

NAME \_\_\_\_\_

SCHOOL \_\_\_\_\_

CLASS \_\_\_\_\_

CANDIDATES SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_

433/1

AGRICULTURE

PAPER1

JANUARY 2011

BUNYORE- MARANDA JOINT EXAM

AGRICULTURE

PAPER 1

INSTRUCTIONS TO CANDIDATES

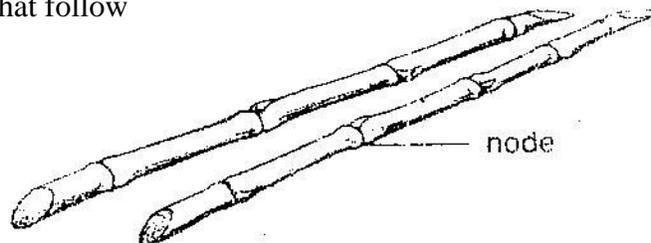
Answer any two questions in section C in the spaces provided and answer all questions in sections A and B in the spaces provided

SECTION	QUESTIONS	MAXIMUM SCORE	SCORE
A	1-17	30	
B	18-22	20	
		20	
		20	
TOTAL SCORE			

1. Give four benefits Kenya's Agriculture will get by shifting from rain-fed agriculture to irrigation agriculture (2mk)
2. List four farming systems used in Kenya (2mk)
3. Give three ways by which;
  - a) Nitrogen is removed from the atmosphere (1 1/2 mk)
  - b) Nitrogen is returned to the atmosphere (1 1/2 mk)
4. List four physical control measures of soil erosion that can be constructed on the farm (2mks)
5. State four types of records that should be kept on a farm (2mks)
6. Give three characteristics of economic resources used in agricultural production (1 1/2mk)
7. State two conditions that may lead to sub-division of agricultural land (1mk)
8. State four conditions that make land reclamation necessary (2mks)
- 9
  - a) State two conditions of soil that favor loss of nitrogen by dinitrification (1mk)
  - b) Name the process that releases nutrients from soil mineral particles (1/2 mk)
  - c) Name a nutrient plants obtain from soil water (1/2 mk)
10. State four ways in which trees help in soil conservation (4mks)
11. a) Explain the following practices in onion production
  - i) Onion seedlings should not be planted deep (1/2 mk)
  - ii) Excess soil is removed from around the root region of onion plants during field management (1/2 mk)
- b) Name two early maturing cabbage varieties (1mk)
12. Distinguish between the terms hybrid and composite as used in maize breeding (1mk)
13. State four management practices carried out to maintain pasture productivity (2mks)
14. a) Explain the term, changing the cycle in coffee growing (1/2 mk)
- b) Explain the term training in crop production (1/2 mk)
15. State the useful effects of the following biotic factors on crop production
  - a) Decomposers
  - b) Bacteria of genus rhizobium
  - c) Pollinators
16. Outline two ways of controlling damping off disease on vegetable seedlings in a Nursery (1mk)
17. Give four classes of crop pests (2mk)

### **SECTION B (20MKS)**

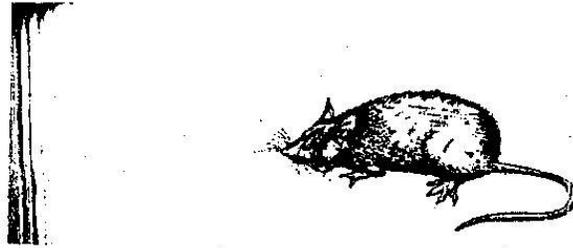
18. Given a Napier grass cutting shown in the diagram below, use it to answer the questions that follow



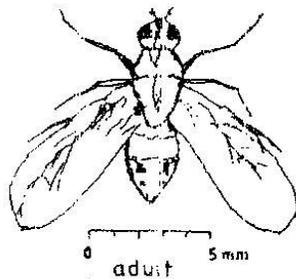
- i) Give four qualities of a mother plant which should be considered when selecting the vegetative material for propagation (2mks)
- ii) What other material would you use to plant Napier grass (1/2 mk)

- iii) Explain how the lower cut should be made on the stem cutting (1mk)
- iv) How upper cut should be made (1mk)
- v) What tertiary practice would you carry out on a seedbed before planting the Napier grass seeds (½ mk)

19. Given the pest shown in the diagram below



- i) Name the barrier you would put on a grain store to control the pest
  - ii) Apart from the use of barriers list four other physical methods of pest control in and out store (2mks)
20. The diagram below shows an adult crop pest which in its larve stage causes the middle shoot of sorghum seedlings to wither as shown in the diagram



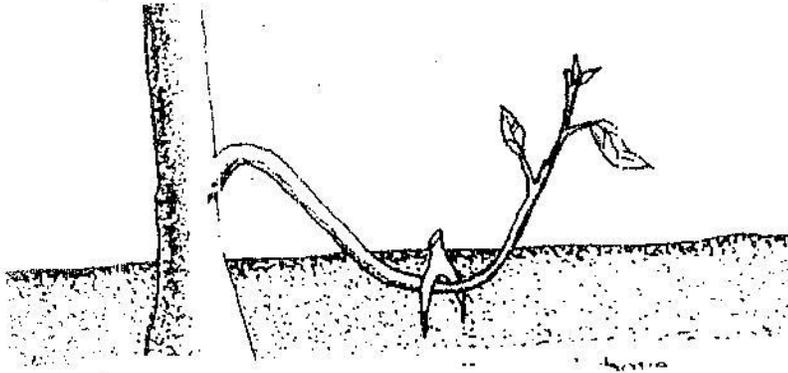
- i) Identify the pest (½ mk)
  - ii) Give two ways of controlling the pest (2mks)
  - iii) Give two methods of controlling birds in a field of sorghum (2mks)
21. Below is a copy of farmer’s consumable goods inventory

Consumable goods inventory

RECEIPTS			ISSUES			
DATE	COMMODITY/ITEM	QUANTITY	DATE	ISSUED TO	QUANTITY	BAL. IN STOCK

- a) Given at the beginning of farming business the farmer has two bags of DAP fertilizer, drugs and 1 bag of cement. He also had some tools
  - i) Which item should not be entered in the inventory above (2mks)
  - ii) Give two reasons for keeping a farm inventory (2mks)

22. Below is a diagram of a method of propagation



- Name the method of propagation illustrated above (½ mk)
- Give two ways of initiating faster root development in the propagation method shown above (2mks)
- What would make it necessary for a farmer to choose the above method of propagation (1mk)

### **SECTION C**

Answer any two questions in the spaces provided

- Give four characteristics of nitrogenous fertilizers (3mks)
  - State five functions of nitrogen in crops (5mks)
  - Give three sources of nitrogen in the soil (5mks)
  - What is crop rotation (1mk)
  - State five advantages of crop rotation (5mks)
  - State five factors that should be considered when designing a crop rotation programme (3mks)
- Describe different methods of pasture utilization and conservation (20mks)