

NAME:.....INDEXDATE.....

SCHOOL:.....SIGNATURE.....

443/1
AGRICULTURE
PAPER 1
JULY/AUGUST 2010
TIME: 2HOURS

JOINT INTER-SCHOOLS EVALUATION TEST (JISSET) Kenya Certificate of Secondary Education

443/1
AGRICULTURE
PAPER 1

INSTRUCTIONS TO CANDIDATES.

1. Write your name and index number in the spaces provided above
2. Sign and write the date of examination in the spaces provided.
3. This paper consists of **THREE** sections; A, B, and C.
4. Answer all questions in sections A and B.
5. Answer any **TWO** questions in section C.
6. All the questions should be answered in the spaces provided

For Examiners' Use Only

Section	Questions	Maximum Score	Candidates score
A	1-20	30	
B	21-24	20	
C		20	
		20	
Total score		90	

SECTION A (30MKS)

Answer ALL the questions in this section.

1. List **four** environmental factors that affect crop distribution in a given area.

(2mks)

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2. Mention **two** methods of storing water on a farm

(1mk)

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3. Give one reason why too much air in the silo is undesirable in the process of making silage.

(½mk)

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4. State **two** advantages of a grass-legume pasture over a pure grass pasture

(1mk)

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5. State **two** characteristics of a large scale farming system.

(1mk)

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6. Give **four** reasons why farmers are encouraged to practice organic farming.

(2mks)

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7. (a) What is meant by the term **land reform**?

(½mk)

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(b) State **four** steps followed in land adjudication. (2mks)

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(c) Mention any **four** pieces of information contained in a land title deed. (2mks)

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8. State **two** ways how ridging controls soil erosion (1mk)

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9. List down **two** determinants of national income (1mk)

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10. State **two** possible causes of a hard pan. (1mk)

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11. Differentiate between chitting and seed inoculation. (1mk)

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12. Mention **four** management practices that are carried out on agro forestry trees from transplanting to maturity (2mks)

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13. Give four possible causes of seed dormancy. (2mks)

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14. State **four** reasons for planting cereals early in the planting season. (2mks)

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15. Give **four** functions of Young Farmers Clubs in Kenyan secondary schools and colleges. (2mks)

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16. Give **one** term used to explain a market condition where there is a:

(i) Sole seller (½mk)

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(ii) Sole buyer (½mk)

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17. Distinguish between the terms hybrid and composite as used in maize breeding (1mk)

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18. State **two** characteristics of green manure plants (1mk)

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19. Give **four** farming practices that may help in achieving minimum tillage (2mks)

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20. What is biological weed control (1mk)

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SECTION B (20MKS)

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

21. (a) A farmer can combine dairy meal and home made feeds in order to obtain 40kg of milk from a lactating cow as shown in the table below.

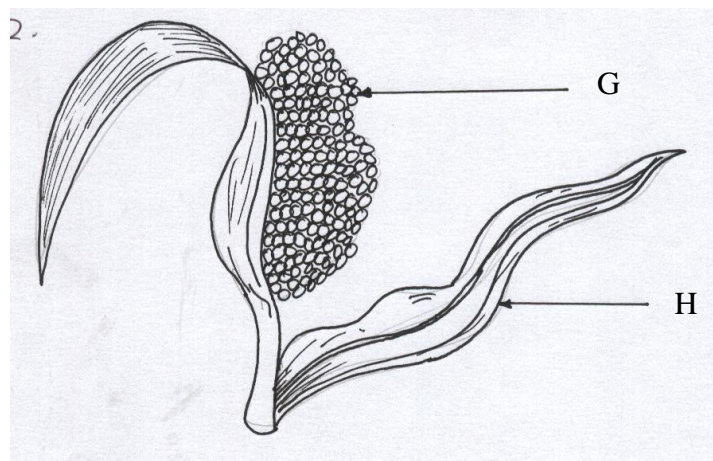
Dairy meal(kg)	Home-made feed(kg)	Marginal rate of substitution
1	48	0
2	39	V
3	32	7
4	27	W
5	23	4
6	21	X
7	20	1
8	19	Y

(i) Given the above information, calculate the Marginal Rate of Substitution and give the value of V, W, X and Y. (4mks)

(ii) Given that the price of dairy meal is Kshs.8.00 per kilogram and that of home-made feeds is Kshs.2.00 per kilogram, calculate the least cost combination. (1mk)

b) Given that the price of Kshs 1000 per bag, 20bags of maize are demanded, but when the price changes to Kshs 800 per bag, 22 bags are demanded, calculate the elasticity of demand. Show your working (3mks)

22. The diagram below illustrates one of the arable field crops. Study it carefully and answer the questions that follow.



a) Identify the field crop. (1mk)

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b) State **two** common diseases that attack the parts labeled G and H (2mks)

G..... H.....

c) Explain four **cultural** methods of controlling the disease named H in (b) above (2mks)

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23. Name the deficient nutrient element in plants showing the following symptoms;

i. Stunted growth, die back of plant tips, leaves roll up and chlorosis along margins of younger leaves (½mk)

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ii. Yellowing of leaves appears first on lower leaves; leaves turn brown and fall prematurely, stunted growth. (½mk)

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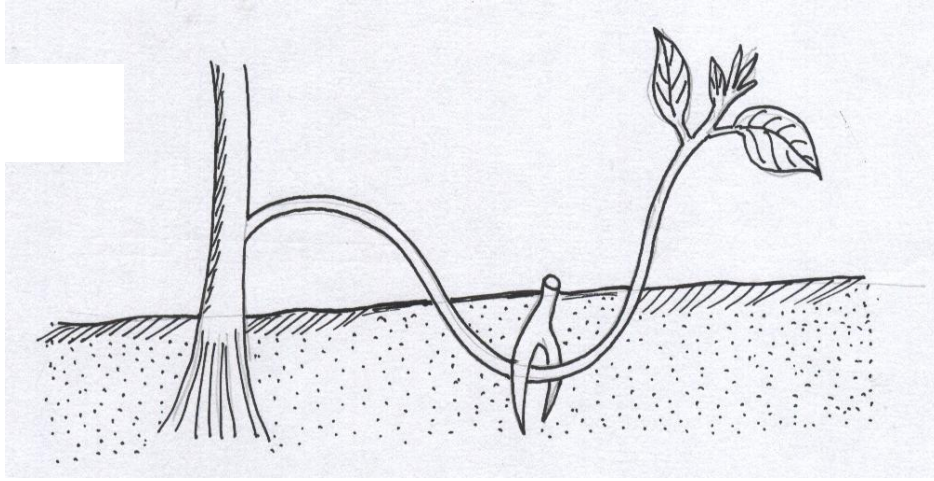
iii. Leaf curling, yellowing of leaves tips and edges of leaves scorched and has small mottles. (½mk)

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iv. Purpling of leaves, stunted growth, slender stalks and lateral buds remain dormant. (½mk)

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24. The figure below is a diagram illustrating a method of crop propagation. Study it carefully then answer the questions that follow.



a) Name the method of propagation illustrated above (1mk)

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b) Give **two** ways of initiating faster root development in the propagation method shown above (2mks)

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c) What would make it necessary for a farmer to choose the above method of propagation instead of using cuttings? (2mks)

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SECTION C (40MKS)

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

25. Describe the establishment of kales under the following sub-headings:

a) Nursery preparation (4mks)

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b) Establishment in the nursery (3mks)

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c) Management of seedlings in the nursery (5mks)

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d) Transplanting of seedlings (8mks)

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26. Study the information provided carefully and use it to prepare a profit and loss account for Mr. Khafafa's farm for the year ending 2009. His purchases and expenses were as follows:

Goats	4,000
Poultry	15,000

Dairy meal	25,000
Pasture seeds	50,000
Transportation of farm produces	15,000
Casual workers	12,000
Ox-plough	10,000
Opening Valuation	150,000

His sales and Receipts.

Mohair	75,000
Rabbits	36,000
Pigs	70,000
Groundnuts	100,000
Orange	20,000
Eggs	15,000
Closing valuation	200,000

a) Prepare profit and loss account (15mks)

b) Did Mr. Khafafa make a profit or loss? (1mk)

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c) How much was the profit or loss? (1mk)

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(c) Mention and describe **five** factors considered when choosing water pipes for irrigation (5mks)

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