

Name..... Index No.....
School..... Candidate's sign.....
Date.....

443/1
AGRICULTURE
PAPER 1
AUGUST / SEPTEMBER 2022
Time: 2 Hours

MANG'U HIGH MOCK EXAMINATION
Kenya Certificate of Secondary Education (K.C.S.E)

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 3 Sections: A, B and C.
4. Answer ALL questions in Section A and B.
5. Answer any two questions in Section C.
6. All answers should be written in the spaces provided.

FOR EXAMINER'S USE.

SECTION	Question	Maximum Score	Candidates Score
A	1 – 20	30	
B	21 – 24	20	
C	25-27	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 Questions in this Section.

1. State two economic effects of HIV/Aids on agriculture. (1mk)
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2. State three guidelines used in coming up with a crop rotation programme. (1 ½ mks)
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3. Give four factors to consider when planning a farm. (2mks)
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4. Outline four functions of trees in soil conservation. (2mks)
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5. List three factors that affect the selectivity and effectiveness of herbicides. (1½mks)
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6. Distinguish between the terms below as used in pasture utilization. (2mks)
 - (i) carrying capacity
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 - (ii) stocking rate
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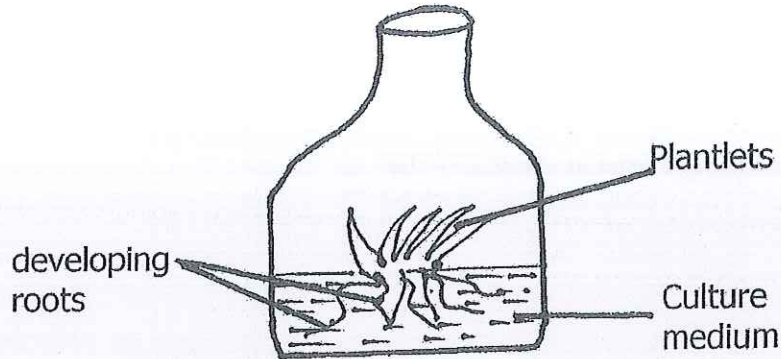
7. Why is it not advisable to use manure in carrot production. (1mk)
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8. State two methods of frame formation in tea. (1mk)
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9. Give two reasons why processing of raw materials is important. (1mk)
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10. State two ways in which agriculture contributes to the development of industries. (1mk)
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11. State three biological factors that influence the weathering process. (1½mks)
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12. Give three qualities of trees used in agro forestry. (1½mks)
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13. List three common risks and uncertainties in most farms. (1 ½ mks)
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14. Give two financial statements a farmer may prepare on a well organized farm. (1mk)
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15. List two liming elements in agriculture. (2mks)
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16. State three causes of fragmentation and land sub-division. (1 ½ mks)
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17. Give two disadvantages of feeding livestock on lush pasture. (1mk)
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18. Give two examples of working capital in a poultry enterprise. (1mk)
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19. (a) Give three advantages of drip irrigation. (3mks)
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- (b) State two surface water sources on the farm (1mk)
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20. State two ways of increasing labour efficiency in the farm. (1mk)
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SECTION B (20 MARKS)

Answer ALL questions in this section.

21. The diagram below shows an illustration of a method of crop propagation. Use it to answer the questions that follow.



a) Identify the method (1mk)

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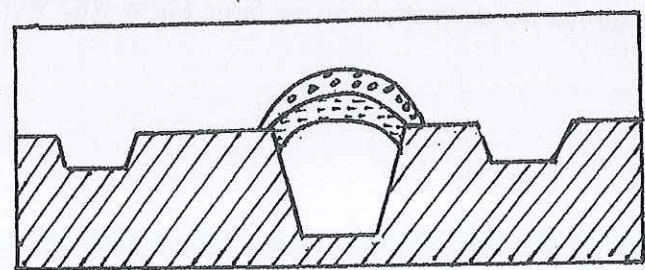
b) Name two ways of inducing the rooting in plantlets. (2mks)

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c) Outline two disadvantages of the method shown above. (2mks)

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22. The diagram below shows a method of silage preparation. Use it to answer the Questions that follow.



a) Identify the structure. (1mk)

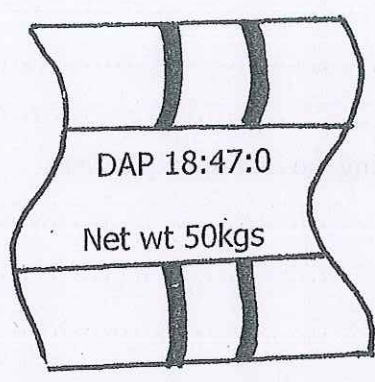
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b) State one way of improving the palatability of silage. (1mk)
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c) What is the importance of chopping silage material before ensiling. (1mk)
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d) Give two ensiling losses in silage making. (2mks)
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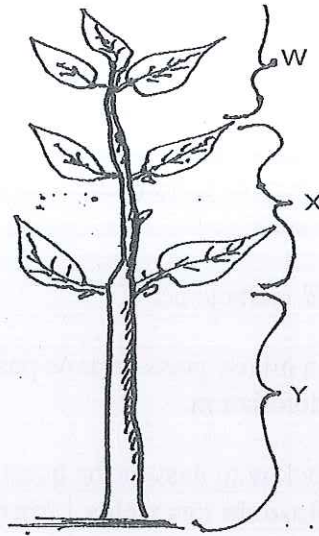
23. Study the illustration below and answer the questions that follow.



a) What do the figures labeled on the diagram stand for. (1mk)
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b) A farmer was advised to apply 20kg of N, 30kg of phosphorus and 10kg of potassium. The fertilizers available are CAN (20%N), SSP (10%P₂O₅) and KCl (20%K₂O). Calculate the amount of each fertilizer the farmer needs to apply on his farm. Show your working. (4mks)

24. The diagram below is of a tea cutting. Study it carefully and answer the questions that follow.



a) Which part of the branch is the most appropriate for raising a new seedling. (½ mk)

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b) Give reasons for your answer in (a) above. (1mk)

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c) Give four reasons why farmers are advised to raise tea in polythene sleeves. (2mks)

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d) State two factors that promote rooting in cuttings. (1mk)

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e) What is the name given to a stem cutting used to propagate sugarcane. (½ mk)

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SECTION C (40 MARKS)

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

25. a) Discuss the production of Napier grass (*pennisetum perpureum*) under the following headings.
- i) Ecological requirement (3mks)
 - ii) Land preparation. (3mks)
 - iii) Establishment and management. (3mks)
 - iv) Utilization (2mks)
- b) i) Explain the benefits of a mixed grass-legume pasture over pure grass pasture. (5mks)
- ii) State four effects of late defoliation. (4mks)

26. Use the data from the table below to answer the questions that follow.

Unit of labour input	Maize in kgs yields	Marginal product	Average product.
0	0		
1	600		
2	1800		
3	3000		
4	3600		
5	3700		
6	3600		
7	3400		

- a) Calculate and fill the columns for:-
- i) Marginal product. (7mks)
 - ii) Average product. (7mks)
- b) Assume the cost of labour in (i) above is Kshs.200 per day and the price of maize to be Kshs.20 per unit.
- i) Calculate the value of the maize yield produced against the corresponding units of labour inputs. (2mks)
 - ii) Calculate the cost of labour for producing various quantities of maize given in the table. (2mks)
- c) Determine from (b) above the most profitable level of production. (2mks)
27. a) Discuss the factors that determine the spacing of crops. (10mks)
- b) Explain the importance of the following practices in crop production.
- i) Chitting (1mk)
 - ii) Seed dressing (1mk)
 - iii) Seed inoculation (1mk)
 - iv) Earthing up (1mk)
 - v) Rogueing (1mk)
- c) State reasons for raising seedlings in a nursery. (5mks)