

NAME:..... INDEX NO.....
SCHOOL:..... CANDIDATE'S SIGN
DATE

443/1
AGRICULTURE
Paper 1
July/August - 2015
Time: 2 Hours

**BONDO SUB-COUNTY SECONDARY SCHOOLS JOINT
EVALUATION - 2015**
Kenya Certificate of Secondary Education (K.C.S.E)

443/1
AGRICULTURE
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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

Section	Question	Maximum Score	Candidate's Score
A	1 – 18	30	
B	19 – 23	20	
C		20	
		20	
	Total Score	90	

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. State **two** ways in which agriculture contributes directly to the development of industries. (1mk)
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2. List **three** biotic factors influencing agriculture negatively (1 ½ mks)
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3. State **two** ways in which land consolidation improves farm management. (1mk)
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4. State **four** factors which determine the depth of ploughing (2mks)
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5. Differentiate between mixed cropping and intercropping (2mks)
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6. State **two** advantages of carrying out chitting in the preparation of irish potatoes for planting. (1mk)
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7. Give **four** reasons why staking is carried out in tomatoes. (2mks)
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8. List **four** examples of variable inputs in maize production. (2mks)

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

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

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

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

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13. Name **four** factors that may affect the selectivity and effectiveness of herbicides. (2mks)

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14. Give **two** means by which water can be conveyed from the place of storage to where it is needed on the farm. (1mk)

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

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

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

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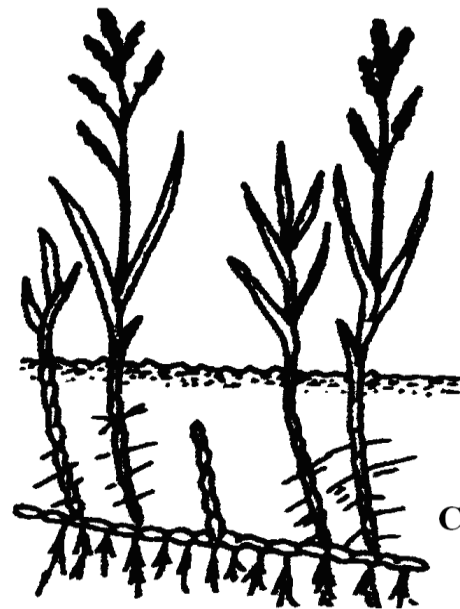
18. A farmer was advised to apply 200kg of CAN/ha, while top dressing bean crop. CAN contains 21% N. Calculate the amount of CAN applied per hectare. (2mks)

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SECTION B (20 MARKS)

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

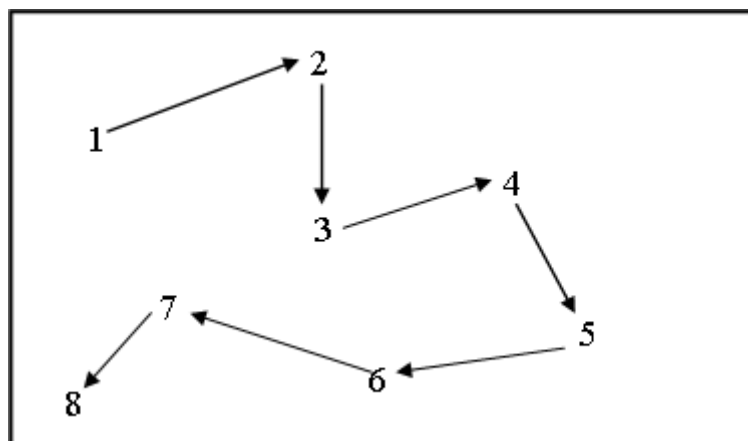
19. Below are diagrams of common weeds on the farm. Use them to answer the questions that follow.





- 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)
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-
- c) 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. (2mks)

- i).....
- ii).....
- iii).....
- iv).....

c) State **two** precautions a farmer should take when collecting a representative soil sample from the field for testing. (1mk)

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

Diagram 1

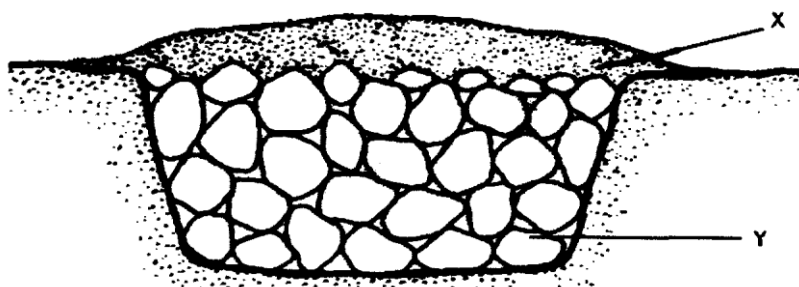
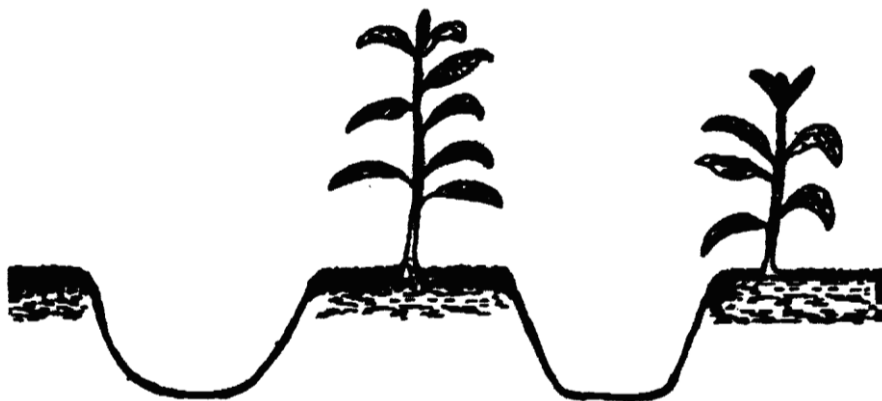


Diagram 2



- 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)
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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

Item	A	B
1.	Chick mash	20 bags
2.	Dairy Meal	10 bags
3.	CAN fertilizer	4 bags (50kg)

Received the above goods in good condition and order.

Delivered by.....
Received by.....

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

A.....

B.....

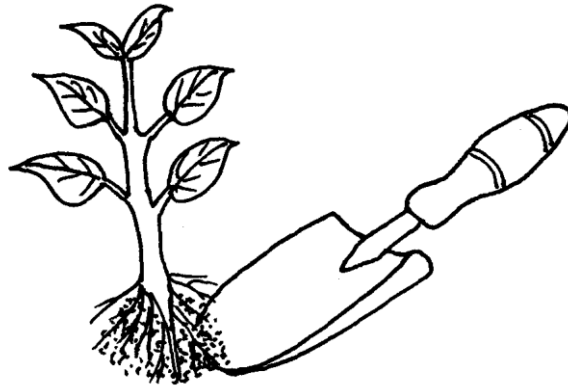
b) What is the purpose of this document in business transaction? (1mk)

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

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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)
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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.

<u>Item</u>	<u>Ksh.</u>
Cattle	125,000
Goats	19,000
Poultry	35,000
Coffee trees	95,000
Equipment	40,000
Farm buildings	145,000
Stored cattle feed	4,000
Stored cattle spray	21000
Money in cash box	2,000
Land valued at	600,000

- i) Prepare a balance sheet for Bondo farm as at 31st December, 2012 (7mks)
- ii) Show whether Bondo farm was solvent or insolvent (1mk)
- iii) Explain your answer in (ii) above. (1mk)

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End

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		20	
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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)
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- 2. State **four** factors that may lead to dipwash being exhausted or weakened while in the diptank. (2mks)
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- 3. Distinguish between dominant and recessive gene in animal breeding (2mks)
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- 4. Give **four** ways of administering vaccine in livestock. (2mks)
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- 5. State **two** reasons for curing timber for construction purposes. (2mks)
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- 6. Give **four** reasons for crossbreeding in beef production (2mks)
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7. List **four** tools/equipments used in harvesting honey (2mks)

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

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

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

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

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

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13. List **four** routes through which pathogens can enter the body of an animal. (2mks)

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14. Why are droppers used in fencing work? (1mk)

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

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

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

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

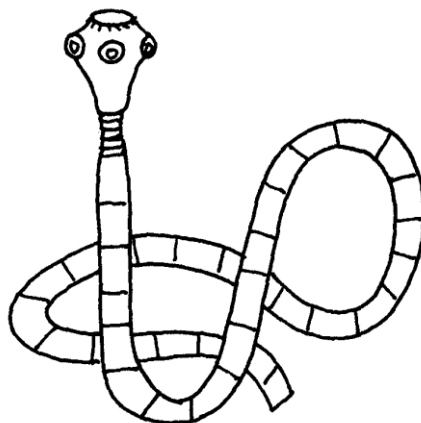
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19. Name any **one** tickborne disease affecting livestock. (½ mk)

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SECTION B (20 MARKS)

20.



A

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)

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.....
v) State **two** methods by which this parasite can be controlled. (2mks)
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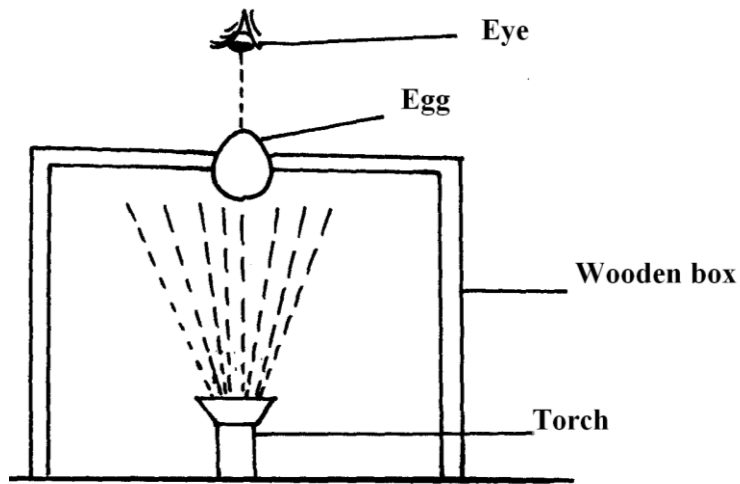
21. a) If the maize meal contains 6% Digestible Crude Protein (DCP) and Fish contains 64% DCP, calculate the amount of each feed stuff in kilogrammes, required to prepare 200kg of chickmash containing 18% DCP (4mks)

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b) Name **two** other feed ingredients which should be added to the chickmash to make it a balanced feed. (1mk)

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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)

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

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b) How can a farmer improve the following.

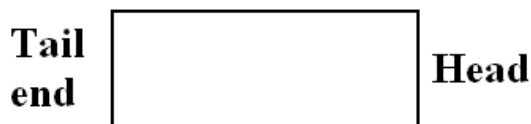
i) hardness of egg shells (1mk)

.....

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 (2mks)

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

SECTION C (40 MARKS)

24. a) Describe **ten** signs of Trypanosomiasis (Nagana) diseases in livestock (10mks)
b) State the function of any seven parts of a zero grazing unit in dairy farming (7mks)
c) Outline **three** characteristics of clean milk (3mks)

25. a) Outline the procedure of handling a heifer when administering a liquid deworming drug to control tapeworm (5mks)
b) Describe the causes of stress in poultry management (10mks)
c) Describe the uses of fences on the farm (5mks)

26. a) Describe the use of various hand tools required for the construction of a wooden battery cage. (10mks)
b) Describe how the ignition of a tractor petrol engine work (10mks)

