NAME:_____INDEX NO._____

CANDIDATES SIGNATURE:_____

DATE:_____

GATUNDU-SUB COUNTY JOINT EVALUATION EXAMINATION

443/1

AGRICULTURE

PAPER I

JULY/AUGUST 2016

2 HRS

INSTRUCTIONS TO CANDIDATES

1) Write your name and index number in the spaces provided.
2) Sign and write the date of examination in the spaces provided.
3) This paper consist of three sections: A,B and C.
4) Answer all the questions in sections A and B
5) Answer **any two** questions from section C.
6) Write all answers in the spaces provided.

FOR EXAMINER'S USE ONLY

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1-18		
B	19-22		
C	23-25		
TOTAL SCORE			

SECTION A:

1. Give two sub-branches of arable farming. 1mk

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   _____

   _____

2. Give four biotic factors that influence agriculture. 2mks

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3. Give four reasons why land should be prepared early in readiness for planting. 2mks

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4. State four reasons for deep ploughing during land preparation. 2mks

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5. List two methods of land reclamation. 1mk

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   _____

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6. Give two circumstances that may necessitate irrigation. 1mk

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7. Name the parts harvested for each of the following crops. 1½ mks

(a) Onions

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(b) Carrots

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(c) Coffee

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8. Give two characteristics of fresh market tomatoes. 1mk

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9. Name four general methods of controlling crop pests. 2mks

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10. Give two effects of scarcity in agricultural production. 1mk

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11. Differentiate fertilizer grade and fertilizer ratio. 2mks

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12. Give three precautions that should be observed when storing nitrogenous fertilizers. 1 ½ mks

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13. State two conditions that must exist for a market to be purely competitive. 2mks

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14. Distinguish between grading and standardization in agricultural marketing. 2mks

    (i)   Grading

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    (ii)   Standardization.

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15. A form four student at Muthiga girls planted maize for her KCSE agriculture project. She used a spacing of 75cm x 25cm. her plot was 4x 3m.

    (i)   What does 75cm stand for in this statement? 1mk

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    (ii)   Calculate the plant population. Show your working. 3mks

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16. Give four benefits of a land title deed to a farmer. 2mks

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17. State four control measures of river bank erosion. 2mks

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18. Name two types of pests with piercing and sucking mouth parts. 1mk

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SECTION B:

19. (a) Indicate the type of elasticity shown in diagrams A, B and C.
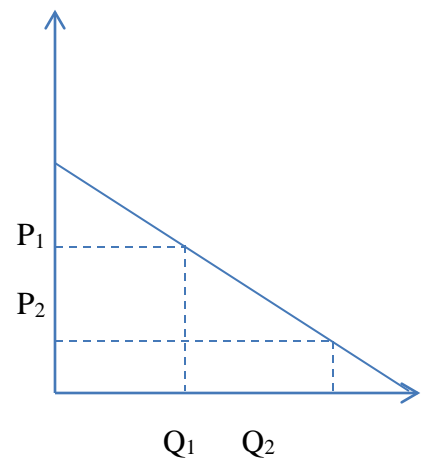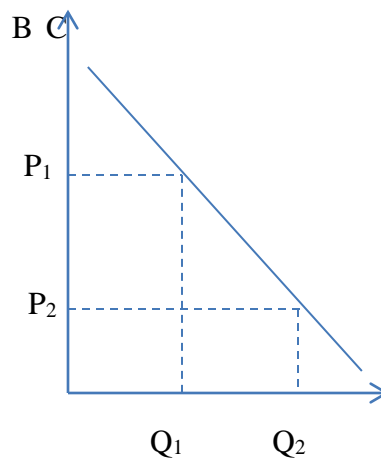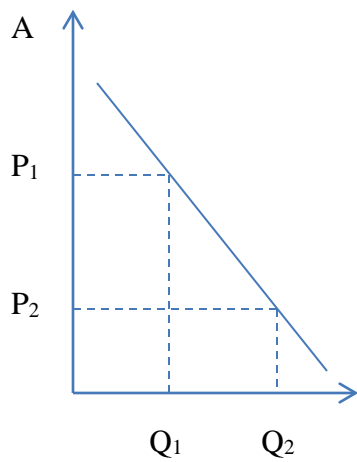
A

B

C

(b)   Give three factors that determine elasticity of demand. 3mks

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_____

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_____

(c)   Give one example of a marketing agency in Kenya. ½ mk

_____

20.   Study the diagram below carefully and answer the questions that follow.
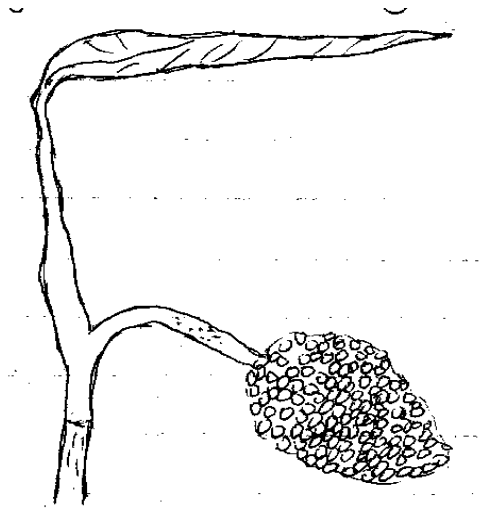
(a) Identify the variety of sorghum shown in the diagram. ½ mk

_____

_____

(b) Name two types of pests whose damage can be controlled by planting the above named variety. 2mks

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(c) State two other measures used to control the pests named in (b) above. 2mks

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(d) Name one disease that cause wilting of crops. ½ mks

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_____

21. The illustration below is methods of pruning. Study them carefully and then answer thequestions that follow.
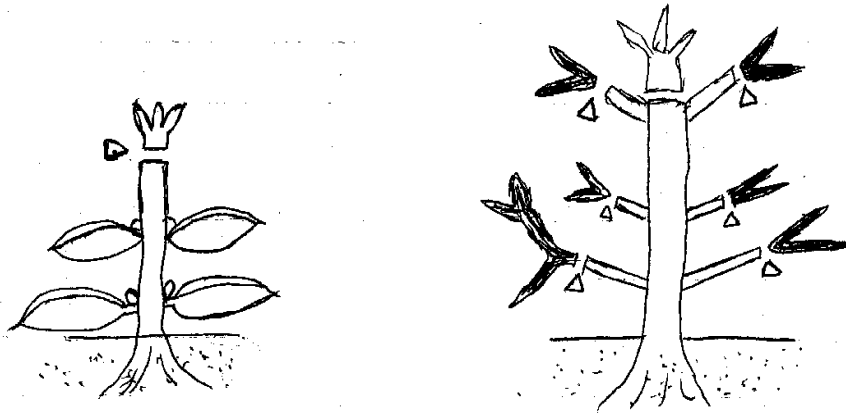
(a) Identify the methods of pruning. 1mk

A _____

B _____

(b) State two ways in which pruning help in control of pests and diseases. 2mks

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_____

_____

(c) Identify 3 tools used in pruning and give the use of each of them. 3mks

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22. The illustration below shows a cropping programme.

Beans	Maize
↑	↓
Kales	Cassava
↑	↓
Cabbages	Sweet potatoes
←	
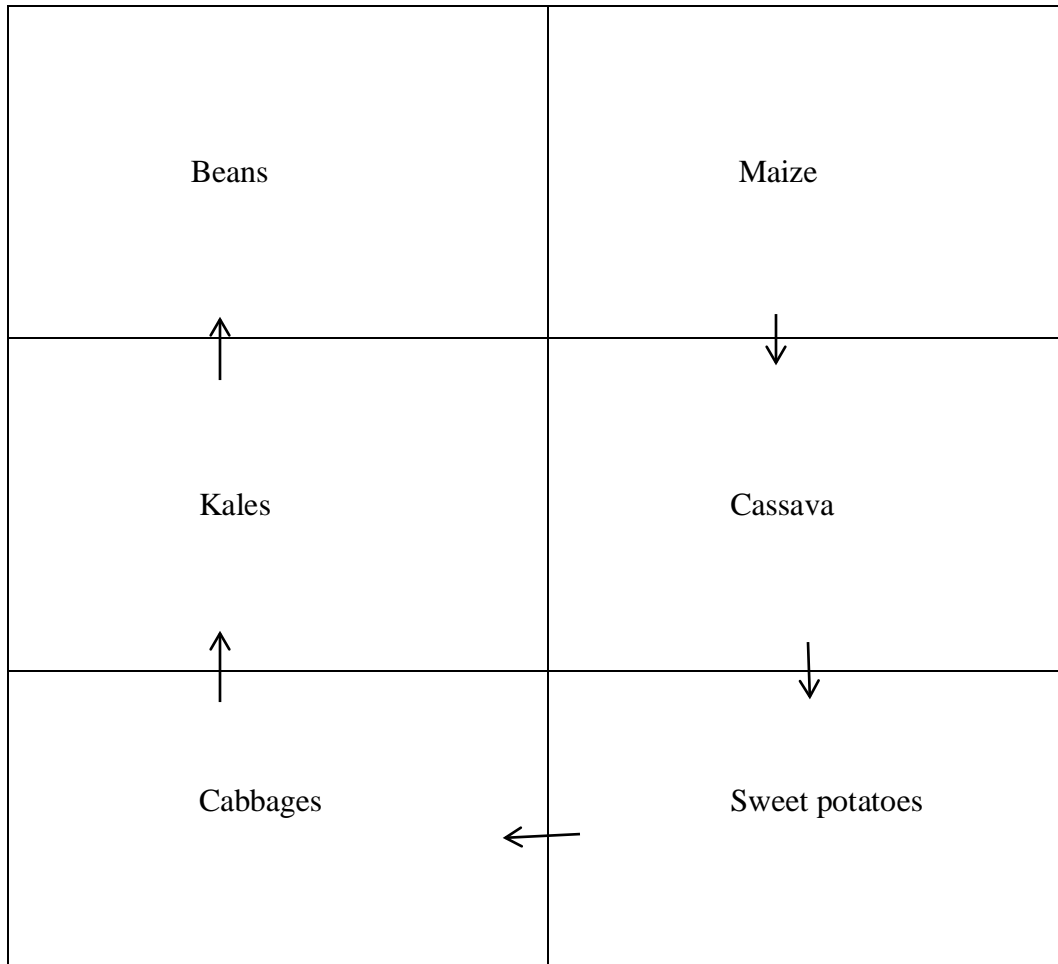
(a) Identify the cropping programme.   ½ mk

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_____

_____

(b) Giving a reason, identity one mistake the farmer made when designing the above programme. ½ Mk

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(c) State two ways the above programme help in control of weeds. 2mks

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(d) State three advantages of this programme. 1 ½ mk

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SECTION C: 40mks

Answer <u>any two</u> questions in this section.

23. The following is a table of maize at various levels of NPK fertilizer application.

Land (Ha)	NPK (kgs)	Total product (TP) maize in 90kg bags	Marginal product maize in 90kg bag	Average product maize in 90kg bag
1	30	10	10	10
1	60	27	17	--
1	90	42	--	14
1	120	56	14	--
1	150	63	--	12.6
1	180	65	2	--
1	210	65	--	9.3
1	240	60	-5	--
1	270	52	--	5.8
1	300	42	-10	4.2

(a) Complete the marginal product and average product columns. 4mks

(b) Describe eight factors considered when drawing a farm plan. 8mks

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(c) Describe uses of farm records.

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8 x 1 = 8mks

24. (a)   Describe six harmful effects of weeds. 6mks

(b)   Explain the principles of co-operatives. 8mks

(c)   Describe six advantages of mixed stand of pastures. 6mks

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25. (a)   Describe maize production under the following sub-topics.
    (i) Land preparation. 3mks

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    (ii) Field practices.   5mks

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(iii)Post-harvest practices. 5mks

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(b) Describe the cultural methods of controlling crop diseases. 7mks

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