

CENTRAL KENYA NATIONAL SCHOOLS MOCK JOINT EXAM 2016

443/1

AGRICULTURE

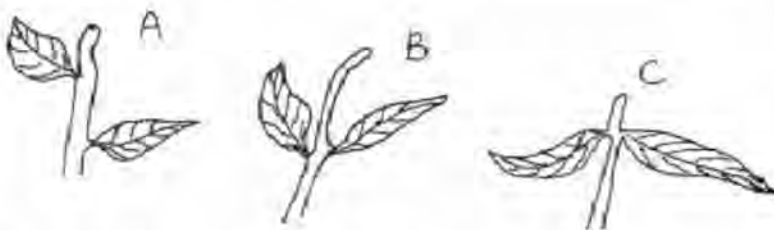
PAPER 1

SECTION A: (30 MARKS)**Answer all the questions in the spaces provided.**

1. State **two** conditions leading to small scale farming. (1 mark)
2. State **four** ways in which water is vital to the crops. (2 marks)
3. Outline **four** factors that influence the planning of a crop rotation programme. (2 marks)
4. List any **four** insect pests that attack maize in the field. (2 marks)
5. Give **four** qualities of shrubs and trees used for agroforestry. (2 marks)
6. Name **one** crop in each case, propagated using the vegetative parts below. (2 marks)
 - (i) Bulbils
 - (ii) Splits
 - (iii) Crowns
 - (iv) Setts
7. State **four** ways in which pesticides work to kill pests. (2 marks)
8. List **three** types of production functions. (1½ marks)
9. State **three** sources of soil acidity in crop production (1½ marks)
10. State **three** advantages associated with single stem pruning in coffee production. (1½ marks)
11. Give **four** reasons why drainage is an important method of land reclamation. (2 marks)
12. Differentiate between a cash book and a ledger. (1 mark)
13. Given that at a price of ksh. 100 per bag, 20 bags of maize are demanded but when the price changed to ksh. 80 per bag, 22 bags are demanded. Calculate the elasticity of demand. (show your working) (2 marks)
14. Give a reason why low pH is desirable in the process of silage making. (1 mark)
15. State **two** biological methods of weed control. (1 mark)
16. Give **three** significance of irrigating dry land. (1½ marks)
17. State **four** general symptoms of viral diseases in crops. (2 marks)
18. State **four** advantages of tissue culture in crop propagation. (2 marks)

SECTION B (20 marks)**Answer all questions in the spaces provided.**

19. The drawings below shows leaves of a certain weed with different morphological characteristics.



- (a) Which of the leaves represent a weed that is more susceptible to herbicides? (1 mark)
 - (b) Give a reason for your answer in (a) above. (1 mark)
 - (c) State any other **three** morphological characteristics that affect selectivity and effectiveness of herbicides. (3 marks)
20. The diagram below represents a bag of fertilizer observed in a shop. Study it and answer the questions that follow.



- (a) Classify the fertilizer according to the nutrient content. (1 mark)
- (b) What is the fertilizer ratio of the fertilizer? (1 mark)
- (c) A coffee farmer was supposed to apply 100 kg of P_2O_5 in his coffee farm. How much of the fertilizer 20 - 20 - 0 would he be required to buy? (4mks)

21. The illustration below shows a plant leaf infected by a disease. Study it and answer the questions that follow.



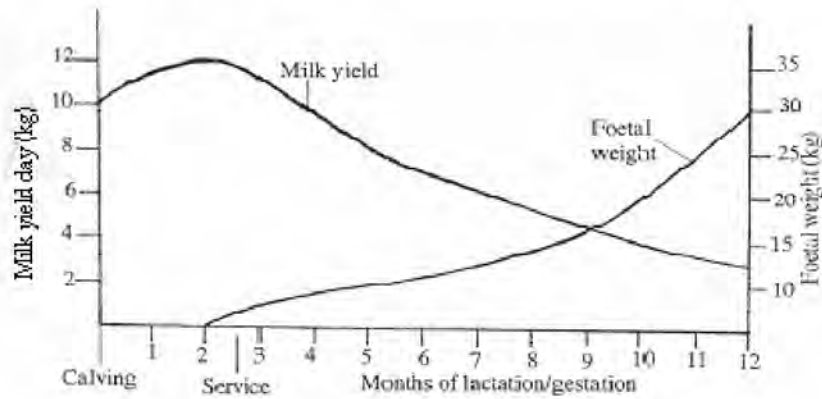
- (a) Identify the disease illustrated above. (1 mark)
 (b) Name **three** crops infected by the disease illustrated above. (3 marks)
 (c) Give the control measures of the disease illustrated above. (2 marks)
 (d) State **two** symptoms of the disease named in (a) above. (2 marks)

SECTION C (40 marks)

Answer any two questions in this section in the spaces provided.

23. (a) Describe the establishment of a grass pasture from the time land ploughed using a mouldboard plough to the time the pasture is ready for grazing. (12 marks)
 (b) Briefly explain **four** practices carried out on seeds/seedlings to prepare them for planting. (4 marks)
 (c) Describe **four** practices that a farmer should carry out to ensure uniform germination of seeds. (4 marks)
24. (a) State **six** objectives of land reform in Kenya. (6 marks)
 (b) State and explain the qualities of mother plants considered when selecting vegetative propagation materials. (10 marks)
 (c) State the information contained in an invoice. (4 marks)
25. (a) Describe the environmental conditions that may lead to low crop yields. (8 marks)
 (b) State the factors that are likely to hinder access to enough clean water to most Kenyans. (7 marks)
 (c) Explain **five** factors considered in spacing of crops in the field. (5 marks)

19. The graph below shows the relationship in milk yield and foetal growth against time.



- (a) Name the stage between the month in respect of lactation and gestation.
- 2nd to 12th month (1 mark)
 - 10th to 12th month. (1 mark)
 - 1st to 10th month. (1 mark)
- (b) Give **two** practices carried out on the incalf cow within the period from 10th to the 12th month. (2 marks)
- (c) State **two** routine practices a farmer should avoid carrying out on the incalf cow between the 10th and 12th month. (2 marks)
- (d) From the graph find the birth weight of the calf. (1 mark)

SECTION C (40 MARKS)

Answer any two questions in this section in the spaces provided.

20. (a) State **five** microbial activities that takes place in a rumen. (5 marks)
- (b) State and describe **ten** methods used to control livestock diseases. (15 marks)
21. (a) Outline the **main** differences between a petrol and a diesel engine. (10 marks)
- (b) Give **four** maintenance practices of a trailer. (4 marks)
- (c) Describe **six** factors that should be considered when siting a farm structure. (6 marks)
22. (a) Describe the lifecycle of a 3-host tick. (6 marks)
- (b) Explain the maintenance practice of a fish pond. (10 marks)
- (c) State **four** advantages of a disc plough. (4 marks)