *B*
4. Answer *any two* questions from section *C*
5. All answers should be written in the spaces provided

FOR EXAMINER'S USE ONLY

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1-17	30	
B	18-21	20	
C		20	
		20	
TOTAL SCORE		90	

*This paper consists of 12 printed pages.
Candidates must check to ascertain that all pages are printed as indicated
and that no question(s) is/are missing.*

SECTION A (30 Marks)

Answer all question in this section in the spaces provided

1. State **three** causes of blossom end rot disease in tomatoes. (1½ mks)

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2. Give a term used to mean a market condition where

(i) There is a sole seller (1mk)

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.....

(ii) There is a sole buyer (1mk)

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How are the following conditions prevented in carrot production. (3mks)

(i) Cracking

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.....

(ii) Forking

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.....

(iii) Greening

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4. Outline **two** ways in which inorganic Mulches help to conserve water in the soil. (1mk)

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5. Give **three** differences between soil formed in situ and depositions. (1½mks)

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6. State **four** factors promoting rooting of cuttings (2mks)

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7. State three conditions under which opportunity cost is zero or does not exist. (1 ½ mks)

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8. Give a reason in each case for carrying out the following management practices in a vegetable nursery. (1mk)

(i) Pricking out

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.....

(ii) Rogueing

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.....

(a) State two mechanical methods of breaking seed dormancy. (1mk)

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.....

(b) State two other Methods of breaking seed dormancy. (1mk)

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10. State any four non-chemical methods of controlling storage pest in a maize granary. (2mks)

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11. State four qualities of a good root stock for grafting. (2mks)

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12. Give three limitations of tissue culture. (1 ½ mks)

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13. Give two roles of micro-organisms in soil that are beneficial to crops. (1mk)

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14. State **four** factors that influence erodability of soil. (2mks)

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15. Give **two** examples of each of the following types of costs in maize production.

(a) Variable costs; (1mk)

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.....

(b) Fixed costs (1mk)

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16. Give **four** reasons why nomadic pastoralism is being discouraged in Kenya today. (2mks)

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17. Give **four** reasons for treating water for use on the farm. (2mks)

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SECTION 2 (20 MARKS)

Answer ALL the questions in the spaces provided.

18. A farmer is to apply a compound fertilizer 20:20:10 on a vegetable plot measuring 4 metres by 3 metres wide at a rate of 100kg per hectare.

(a) Calculate the amount of fertilizer to be applied on the plot. (Show your working) (2mks)

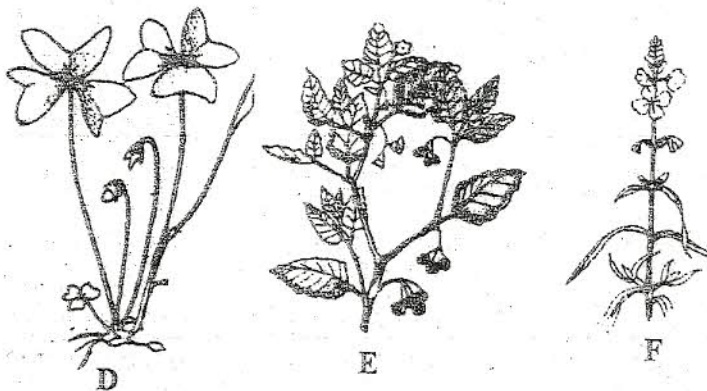
(b) What do the figures 20 and 10 stand for? (2mks)

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(c) Give two factors which influence the type of fertilizer to be applied in a given piece of land. (1mk)

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19. Study the illustrations D, E and F below of weeds and answer the questions that follow.



(a) Identify the specimens labeled D and E. (2mks)

D.....
E.....

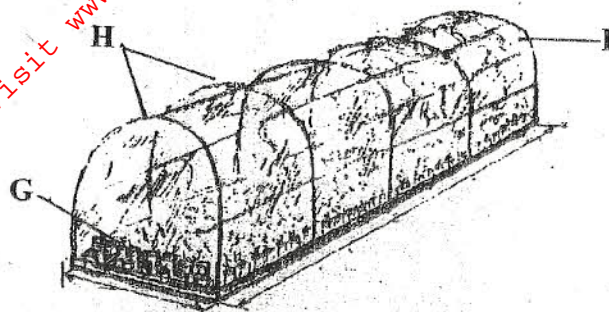
(b) Name one field crop that weed F is parasitic to; (1mk)

.....
.....

(c) State two measures for controlling specimen F.

(2mks)

20. Study the illustration below and answer the questions that follows.



(a) Identify the structure.

(1mk)

(b) Name one common crop that is raised in the structure.

(1mk)

(c) Name the parts labeled G, H and I

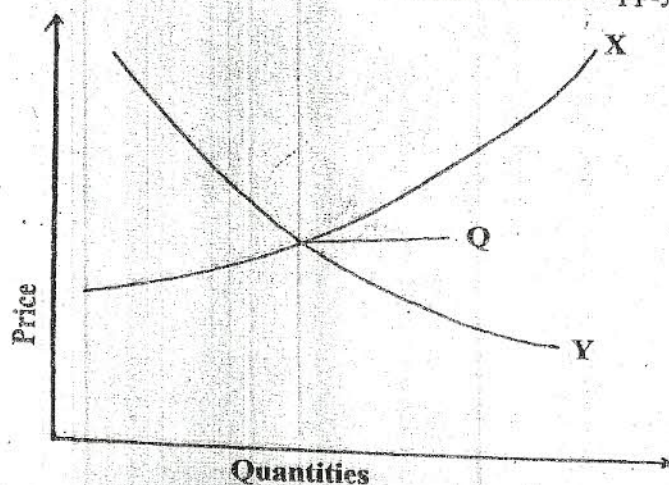
(3mks)

G.....

H.....

I.....

21. Below is a graph showing the relationship between demand and supply in price determination.



(i) Identify curves X and Y

(2mks)

X.....

Y.....

(ii) What name is given to the point where curves X and Y intersect, (1mk)

(iii) Give a reason why curve X slopes downwards from left to right. (2mks)

SECTION C (40 MARKS)

Answer ANY TWO questions from this section in the spaces provided

22. (a) Describe production of maize under the following sub-headings (4mks)
- (i) Ecological requirements. (3mks)
 - (ii) Seed bed preparation. (5mks)
 - (iii) Harvesting
- (b) Explain six factors considered when designing a successful crop rotation programme. (6mks)
- (c) Give two reasons why timely weed control is advisable in crop production. (2mks)
23. (a) A farmer has 150 ha of arable land, 55 of which is under wheat, 30 ha under maize, 10ha under fodder crops and the rest under pasture. She wishes to know whether replacing 12 ha of maize with Irish potato the following year would be worthwhile. The fertilizer rates would have to be increased from 5 bags per ha to 7 bags per ha. For Irish potatoes and extra 100man – days of casual labour per ha will be necessary as a result of change. The average yield of maize and Irish potatoes is 40 bags and 110 bags /ha respectively. The prices are Sh. 1,300 per bag for maize and Sh. 1,100 per bag for Irish potatoes. Seed costs are 2,400 per ha for maize and 25,000 per ha for Irish potatoes. Fertilizer costs are 1,300 per bag. labour is paid Sh. 150 per man day. Draw up a partial budget and indicate the effects of the change. (12mks)
- (b) Explain three poor cultivation practices which cause water pollution. (3mks)
- (c) Outline five requirements for the success of settlement schemes. (5mks)
24. (a) Explain influence of Biological measures in soil and water conservation. (8mks)
- (b) Explain four benefits of a good transport and communication network in Agriculture. (4mks)
- (c) Explain advantages of mixed grass-Legume pasture over pure grass pasture. (8mks)

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