INSTRUCTIONS TO CANDIDATES

1. Write your name and index number in the spaces provided above
2. Sign and write the date of examination in the spaces provided above.
3. This paper consists of three sections: A, B and C
4. Answer all the questions in section A and B and any two questions from section C
5. Do not remove any pages from this booklet

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 – 18</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>19 – 23</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Score</td>
<td></td>
<td>90</td>
<td></td>
</tr>
</tbody>
</table>
SECTION A (30 MARKS)
Answer all the questions in this section in the spaces provided.

1. State two ways in which agriculture contributes directly to the development of industries. (1mk)

2. List three biotic factors influencing agriculture negatively (1 ½ mks)

3. State two ways in which land consolidation improves farm management. (1mk)

4. State four factors which determine the depth of ploughing (2mks)

5. Differentiate between mixed cropping and intercropping (2mks)

6. State two advantages of carrying out chitting in the preparation of Irish potatoes for planting. (1mk)

7. Give four reasons why staking is carried out in tomatoes. (2mks)
8. List four examples of variable inputs in maize production. (2mks)

9. Give three reasons for grafting old trees in agroforestry tree management (1 ½ mks)

10. Give two functions of the Agricultural Finance corporation (AFC) (2mks)

11. State two common symptoms of viral infection in crop (1mk)

12. State four qualities of a mother plant that should be considered when selecting Vegetative materials for planting. (2mks)

13. Name four factors that may affect the selectivity and effectiveness of herbicides. (2mks)
14. Give **two** means by which water can be conveyed from the place of storage to where it is needed on the farm. (1mk)

15. List **four** pieces of information likely to be found in a field operation record. (2mks)

16. Give **four** natural factors that encourage soil erosion. (2mks)

17. Give **four** qualities of good silage. (2mks)

18. A farmer was advised to apply 200kg of CAN/ha, while top dressing bean crop. CAN contains 21% N. Calculate the amount of CAN applied per hectare. (2mks)
SECTION B (20 MARKS)

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

19. Below are diagrams of common weeds on the farm. Use them to answer the questions that follow.
a) Identify the weeds A, B, C and D (2mks)
A…………………………………………………………………………
B…………………………………………………………………………
C…………………………………………………………………………
D…………………………………………………………………………

b) Give one negative effect of weed labeled B in livestock. (1mk)
...........................................................................................................
...........................................................................................................

b) Suggest the most appropriate method of controlling weed labeled D (1mk)
...........................................................................................................

20. The diagram below illustrates a method of collecting soil samples from a field

a) Identify the method illustrated above. (1mk)
...........................................................................................................
b) Describe four steps that should be followed when collecting soil samples.  
   i) ..............................................................................................................
   ii) ..............................................................................................................
   iii) ..............................................................................................................
   iv) ..............................................................................................................

   (2mks)

c) State two precautions a farmer should take when collecting a representative soil sample from the field for testing.  

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

   (1mk)

21. The diagrams below illustrate some methods of draining water fields.

   Diagram 1

   ![Diagram 1]

   Diagram 2

   ![Diagram 2]
a) Identify the methods illustrated in the diagrams 1 and 2 above. (1mk)
1………………………………………………………………
2………………………………………………………………
b) Name the materials used in diagram 1 labeled X and Y (1mk)
X…………………………………………………………………………
Y…………………………………………………………………………
c) State two sources of water pollution in the farm. (2mks)
…………………………………………………………………………………………
…………………………………………………………………………………………
…………………………………………………………………………………………

22. The document shown below is a sample of a delivery note. Study it carefully and answer the questions that follow:

DELIVERY NOTE
NO.1236
Date…………………………
FROM……………………………………………………………………...
TO…………………………………………………………………………….
Please receive the following goods

<table>
<thead>
<tr>
<th>Item</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Chick mash</td>
<td>20 bags</td>
<td></td>
</tr>
<tr>
<td>2. Dairy Meal</td>
<td>10 bags</td>
<td></td>
</tr>
<tr>
<td>3. CAN fertilizer</td>
<td>4 bags (50kg)</td>
<td></td>
</tr>
</tbody>
</table>

Received the above goods in good condition and order.

Delivered by………………………………………………………………………
Received by………………………………………………………………………

a) Name the column labeled A and B (1mk)
   A……………………………………………………………………
   B……………………………………………………………………

b) What is the purpose of this document in business transaction? (1mk)
   …………………………………………………………………………………………………………………
   …………………………………………………………………………………………………………………
   …………………………………………………………………………………………………………………
   …………………………………………………………………………………………………………………

c) Outline **four** details that the document should contain for it to be complete. (2mks)
   …………………………………………………………………………………………………………………
   …………………………………………………………………………………………………………………
   …………………………………………………………………………………………………………………
   …………………………………………………………………………………………………………………

23. Study the illustration in the diagram below and answer questions that follow.
a) Identify the practice being illustrated above. (1mk)

b) State three activities that should be carried out for successful results in the practice shown above. (3mks)

SECTION C (40 MARKS)

Answer any two questions from this section in the spaces provided after question 26.

24. a) Explain five reasons for pruning (10mks)
    b) Outline five cultural methods of soil and water conservation. (5mks)
    c) State five ways in which a farmer can adjust to risks and uncertainties. (5mks)

25. a) Describe the characteristics of ideal agroforestry tree species (10mks)
    b) Explain five physical methods of pest control (10mks)

26. a) State five roles of organic matter in a sandy soil. (5mks)
    b) Describe maize production under the following sub-headings.
       i) Land preparation (3mks)
       ii) Planting (3mks)
    c) The following information was extracted from Bondo farm’s book records as at 31st December 2012. The farm had borrowed a long term loan of 1 million from the co-operative bank and owed Ksh.10,000 to the co-operative society shop for coffee
sprays and cattle feeds. The farm is owed Ksh.10,000 for milk delivered to New KCC. Salaries amounting to Ksh.9,500 had not been paid. The valuations of the farm were as follows.

<table>
<thead>
<tr>
<th>Item</th>
<th>Ksh.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cattle</td>
<td>125,000</td>
</tr>
<tr>
<td>Goats</td>
<td>19,000</td>
</tr>
<tr>
<td>Poultry</td>
<td>35,000</td>
</tr>
<tr>
<td>Coffee trees</td>
<td>95,000</td>
</tr>
<tr>
<td>Equipment</td>
<td>40,000</td>
</tr>
<tr>
<td>Farm buildings</td>
<td>145,000</td>
</tr>
<tr>
<td>Stored cattle feed</td>
<td>4,000</td>
</tr>
<tr>
<td>Stored cattle spray</td>
<td>21,000</td>
</tr>
<tr>
<td>Money in cash box</td>
<td>2,000</td>
</tr>
<tr>
<td>Land valued at</td>
<td>600,000</td>
</tr>
</tbody>
</table>

i) Prepare a balance sheet for Bondo farm as at 31st December, 2012  
ii) Show whether Bondo farm was solvent or insolvent  
iii) Explain your answer in (ii) above.
INSTRUCTIONS TO CANDIDATES

1. Write your name and index number in the spaces provided above.
2. Sign and write the date of examination in the spaces provided above.
3. This paper consists of three sections: A, B and C.
4. Answer all the questions in section A and B and any two questions from section C.
5. Answers should be written in the spaces provided.

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 – 19</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>20 – 23</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td></td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>90</td>
<td></td>
</tr>
</tbody>
</table>
This paper consists of 12 printed pages. Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing.

SECTION A (30 MARKS)
Answer ALL the questions in this section in the spaces provided.

1. Apart from medicants give two other forms of feed additives. (1mk)

2. State four factors that may lead to dipwash being exhausted or weakened while in the diptank. (2mks)

3. Distinguish between dominant and recessive gene in animal breeding (2mks)

4. Give four ways of administering vaccine in livestock. (2mks)

5. State two reasons for curing timber for construction purposes. (2mks)

6. Give four reasons for crossbreeding in beef production (2mks)
7. List **four** tools/equipments used in harvesting honey (2mks)

8. Why is drenching alone NOT an effective method of controlling internal parasites in Livestock? (1mk)

9. List **Two** roles of polyvinyl chloride (PVC) sheet in the construction of foundation (1mk)

10. Give any **three** signs of broodiness in poultry (1 ½ mks)

11. State **two** reasons for feeding a lamb on colostrums (1mk)

12. Give a reason for starving poultry for 12 hours before slaughter. (1mk)

13. List **four** routes through which pathogens can enter the body of an animal. (2mks)
14. Why are droppers used in fencing work? (1mk)

15. State **four** factors considered when siting a farm structure (2mks)

16. State **four** factors that affect the digestibility in livestock nutrition (5mks)

17. List **four** advantages of rearing chicken in a battery cage (2mks)

18. State **four** precautionary measures a farmer should undertake when spraying a wash made from an acaricide. (2mks)

19. Name any **one** tickborne disease affecting livestock. (½ mk)
The diagram A above shows a livestock parasite.

i) Identify the parasite (½ mk)

ii) Name two species of livestock the parasite infests (1mk)

iii) How is the parasite passed from livestock to human beings? (1mk)

iv) Give two forms in which the parasite is found in livestock (1mk)
v) State **two** methods by which this parasite can be controlled.  

21. a) If the maize meal contains 6% Digestible Crude Protein (DCP) and Fish contains 64% DCP, calculate the amount of each feed stuff in kilogrammes, required to prepare 200kg of chickmash containing 18% DCP  

b) Name **two** other feed ingredients which should be added to the chickmash to make it a balanced feed.  

22. a) Below is an illustration of an activity carried out by a poultry farmer keeping layers
i) Identify the activity carried out using the set up. (½ mk)

ii) State four faults in the eggs that can be detected by using this set up. (2mks)

b) How can a farmer improve the following.
   i) hardness of egg shells (1mk)
   ii) yellowness of the egg yolk? (1mk)

23. The diagram below illustrates the general shape of a cattle breed. Study it carefully and answer the questions that follow.

   a) Identify the type of breed illustrated by the above shape (½ mk)
b) Give example of a breed in (a) above (½ mk)

c) State four physical characteristics of the type of breed identified in (a) above (2 mks)

d) Name any four practices that a farmer can carry out on a crush (2 mks)

SECTION C (40 MARKS)

24. a) Describe ten signs of Trypanosomiasis (Nagana) diseases in livestock (10 mks)

b) State the function of any seven parts of a zero grazing unit in dairy farming (7 mks)

c) Outline three characteristics of clean milk (3 mks)

25. a) Outline the procedure of handling a heifer when administering a liquid deworming drug to control tapeworm (5 mks)

b) Describe the causes of stress in poultry management (10 mks)

c) Describe the uses of fences on the farm (5 mks)

26. a) Describe the use of various hand tools required for the construction of a wooden battery cage. (10 mks)

b) Describe how the ignition of a tractor petrol engine work (10 mks)