

Name: Index no

School: Candidate's sign

Date:

443/1
AGRICULTURE
PAPER 1
MARCH/APRIL 2011
TIME: 2 HOURS

BUTERE EAST ZONE JOINT EXAMINATION

Kenya Certificate of Secondary Education (K.C.S.E.)

Agriculture
Paper 1

INSTRUCTIONS TO CANDIDATES:

- Write **your name** and **Index Number** in the spaces provided.
- This paper consists of three section **A, B** and **C**
- Answer **ALL** the questions in section **A** and **B**
- Answer **any two** questions in section **C**.
- Answers should be written in the spaces provided in this booklet.

For Examiner's Use Only:

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A	1-20	30	
B	21-23	20	
C	24-26	20	
		20	
	TOTAL	90	

This paper consists of 8 printed pages. Candidates should check to ascertain that all papers are printed as indicated and that no questions are missing

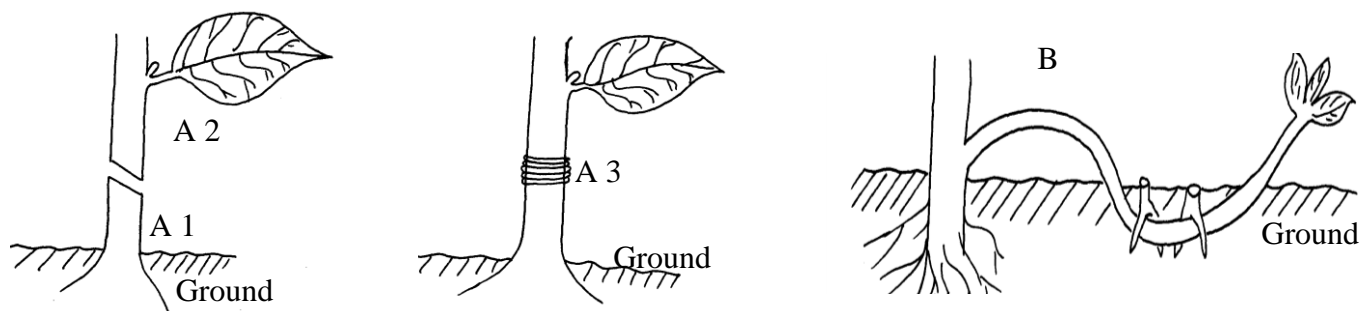
SECTION A (30 MARKS)
Answer ALL the questions in this section.

1. List the main branches of Agriculture. (2mks)
2. What is integrated Pest management. (1mk)
3. State **three** ways by which biological agents can enhance the process of soil formation. (1 ½ mk)
4. State **four** advantages of over head irrigation. (2mks)
5. Why is it not advisable to use nitrogenous fertilizers during planting time. (½ mk)
6. Mention any **four** sites to avoid when carrying out soil sampling. (2mks)
7. State **two** benefits of owning a land title deed. (1mk)
8. Define the following terms as used in crop production
 - i) Seed dressing (½ mk)
 - ii) Seed inoculation..... (½ mk)
 - iii) Chitting..... (½ mk)
9. State **two** advantage of including grass leys in crop rotation programme . (1mk)
10. Define the following as used in pasture management. (1mk)
 - i) Stocking rate..... (½ mk)
 - ii) Carrying capacity..... (½ mk)
11. State **four** ways by which afforestation helps in land reclamation. (2mks)
12. Differentiate between the following terms
 - i) Aquaculture and Apiculture (1 mk)
 - ii) Seed dormancy and seed viability. (1mk)
13. Name **two** chemicals used in water treatment. (1mk)
14. State **four** policies the government should institute to regulate the amount of imported agricultural products entering Kenya. (2mks)
15. Name **two** leguminous pastures. (1mk)
16. List **four** factors that make weeds very competitive to crops. (2mks)
17. Differentiate the following:
 - i) Organic farming (½ mk)
 - ii) Agroforestry (½ mk)
18. Give **two** reasons for conserving forage. (1mk)
19. State **four** causes of land fragmentation. (2mks)

SECTION B (20 MARKS)

Answer ALL the questions in this section.

21. The diagram **A1**, **A2**, **A3** and **B** below illustrates materials and methods of vegetative propagation. Study them and answer questions that follow.



a) Name the parts labeled **A1** and **A2** (2mks)

A1.....

A2.....

b) Name the methods of propagation illustrated in the diagram **A3** and **B** (2mks)

A3.....

B.....

c) Mention **four** characteristics of parts A above (2mks)

22. Study diagram below and answer questions that follow.

Date	Commodity /item	Quantity	Written off	Balance	Comment
7.7.2003	Tractor	1	-	1	New
10.8.2003	Jembe	4	-	4	In good condition
10.8.2003	Panga	4	-	4	In good condition

i) Identify the farm record above. (1mk)

ii) Name **two** types of the named record. (2mks)

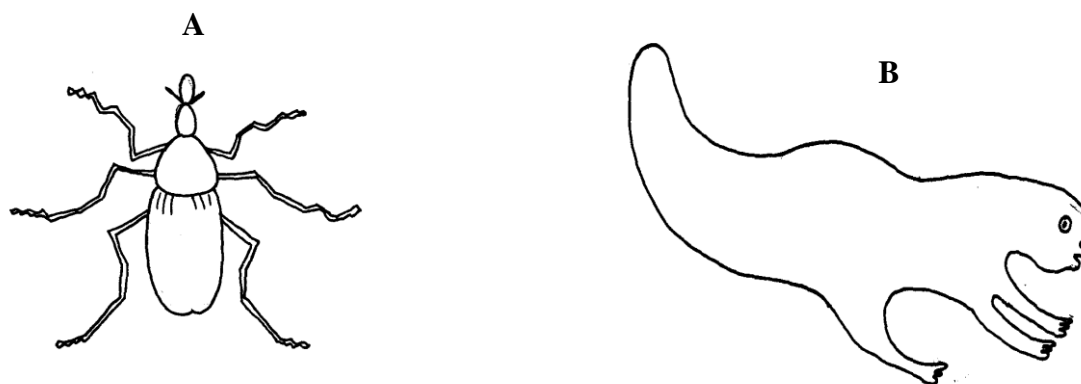
23. A farmer has a plot of 5 hectares on which he intend to plant maize. He was advised to apply 150kg P₂O₅ per hectare and 200 kg N per hectare during top dressing. The fertilizers available are Diamonium phosphate 18-46-0 and calcium Ammonium Nitrate 20 kg N.

a) What do the figure 18-46-0 represent. (1½ mk)

b) Calculate a mount of filler material in the Diamonium phosphate 18 – 46 – 0 (½ mk)

c) Calculate the quantity of each fertilizer required for 5 hectares show your working. (4mks)

24. Two maize pests are shown below. Study them and answer questions that follow.



a) Identify the pests in the diagrams labeled. (1mk)

A

B

b) At what stage of maize production does pests labeled **B** cause damage to crop. (1mk)

c) Give **one** way of controlling Pest labelled **A** (1mk)

SECTION C (40 MARKS)

Answer only two questions from the section.

- 24.a) Describe the different types of soil erosion stating how each is formed. (16mks)
 b) Explain any **four** factors that can encourage soil erosion. (4mks)
25. Describe the production of tomatoes under the following subheadings.
 a) Nursery management. (5mks)
 b) Transplanting (4mks)
 c) Planting (6mks)
 d) Field management (5mks)
26. A farmer is considering undertaking production of either maize or beans. Study the following information about the two crop and answer questions that follow.

Maize	
Yield per hectare	5500kg
Price	Kshs. 20 per kg
Cost of cultivation per ha	Kshs. 3000
Cost of DAP/bag	Kshs. 1500
Amount of DAP/ ha	3 bags
Cost of seed/ ha	Kshs. 100
Amount of seed/ ha	10 kg
Labour requirement per / ha	50 man days
Cost of labour	Kshs. 150 per man day
Amount of CAN fertilizer	3 days
Cost of CAN fertilizer / bag	Kshs. 1000

Beans	
Yield per hectare	5000kg
Price	Kshs. 50 per kg
Cost of cultivation per ha	Kshs. 3600
Labour requirement per / ha	75 man days
Cost of labour	Kshs. 200 per man day
Cost of DAP/bag	Kshs, 1500
Amount of DAP/ ha	2 bags
Cost of seed/ ha	Kshs. 80
Amount of seed/ ha	20 kg
Amount of CAN fertilizer/ha	1 bag
Cost of CAN fertilizer / bag	Kshs. 1000
Cost of sprays	Kshs. 3000

- i) Calculate the gross margin for each crop. (15mks)
 ii) Which crop is profitable fro the farmer to grow? (1mk)
 iii) Describe water control in a field of rice. (4mk)