

NAME.....ADM NO.....CLASS.....

DATE.....SIGN.....

443/1**AGRICULTURE****PAPER 1****SEPTEMBER 2022****MECS JOINT EXAMINATION****INSTRUCTIONS TO CANDIDATES**

1. Write your name, admission number and class
2. This paper contains **three** sections
3. Answer all question in section **A** and **B**
4. In section **C** answer any two questions
5. Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing
6. This paper has 10 printed pages
7. Candidates must answer all the questions in English

For examiner's use only

| Section | Questions | Maximum score | Candidate score |
|--------------------|---------------|---------------|-----------------|
| A | 1-16 | 30 | |
| B | 17 -20 | 20 | |
| C | | 20 | |
| | | 20 | |
| Total score | | 90 | |

SECTION A 30 MARKS.ANSWER ALL QUESTION

1.Differentiate between olericulture and pomoculture as used in crop production. (1mark)

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2.Give **two** methods of farming (1marks)

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3.Give **two** examples for each of the following types of cost incurred in broiler production.

a)Variable cost (1 mark)

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b)fixed cost (1 mark)

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4.Give **four** advantages of crop rotation. (2marks)

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5.State **four** factors to consider when choosing seed rate. (2marks)

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6(a) Give **four** reasons for using certified seeds for planting. (2marks)

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(b).Give **four** disadvantages of using non capped multiple stem pruning in coffee (2marks)

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7. State **two** reasons why cassava should be grown as the last crop in crop rotation programme. (1mark)

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8.State **four** importance of farm records. (2marks)

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9.Name **two** aspects of light that affect crop production. (1mark)

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10.(a) What is tissue culture? (1mark)

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(b) State **two** importance of tissue culture in crop propagation. (1marks)

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11.a) Apart from the identity of owner, title number and size of land, name other two essentials contained on a land title deed. (2marks)

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b) Give **four** importance of a land title deed. (2marks)

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12. List **four** methods of fertilizer application. (2marks)

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13. State **four** advantages of growing maize in rows instead of broadcasting. (2marks)

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14. Name **four** factors that determine the choice of a nursery site. (2marks)

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15. Name **two** post-harvest practices in beans. (1marks)

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16. Give **four** reasons why burning is discouraged as a method of land clearing. (2marks)

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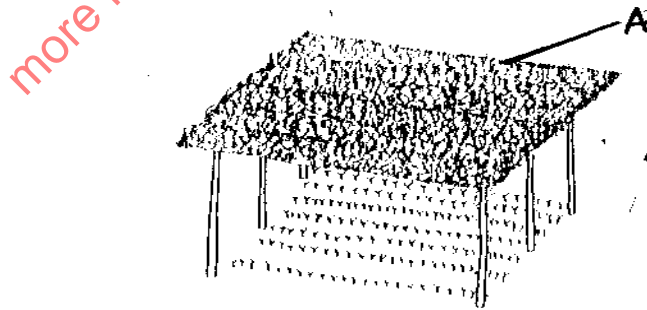
SECTION B 20 MARKS

17. The table below shows output of maize in response to increase in D.A.P fertilizers on one hectare of land.

| Fixed input land (in ha) | Variable input D.A.P in 30kg-bag | Total product maize yield in 90-kg bag | Average product (AP) maize in 90kg bag | Marginal product (M.P) in 90kg bag |
|--------------------------|----------------------------------|--|--|------------------------------------|
| 1 | 0 | 2 | | - |
| 1 | 1 | 5 | - | - |
| 1 | 2 | 14 | - | - |
| 1 | 3 | 21 | - | - |
| 1 | 4 | 26 | - | - |

a) Fill in the table for average product (A.P) and marginal products (M.P) 5marks

18. The diagram below shows a structure used in crop production.



(a). Identify the structure above. (1mark)

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(b). Give a reason for carrying out each of the following practices in the structure shown above

(i).Pricking out. (1mark)

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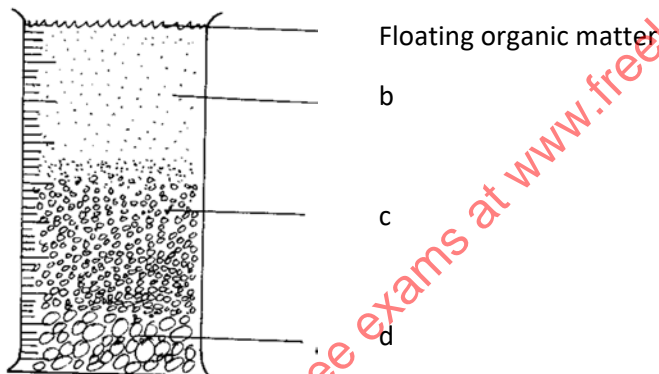
(ii). Hardening off. (1mark)

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(c).State **two** importance of the part labelled **A** in the above structure. (2marks)

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19. Form two student put some soil sample in a measuring cylinder, added some water and sodium carbonate and then covered the cylinder with the hand and shook the cylinder for about two minutes. He left the cylinder on the bench for one hour. The result was as shown below.



(i). Name the layers marked b,c, and d. (3marks)

b).....

c).....

d).....

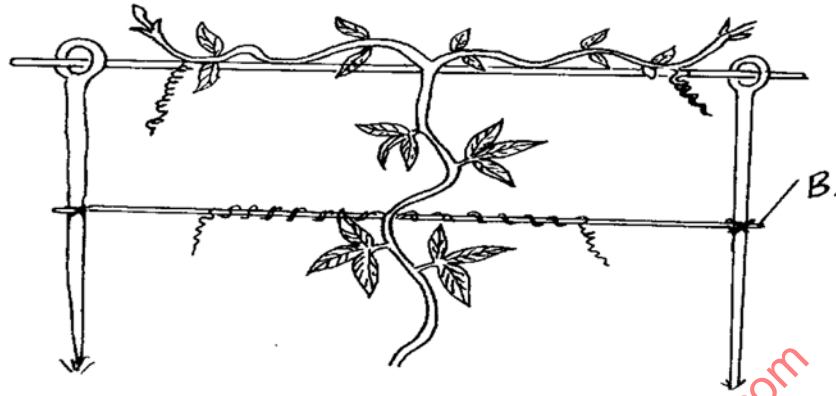
(ii). What was the function of sodium carbonate in this experiment? (1mark)

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(iii). What was the aim of this experiment ? (1mark)

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20. Study the diagram below and answer the questions that follow.



(a) Name the crop production practice illustrated above. (1mark)

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b) Name a material that may be used as part B in the diagram (1mark)

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c) State **three** reasons why the practice is done in crops. (3marks)

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SECTION C 40 MARKS(ANSWER ONLY TWO QUESTIONS)

- 21. (a) Outline any **ten** marketing functions (10marks)
- (b) Discuss any **five** problems in marketing of agricultural produce (10marks)

22. Describe the production of tomatoes (*Lycopersicon esculentum*) under the following subheadings.

- (a) Ecological requirements (4marks)
- (b) Nursery establishment (4marks)
- (c) Transplanting (4marks)
- (d) Seed bed preparation (4marks)
- (e) Field management practices (4marks)

- 23a) Explain **eight** factors that encourage soil erosion. (8marks)
- b) Describe **seven** management practices that should be carried out on a vegetable nursery after sowing until the seedlings are ready for transplanting. (7marks)
- c) Describe the harvesting of sugarcane. (5marks)

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