

School.....

Name.....ADM NO..... class .....

Index No.....

443/1

AGRICULTURE

Paper 1 Time: 2hrs

NYANDARUA WEST CLUSTER 2018 EXAMINATIONS

(K.C.S.E) INSTRUCTIONS TO CANDIDATES.

- (a) Write your name and index number in the spaces provided above.
- (b) Sign and write the date of the examination in the spaces provided above.
- (c) This paper consists of **three** sections: **A, B** and **C**.
- (d) Answer **all** the questions in sections **A** and **B**
- (e) Answer any two questions in section **C**.
- (f) All answers should be written in the spaces provided.
- (g) **This paper consists of 9 printed pages.**
- (h) **Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.**
- (i) **Candidates should answer the questions in English.**

SECTION	For examiners, use only		
	Question	Maximum	Candidates score
A	1-17	30	
B	18-22	20	
c		20	
		20	
TOTAL		90	

*This paper consists of 9 printed pages  
Candidates should check carefully to ascertain that all the  
pages are printed as indicated and no questions are missing*

**SECTION A (30MARKS)**

**Answer all the questions in this section.**

- 1.** Give any two farming methods. (1 mark)

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- 2.** List any three ecological factors which affect crop production in Kenya. **(1mark)**

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- 3.** State the difference between soil structure and soil texture. (1 mark)

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- 4.** Explain the difference between liquid capital and working capital in an agricultural production. (1 mark)

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- 5.** Give four factors influencing crop rotation (2marks)

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- 6.** State four types of crop field pests that commonly affect crops. (2marks)

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- 7.** State three deficiency symptoms of Sulphur in crop production. (1 ½ mark)

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- 8.** State the difference between Gross National production (GNP) and Gross Domestic Production(GDP). (2marks)

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**9.** Mention any three types of farm records that a farmer should keep (1 ½ mark)

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**10.** Give three advantages of rotational grazing. (1 ½ mark)

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**11.** Give two factors that determine the quality of hay. (1 mark)

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**12.** Give the beneficial effects of weeds. (1 ½ mark)

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**13.** State four characteristics of a fertile soil. (2marks)

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**14.** State five ways of preparing planting materials before planting. (2 ½ mark)

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**15.** Give six factors that influence the rate of soil erosion. (3marks)

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**16.** (a) Give the steps followed in the development of a gully. (2marks)

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(b) State the two types of gulley erosion

(1 mark)

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17. Name any four physiological diseases of a tomato crop.

(2marks)

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**SECTION B (20MARKS)**

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

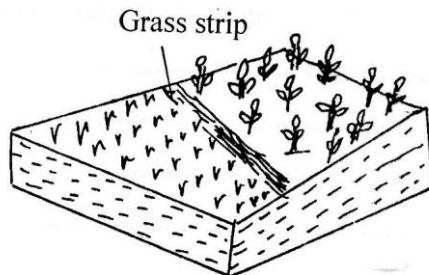
18. The diagram below illustrates materials and a method of vegetative propagation. Study it and answer the questions that follow.



(a) Identify the method of propagation illustrated above. (1 mark)

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(b) Give two advantages associated with then method named above. (2marks)

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19. Study the diagram below which illustrates a method of soil conservation and answer the the questions that follow.



(b) Under which condition should the farmers would apply these method?

(1mark)

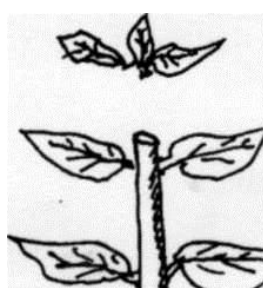
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(c) State the role played by the grass strip in the diagram above. (1mark)

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20. A farmer was advised to apply 150kg CAN/ha while top dressing the maize crop. CAN contains 2%N.  
Calculate the amount of nitrogen applied/ha (1mark)

21. The diagram below illustrates a method of pruning.



(a) Identify the method of pruning shown above (1mark)

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(b) Give any two advantages of pruning in crops. (2marks)

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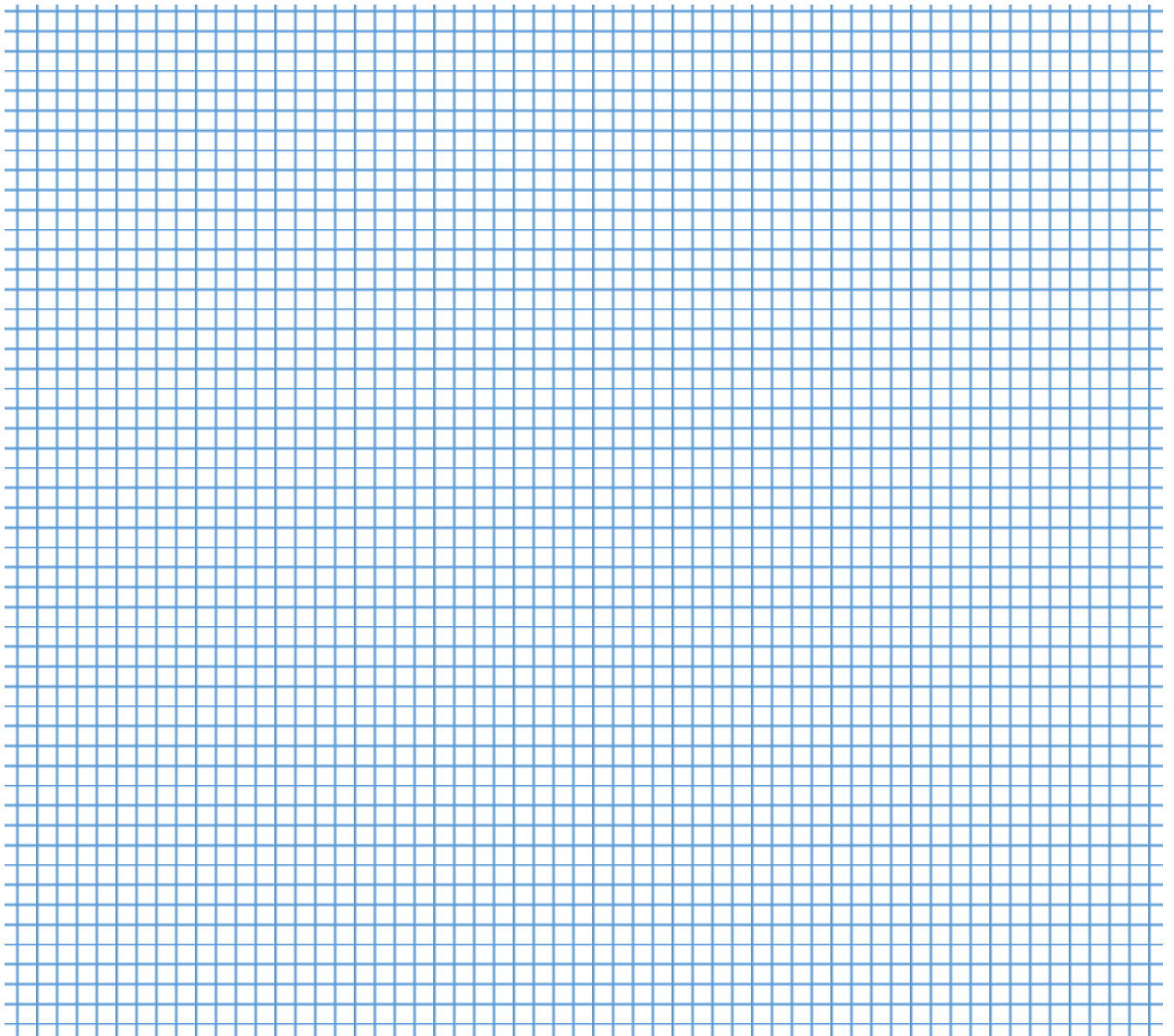
22. The table below shows the production of maize at various levels of N.P.K fertilizer application. Study it carefully and answer the questions that follow.

(a) Identify the methods of soil conservation illustrated above.

Fixed factor of land (1 ha)	Variable input (NPK in kg)	Total product (maize in 90kg bags)	Marginal product (maize in 90kg bags)	Average product (maize in 90kg bags)
1	50	10	0	10
1	100	27	—	—
1	150	42	15	14
1	200	56	—	14
1	250	63	7	12.6
1	300	65	—	—
1	350	65	—	9.3
1	400	60	-5	7.5
1	450	52	—	—
1	500	42	-10	4.2

a) Complete the table above (4 Marks)

b) Using the graph paper provided; draw a graph of total product, marginal product and average product against variable input on the same axis and mark the zones of production. (6marks)



**SECTION C (40MARKS)**

**Answer any two questions in this section in the spaces provided**

- 23.** Describe the production of tomatoes under the following sub headings,  
(a) Nursery establishment and management (10marks)  
(b) Field establishment and management. (10marks)
- 24.** (a) State the advantages of farm yard manure over straight fertilizer. (6marks)  
(b) Explain the factors that determine the spacing of crops when planting (10 marks)  
(c) Discuss the advantages of mulching. (4marks)
- 25.** (a) Explain any eight function of an agricultural market. (16marks)  
(b) Explain four ways by which farmers adjust to uncertainties in an agricultural production, (4 Marks)

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