443/1
AGRICULTURE
PAPER 1
JULY / AUGUST 2013
TIME: 2 HOURS

NANDI CENTRAL 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

<table>
<thead>
<tr>
<th>SECTION</th>
<th>QUESTIONS</th>
<th>MAX. SCORE</th>
<th>CANDIDATE SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1 – 18</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>19 – 21</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td>20</td>
<td></td>
</tr>
<tr>
<td><strong>Total Score</strong></td>
<td></td>
<td><strong>90</strong></td>
<td></td>
</tr>
</tbody>
</table>
SECTION A (30 MARKS)

Answer ALL Questions in the Spaces Provided

1. State **two** ways by which wind affects the growth of crops. (1mk)
   ........................................................................................................................................

2. Name **three** types of capital used in Agriculture. (1½mks)
   ........................................................................................................................................
   ........................................................................................................................................
   ........................................................................................................................................

3. List **four** reasons for primary cultivation. (2mks)
   ........................................................................................................................................
   ........................................................................................................................................
   ........................................................................................................................................
   ........................................................................................................................................

4. Give **four** properties of soil that are influenced by its texture. (2mks)
   ........................................................................................................................................
   ........................................................................................................................................
   ........................................................................................................................................
   ........................................................................................................................................

5. State **two** reasons for drying grains before storage. (1mk)
   ........................................................................................................................................

6. List **four** methods of treating water for domestic use. (2mks)
   ........................................................................................................................................
   ........................................................................................................................................
   ........................................................................................................................................
   ........................................................................................................................................
7. State **four** ways by which plant nutrient may be lost from the soil. (2mks)

8. State **four** functions of nitrogen in crops. (2mks)

9. State **three** ways in which organic mulch helps to conserve water in the soil. (1½mks)

10. Give **four** advantages of proper stocking rate in pasture management. (2mks)

11. Name **three** methods of conserving forage. (1½mks)

12. State **four** factors that determine the spacing of an annual crop. (2mks)
13. List **four** types of records that a crop farmer keeps. (2mks)

14. Differentiate between variable inputs and fixed inputs. (1mk)

15. List **four** types of agencies and institutions involved in marketing of maize. (2mks)

16. Give the minimum number of people required to form a cooperative society. (½mk)

17. State **four** ways of improving productivity of labour. (2mks)

18. Name **five** disadvantages of planting seeds using broadcasting method. (2½mks)
SECTION B (20 MARKS)

Answer all questions in the spaces provided in this section

19. (a) Below is a diagram of a nursery for raising tomato seedlings.

(i) Name the part labeled J. (1mk)

(ii) State two advantages of part labeled J. (2mks)

(iii) Give three management practices that should be carried on the nursery from the time seedlings emerge to the stage of transplanting. (3mks)

(iv) At what stage of growth should tomato seedling be transplanted? (1mk)

(b) Study the crop illustrated in the diagram below and answer the questions that follow.
(i) Name two insect pests which attack the part labeled C1, and one disease that attacks part labeled C2. (3mks)

C1: ................................................................................................................................................

C2: ................................................................................................................................................

(ii) Give one reason why it is advisable to apply a straight nitrogenous fertilizer to the above crop at height of 30 – 45cm. (1mk)

................................................................................................................................................

(c) A member of Form 2 class was advised to apply a complete fertilizer 30:20:10 in tomato crop. State the percentage of K$_2$O in the complete fertilizer. (1mk)

................................................................................................................................................

20. The diagram below shows a method of crop propagation.

(a) Identify the propagation method illustrated above. (1mk)

................................................................................................................................................

(b) List three ways of initiating faster root development in the propagation method illustrated above. (2mks)

................................................................................................................................................

................................................................................................................................................

................................................................................................................................................

21. The diagram below illustrates the law of supply in agricultural marketing. Study it and answer the questions that follow.

A

B

Price of Maize

Quantity of maize supplied.
(a) Give a reason for the shape of the curve labeled A.

(b) If the price of the maize remains constant, explain three factors that can cause the curve to shift to B from A. (3mks)

SECTION C

Answer any two questions in the spaces provided

22. (a) Explain five ways by which farmers minimize grain loses in stores. (10mks)
(b) Describe field production of Napier grass under:
   (i) Planting (5mks)
   (ii) Weed control (5mks)

23. (a) Explain six cultural methods to control crop diseases. (12mks)
(b) Describe four effects of land fragmentation and sub-division. (8mks)

24. (a) Explain seven advantages of budgeting. (7mks)
(b) State and explain six factors that should be considered when designing a Crop rotation programme. (10mks)
(c) Explain the disadvantages of sub-surface irrigation. (3mks)