
**KENYA NATIONAL EXAMINATION COUNCIL
REVISION MOCK EXAMS 2016
TOP NATIONAL SCHOOLS**

MANG’U HIGH SCHOOL

443/1

AGRICULTURE

PAPER 1

TIME: 2 HOURS

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MANG’U HIGH SCHOOL KCSE TRIAL AND PRACTICE EXAM 2016

INSTRUCTIONS TO CANDIDATES:

- Write your **name** and **index number** in the spaces provided.
- This paper consists of three section **A,B** and **C**
- Answer **all** the questions in section **A** and **B**
- Answer any **two** questions in section **C**.
- Answers should be written in the spaces provided in this booklet.

For Examiner’s Use Only:

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE’S SCORE
	1-2		
	3-7		
	TOTAL		

This paper consists of 7 printed pages. Candidates should check to ascertain that all papers are printed as indicated and that no questions are missing

SECTION A (30MARKS)

Answer all questions in this section in the spaces provided.

1. Give the advantages of keeping beef cattle in ranches as approved to nomadic pastoralism. (2mks)
2. State **four** characteristics of shifting cultivation. (2mks)

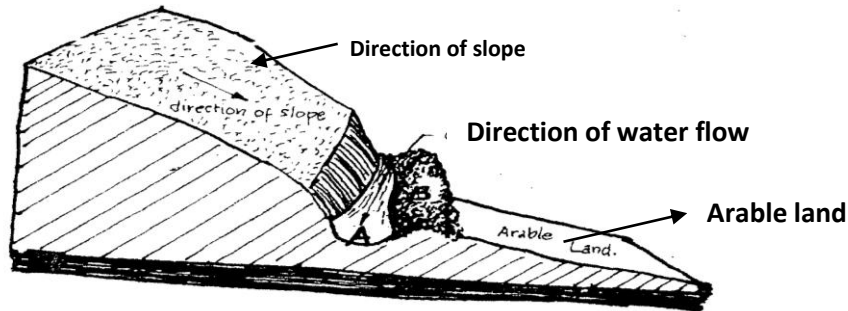
3. List **four** types of records that may be kept in tomato production. (2mks)
4. Give the importance of agricultural economies. (1mk)
5. State any **four** effects of rainfall on agriculture. (2mks)
6. a) Give **three** reasons why it is difficult to control Sodom apple weed in a crop field. (1½mks)
b) State the advantages of mechanical weed control through tillage. (1½mks)
7. Give the reasons for practicing minimum tillage in seedbed preparation. 2mks)
8. Differentiate between a seedbed and a seedling bed as used in crop production. (1mk)
9. Give reason why rolling is carried out in crop production. (1mk)
10. State **four** reasons why drainage of land is necessary in crop production.(2mks)
11. Give the functions of each of the following in the preparation of compost manure.
i) Wood ash (½ mk)
ii) Topsoil (½ mk)
iii) The stick driven into the compost head. (½ mk)
iv) Well rotten manure (½ mk)
12. Why are leguminous plants preferred for green manure? (1mk)
13. Suppose the farmer has to apply **30kg P₂O₅** per hectare and has the following at his disposal 21:15:60
i) What do the numbers **21** and **60** stand for? (2mks)
ii) Calculate the amount of **P₂O₅** he will require for 2hectares (2mks)
14. State **four** things that would happen to the element nitrogen when ammonium sulphate
15. The table below shows crops and the vegetative propagation materials. Complete the table with the correct crop or vegetative materials. (3mks)

crop	vegetative propagation material
tomato	
potato	
orange	
sugarcane	
	stem tuber
	cuttings
	root tubers

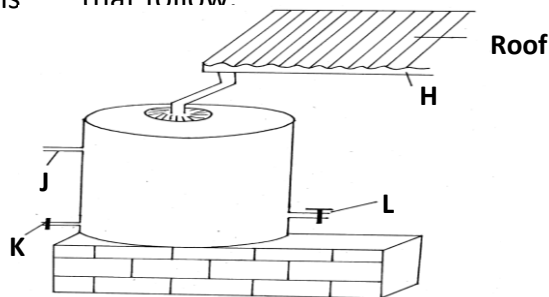
16. Give a reason why the width of a vegetable nursery would be 1meter. (1mk)
b) State the factors considered in siting a nursery. (2mks)
17. Define the term tipping as used in the production in the field. (1mk)
18. Name **two** types of pruning in coffee. (1mk)
19. What is the effect of removing the terminal bud in tomatoes? (1mk)
20. Give a reason for hardening off vegetable seedlings 2-3 weeks before transplanting. (1mk)
21. Describe the factors that affect the ensiling process. (3mks)
22. State **four** advantages of rotational grazing as a grazing system. (2mks)

SECTION B (20MARKS)**Answer all questions in this section**

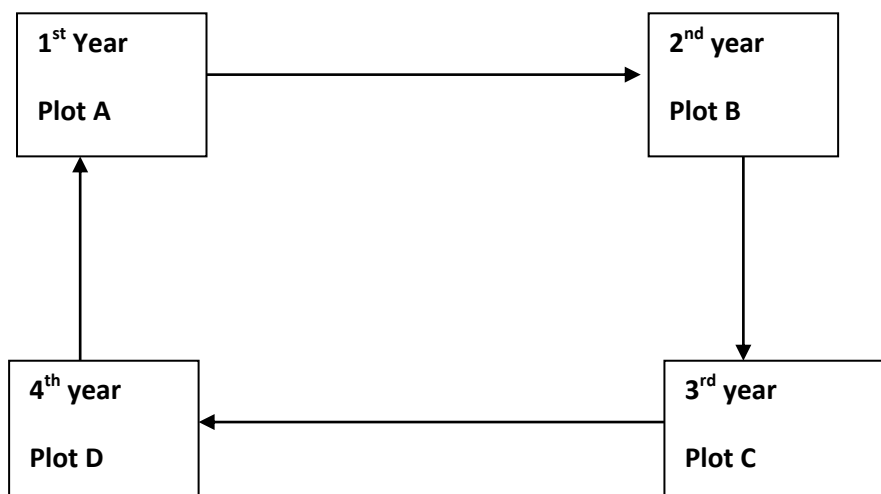
23. The illustration below shows a newly constructed cut-off drain. Study it and answer the questions that follow.



- a) i) How can part of the structure labeled **B** be established after it has been constructed? (½mk)
 ii) Identify the part of the cut-off drain labeled **A**. (½mk)
 b) Describe the procedure of constructing a cut-off drain. (2mks)
24. The diagram below shows a house water storage tank. Study it and answer the questions that follow.



- a) Identify the parts of the tank labeled
 b) Give the function of the part labeled **J** (1mk)
25. The illustration below shows a four year crop rotation programme. Study it and answer the questions that follow.



- a) Explain why it is appropriate to plant peas in year 2 after maize. (4mks)

- b) Why would Rhodes grass be included in the rotation at year **four**? (1mk)
 26. Diagrams **G** and **H** show weeds. (1mk)



- a) Identify the weeds
 i) Describe the economic importance of the weed shown in **G**. (3mks)
 ii) Classify the weed labeled **H** according to growth cycle. (1mk)
27. A farmer has a piece of land on which he grows maize. His farm record on maize production for nine years is shown below.

YEAR	FERTILIZER APPLIED 50KG BAGS	TOTAL OUTPUT OF MAIZE (90KG BAGS)
2003	0	4
2004	2	10
2005	4	28
2006	6	42
2007	8	52
2008	10	60
2009	12	66
2010	14	66
2011	16	

- a) Calculate the farmer's marginal product for the year **2005**. (1mk)
 b) i) From the data given, what rate of fertilizer application would the farmer choose if he wanted to grow maize in **2012**? (1mk)
 ii) Give an explanation for your choice in b (i) above. (1mk)
 c) Calculate the average product for the year **2007**. (1mk)

SECTION C (40MARKS)

Answer any TWO question from the section in the spaces provided after question 30.

28. a) Explain **five** human factors influencing agriculture. (10mks)
 b) Describe the methods used to prepare planting materials before they are planted. (4mks)
 c) Describe the use of any three materials used in building/grafting (6mks)
29. a) Describe the importance of vegetable crop. (6mks)
 b) Explain the cultural methods of pest control. (7mks)
 c) Describe the physical methods of erosion control. (7mks)
30. a) (i)Describe water control in a rice field. (7mks)
 (ii) Explain the precautions that should be observed during the harvesting of coffee. (2mks)
 c) Describe the vegetation effects of land fragmentation (5mks)
 d) Explain the basic concepts of economies. (6mks)