THE KENYA NATIONAL EXAMINATIONS COUNCIL

Kenya Certificate of Secondary Education

AGRICULTURE

Paper 1

2 hours

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 16 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.

For Examiner's Use Only

<table>
<thead>
<tr>
<th>Section</th>
<th>Question</th>
<th>Maximum Score</th>
<th>Candidate's Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1 – 17</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>18 – 21</td>
<td>20</td>
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<tr>
<td>C</td>
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<td>Total Score</td>
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SECTION A (30 marks)

Answer all the questions in the spaces provided.

1. State four reasons for applying phosphatic fertilizers during planting. (2 marks)

2. Give four ways in which crop pests are classified. (2 marks)

3. State four advantages of landlordism and tenancy. (2 marks)

4. Differentiate between apiculture and aquaculture. (1 mark)
5. State four factors that affect the quality of farm-yard manure. (2 marks)

6. Give four reasons why seed propagation is encouraged in crop production. (2 marks)

7. State four factors that can make a farmer choose a jembe for primary tillage. (2 marks)

8. Give four factors that affect the quality of hay. (2 marks)

9. Name five entries that can be made on a cattle breeding record. (2½ marks)
10 Give **two** reasons for testing soil. (1 mark)

11 Name **three** forms of horticulture practised in Kenya. (1½ marks)

12 Give **two** reasons for constructing a shade over a nursery. (1 mark)

13 Name **four** appropriate sites for agroforestry trees. (2 marks)

14 State **four** personal safety measures a farmer should consider when handling herbicides. (2 marks)
15 Give two reasons why a maize plant growing in a cabbage crop field may be treated as a weed. (1 mark)

16 Name four classes of weeds. (2 marks)

17 State four agricultural activities that may pollute water. (2 marks)
SECTION B (20 marks)

Answer all the questions in the spaces provided.

18 A farmer applied a compound fertilizer 10:20:0 on a three hectares piece of land at a rate of 180kg N per hectare.

(a) Calculate the quantity of the compound fertilizer the farmer applied on the piece of land. (3 marks)

(b) What do the figures 10 and 20 stand for in the compound fertilizer? (2 marks)

19 The diagram below illustrates a nursery practice.

(a) Identify the practice. (1 mark)
(b) Describe the procedure followed in carrying out the practice illustrated. (2 marks)

(c) State two advantages of the practice illustrated above in crop production. (2 marks)

20 The diagram below shows crop establishment using a certain method of planting.

(a) Name the method of planting used for the crop. (1 mark)

(b) State two advantages of the planting method used for the crop. (2 marks)

(c) Explain two factors that determine the depth of planting. (2 marks)
21 Below is a diagram showing a crop disease.

(a) Identify the crop disease. (1 mark)

(b) State three control measures for the crop disease. (3 marks)

(c) Name the category in which the crop disease is classified. (1 mark)
SECTION C (40 marks)

Answer any two questions from this section in the spaces provided after question 24.

22 (a) Explain how each of the properties of rainfall and light influence crop production. (8 marks)
(i) rainfall; (4 marks)
(ii) light.

(b) Describe rice production under the following sub-headings: (2 marks)
(i) land preparation;
(ii) water control;
(iii) fertilizer application;
(iv) weed control.

23 (a) Explain five factors that can increase the demand for tea on a market. (10 marks)

(b) State four ways of improving labour productivity on the farm. (4 marks)

(c) The following information was obtained from Upendo Farm inventory on 1st January 2013.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>VALUE (Ksh)</th>
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<tbody>
<tr>
<td>Layers</td>
<td>80,000</td>
</tr>
<tr>
<td>Beef cattle</td>
<td>240,000</td>
</tr>
<tr>
<td>Beans in store</td>
<td>40,000</td>
</tr>
<tr>
<td>Cash at hand</td>
<td>15,000</td>
</tr>
<tr>
<td>Land</td>
<td>550,000</td>
</tr>
<tr>
<td>Machinery</td>
<td>250,000</td>
</tr>
<tr>
<td>Buildings</td>
<td>310,000</td>
</tr>
<tr>
<td>Calves</td>
<td>75,000</td>
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On the same day the farm recorded the following:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>VALUE (Ksh)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wages payable</td>
<td>5,000</td>
</tr>
<tr>
<td>Interest payable</td>
<td>8,000</td>
</tr>
<tr>
<td>Bank loan</td>
<td>725,000</td>
</tr>
<tr>
<td>Milk sales on credit</td>
<td>12,000</td>
</tr>
<tr>
<td>Chicken sales on credit</td>
<td>6,000</td>
</tr>
<tr>
<td>Cash in bank</td>
<td>52,000</td>
</tr>
<tr>
<td>Purchase of fertilizer on credit</td>
<td>26,000</td>
</tr>
<tr>
<td>Taxes payable</td>
<td>3,000</td>
</tr>
</tbody>
</table>

Using the information provided prepare a balance sheet for Upendo Farm. (6 marks)
24 (a) Describe the field management practices for tomatoes. (12 marks)

(b) Describe four types of soil erosion by water. (8 marks)