AGRICULTURE
PAPER 1
JULY / AUGUST 2013
TIME: 2 HOURS

NANDI NORTH DISTRICT JOINT MOCK 2013

Kenya Certificate of Secondary Education (K.C.S.E.)
AGRICULTURE
PAPER 1
TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES:

(a) Write your name and Index number in the spaces provided above.
(b) Sign and write the date of examination in the spaces provided above.
(c) This paper consists of THREE sections A, B and C.
(d) Answer ALL questions in Section A and B.
(e) Answer any TWO questions in section C.
(f) Answers should be written in the spaces provided.
(g) This paper consists of 10 printed pages.
(h) Candidates should check the question paper to ascertain that all the pages are printed as indicated and no questions are missing.

FOR EXAMINER’S USE ONLY

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Total Score 90
SECTION A (30 MARKS)

Answer ALL Questions in the Spaces Provided

1. State two ways in which human health affects agricultural production. (1mk)

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2. Name an APPROPRIATE vegetative material in propagating the following crops:
   (i) Cassava: .................................................................................................................. (½ mk)
   (ii) Irish Potatoes: ........................................................................................................ (½ mk)
   (iii) Sweet potatoes: .................................................................................................. (½ mk)

3. List down four important features of a cash sale receipt. (2mks)

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4. State three advantages of using tissue culture in crop propagation. (1½mks)

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5. Outline three ways in which wind positively affects agricultural production. (1½mks)

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6. Name three agro-forestry practices carried out in the farms. (1½mks)

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7. State three precautions taken when harvesting pyrethrum. (1½mks)

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8. Mention four characteristics of nitrogenous fertilizers. (2mks)

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9. What is a ratoon crop? (1mk)

10. List three sources of capital to a farmer who intends to start farming. (1½mks)

11. List any three ways to be employed in solving the problem of perishability in horticultural crops. (1½mks)

12. Distinguish between the following terms:
(i) Soil texture and soil structure
(ii) Seed dressing and seed inoculation.

13. State two effects of good soil aeration in crop growth. (1mk)

14. (a) Explain why it is important to have regular root pruning in crop production. (1mk)

(b) Give three reasons for raising tea in polythene sleeves. (1½mks)

15. Give one term used to explain a market condition where there is:
(i) Sole seller:
(ii) Sole buyer:

16. Mention three factors that determine the carrying capacity of a pasture. (1½mks)
17. Outline three possible causes of chlorosis in crop production. (1½mk)

18. State four land reform programmes undertaken in Kenya. (2mks)

19. List any four financial documents used in agricultural economics. (2mks)

SECTION B (20 MARKS)

Answer all questions in the spaces provided in this section

20. The diagrams below illustrate both field and storage pests.

(a) Identify the pests in the illustration: (1½mks)

L: .................................................................

M: .................................................................

N: .................................................................

(b) State ways in which pests L and M cause damage to crops. (1mk)

L: ........................................................................
M: .................................................................................................................

(c) State **three** control measures for the pest N. (1½mks)

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(d) Outline **two** damages caused by nematodes on crops. (1mk)

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21. The diagrams below show some of the field practices carried out in the farm in order to obtain optimum yield.

(a) Identify illustration K₁, K₂ and K₃. (1mk)

K₁: .................................................................................................................

K₂: .................................................................................................................

K₃: .................................................................................................................

(b) Give **three** reasons why the practice K₁ is carried out on Irish potatoes. (1½mks)

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(c) Outline **two** conditions that may necessitate the use of K₃ as a method in fertilizer application.

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(d) Apart from K₂, mention other two methods of training crops. (1mk)

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22. The diagram below shows a method of soil sampling.

(a) Name the above method. (1mk)

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(b) State three precautions taken when collecting the soil for testing using the named method. (1½ mks)

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(c) Give three reasons why soil from the farm is tested. (1½ mks)

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(d) Give the information found in the envelope of a sub-sample being taken to the laboratory for testing. (1½ mks)

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23. The illustrations labelled S and T below show some structural methods used in soil and water conservation.

(i) Identify the structures S and T.  
   S: …………………………………………………………………………………………………...
   T: …………………………………………………………………………………………………...

(ii) State the function of the embankment in diagram S.  
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(iii) State two ways in which structure T helps to control soil erosion.  
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(iv) State four methods of harvesting water on the farms.  
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SECTION C
Answer any two questions in the spaces provided

24. (a) Outline five qualities of a good farm manager. 
(5mks)
(b) Explain three importance of budgeting. 
(3mks)
(c) Study the following information which was extracted from Mr. Kolum’s farm
records on 31/12/2012 and answer the questions below:

Kshs.
Loans payable to Bank 300,000
Five milking cows 250,000
20 goats 30,000
400 Layers 80,000
Debts payable to co-op society 20,000
Building and structures 600,000
Bonus payable to workers 19,000
Cattle feed in store 10,000
Debt receivable 18,000
Animal drugs in store 4,000
Breakages to repair 30,000
Cash at hand 20,000
Cash in bank 30,000
Spray equipment 20,000

(i) Prepare a balance sheet for Mr. Kolum’s farm using the information above. 
(9mks)
(ii) Was Mr. Kolum’s business solvent or insolvent? 
(1mk)
(iii) Apart from a balance sheet, name two other financial statements which can be
used in a farm business. 
(2mks)

25. (a) Explain the production of onions (Allium Cepa) under the following sub-headings:-

(i) Ecological requirements. 
(2mks)
(ii) Planting 
(2mks)
(iii) Field practices 
(2mks)
(iv) Pest and disease control

(v) Harvesting

(b) Describe the practices that a farmer should carry out to ensure uniform germination of seeds. (7mks)

(c) Name three methods used when pruning crops in the farm. (3mks)

26. (a) What is soil erosion? (2mks)

(b) Explain how the biological and cultural methods have been used to minimize soil erosion. (18mks)