

K.C.S.E 2007 AGRICULTURE

PAPER 1 (443/1)

SECTION A (30 marks)

Answer **ALL** the questions in this section in the spaces provided.

1. Give **four** conditions of the land which may make it necessary to carry out reclamation practices. (2 marks)
2. List **three** physical weathering agents in the soil formation process. (1 ½ marks)
3. State **two** mechanical methods of separating soil particles according to size during soil analysis. (1 mark)
4. Give **two** benefits of possessing a Land Title Deed to a farmer. (1 mark)
5. Give **four** advantages of crop rotation. (2 marks)
6. State **four** factors that should be considered when classifying crop pests. (2 marks)
7. State **three** functions of boron in crop development. (1½ marks)
8. Outline **four** observable indicators of economic development of a nation. (2 marks)
9. Give **three** factors that may influence the price of an agricultural commodity. (1½ marks)
10. Name **three** examples of leguminous fodder crops. (1 ½ marks)
11. Give **two** factors that may determine the size of a pit for silage making. (1 mark)
12. Give **three** reasons for controlling weeds in pastures. (1 marks)

13. State six characteristics of a productive soil. (3 marks)

14. State any five qualities that should be considered when selecting seeds for planting. (2½ marks)

15. (a) State four practices which encourage soil erosion. (2 marks)

(b) Name two forms of gully erosion. (1 mark)

16. (a) State four advantages of land consolidation. (2 marks)

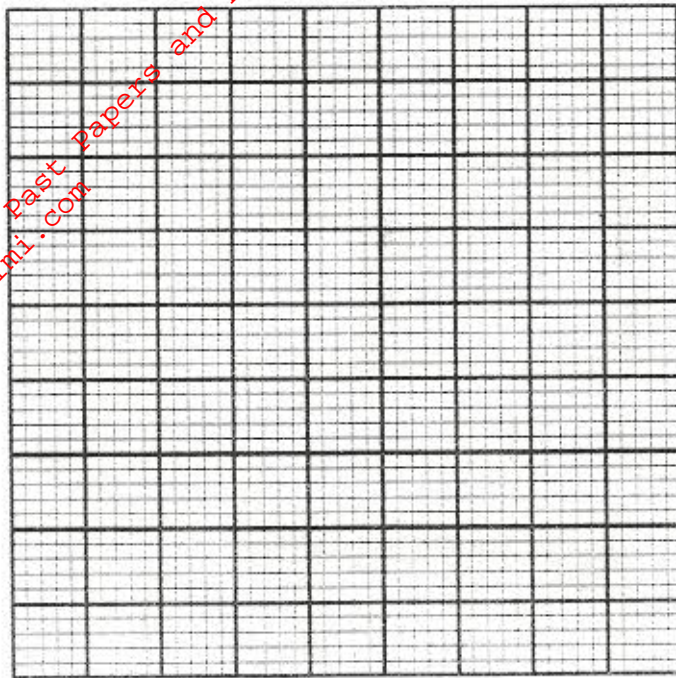
(b) Give two advantages of leasehold tenure system in farming. (1 mark)

SECTION B (20 marks)

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

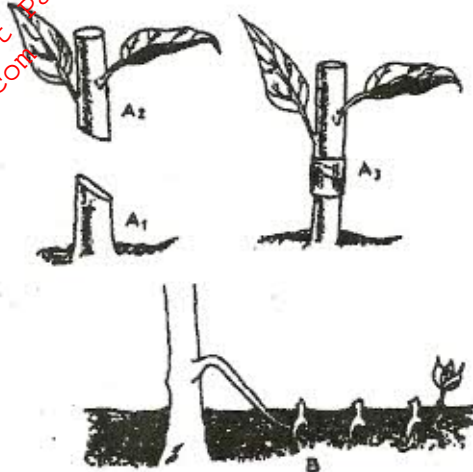
17. The table below shows the demand and supply of potatoes at UKULIMA market.

Price (Ksh)	Quantity demand (in bags)	Quantity supplied (in bags)
1200	50	250
1000	90	200
800	150	150
600	225	70
400	335	0

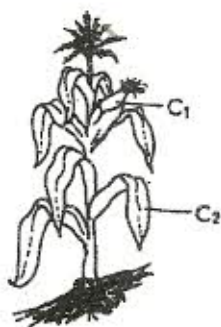


- (a) Using suitable scales, draw and label a graph showing the relationship between the demand and supply of the potatoes at UKULIMA market. (5 marks)
- (b) What is the equilibrium price of the potatoes? (1 mark)
- (c) From the graph determine:
- (i) the number of bags of potatoes that would be bought if the price per bag is Ksh. 900/=. (1 mark)
- (ii) the price of a bag of potatoes if 180 bags are supplied. (1 mark)

18. The diagram labelled A₁, A₂, A₃, and B below illustrate materials and methods of vegetative propagation. Study them and answer the questions that follow.



- (a) Name the parts labelled A₁ and A₂. (2 marks)
- (b) Name the methods of propagation illustrated in diagrams A₃ and B. (2 marks)
19. Study the crop illustrated in the diagram below and answer the questions that follow.



- (a) Name one insect pest which attacks the part labelled C₁ and one diseases which attacks the part labelled C₂. (2 marks)
20. A member of Young Farmers' Club was advised to apply a complete fertilizer 30:20:10 in a tomato plot measuring 10m long by 5m wide at the rate of 300kg per hectare.
- (a) State the percentage of P₂O₅ in the complete fertilizer. (1 mark)
- (b) Calculate the amount of fertilizer the member would require for the plot. (2 marks)
- (Show your working)

21. The diagrams labelled **D** and **E** below are illustrations of coffee established using two different formative pruning systems. Study them and answer the questions that follow.



- (a) Name the system of pruning illustrated in diagram **D** above. (1 mark)
- (b) Outline how the pruning system illustrated in diagram **E** is carried out. (2 marks)

SECTION C (40 marks)

Answer any **TWO** questions in this section in the spaces provided after question 24.

22. (a) Describe the field production of irrigated rice under the following sub-headings:
- (i) Land preparation (7 marks)
 - (ii) Water control (6 marks)
- (b) Describe the management of trees grown under various agro-forestry systems. (7 marks)
23. (a) Describe the problems of marketing of agricultural produce. (10 marks)
- (b) Discuss the importance of budgeting in agricultural production. (10 marks)
24. (a) Discuss the importance of irrigation in farming. (12 marks)
- (b) Explain the factors that influence the type of irrigation to be used in a farm. (8 marks)