

Name:..... Index no.....

School:.....Candidate's sign.....

Class.....Adm No.....

**AGRICULTURE**

**PAPER 1 443/1**

**JUNE 2023**

**TIME: 2HOURS**

**FORM FOUR KASSU JET EXAMINATION**

**Kenya Certificate of Secondary Education (K.C.S.E)**

**Agriculture**

**Paper 1**

**INSTRUCTIONS TO CANDIDATES:**

- Write your name and index number in the spaces provided above.
- Sign and write the date of examination in the spaces provided above.
- This paper consists of three sections A, B and C.
- Answer **all** the questions in section A and B.
- Answer any **two** questions in section C.
- All answers should be written in the spaces provided.
- This paper consists of 12 printed pages.
- Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
- Candidates should answer all the questions in English.

**For Examiner's Use Only:**

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A	1-20	30	
B	21-24	20	
C		20	
		20	
	<b>TOTAL SCORE</b>	<b>90</b>	

1. List **three** branches of horticulture. (1<sup>1</sup>/<sub>2</sub>mks)

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2. a. Give **two** factors that determine the depth of ploughing. (1mk)

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b. state **two** reasons for sub-soiling. (1mk)

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3. state **three** government policies that help to increase agricultural production. (1<sup>1</sup>/<sub>2</sub>mks)

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4. Give **four** factors considered when designing crop rotational programme. (2mks)

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5. Differentiate between the following terms.

i. Pricking out. (1<sup>1</sup>/<sub>2</sub>mk)

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ii. Thinning. (1<sup>1</sup>/<sub>2</sub>mk)

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6. State **three** types of production functions. (1<sup>1</sup>/<sub>2</sub>mks)

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7. Define **Economic Injury Level (EIL)** as used in pest management. (1mk)

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8. Name **three** varieties of dry beans. (1<sup>1</sup>/<sub>2</sub>mks)

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9. State **four** advantages of communal land tenure system. (2mks)

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10. Name **two** types of metal pipes used to convey water in the farm. (1mk)

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11. State **two** conditions under which opportunity cost is said to be at zero. (1mk)

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12. Give **two** reasons for processing agricultural produce. (1mk)

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13. State **two** effects of excessive application of nitrogenous fertilizers on tomatoes (1mk)

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14. State **two** roles of calcium in the soil. (1mk)

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15. State **four** factors that determine the spacing of a crop. (2mks)

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16. Give **four** advantages of budding in crop production. (2mks)

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17. State **three** forms in which water exist in the soil. (1<sup>1</sup>/<sub>2</sub>mks)

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18. State **four** importance of a good soil structure on crop production. (2mks)

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19. Name **two** types of labour records. (1mk)

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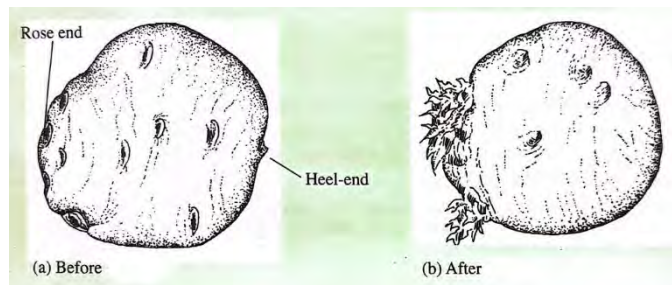
20. State **three** factors considered when siting a nursery bed. (1<sup>1</sup>/<sub>2</sub>mks)

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**SECTION B (20MKS)**

*Answer all questions in the space provided*

21. The diagram below illustrates seed potato prepared for planting. Study it carefully and answer the questions that follow:



(a) Name the practice used in preparing the seed potato above for planting. (1mk)

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(b) Describe the procedure followed in preparing seed potatoes for planting.

(3mks)

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22. The table below shows  $P^H$  values of different soil samples. Study it and answer the questions that follow.

<u>Soil Sample</u>	<u><math>P^H</math> Values</u>
S <sub>1</sub>	3
S <sub>2</sub>	4
S <sub>3</sub>	5
S <sub>4</sub>	6
S <sub>5</sub>	7
S <sub>6</sub>	8
S <sub>7</sub>	9
S <sub>8</sub>	10

(a) Which soil sample has the highest acidity.

(1mk)

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(b) State two ways in which the  $P^H$  values of samples can be lowered. (2mks)

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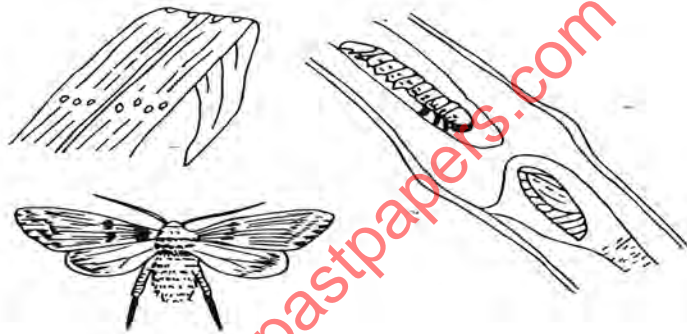
(c) Which of the above soil samples is suitable of grow tea. (1mk)

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(d) Explain what happens to the element phosphorus in soils with  $P^H$  value below  $S_4$  (1mk)

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23. the illustration below shows a maize pest. Study and answer the questions that follow.



(a) Identify the pest illustrated below. (1mk)

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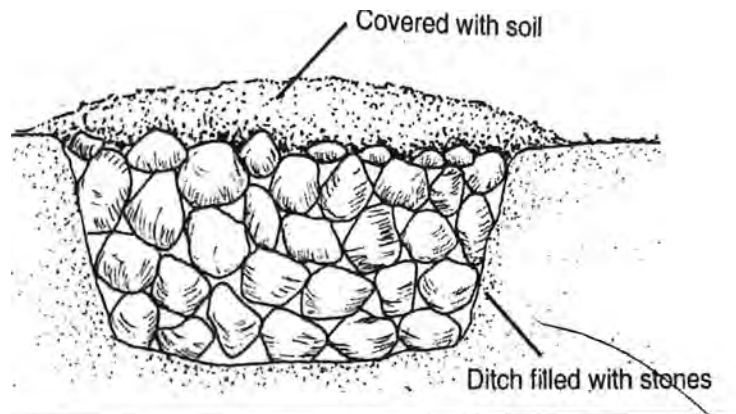
(b) Give the symptoms of infestation of the pest illustrated above (2mks)

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(c) State **two** control measures. (2mks)

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24. study the diagram below and answer the questions that follow.



(a) Identify the method of drainage shown below. (1mk)

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(b) Other than the method shown in (a) above, state **two** other methods used in drainage farm land. (1mk)

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(c) Outline **three** reasons for draining farm land. (3mks)

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**SECTION C (40 MARKS)**

**Answer any two questions in this section**

25. (a) Explain **eight** factors that can encourage soil erosion. (8mks)

(b) Explain the ways farmers use to overcome risks and uncertainties in farming Business. (7mks)

(c) Describe harvesting of tea. (5mks)

26. (a) What **Four** factors influence the time and stage at which crops are harvested? (4mks)

(b) Outline **five** factors considered before deciding the method of irrigation crop production. (5mks)

(c) Give **six** pieces of information found in a breeding record. (6mks)

(d) List any **five** field management practices on crops. (5mks)

27. a. Give **four** advantages of using Farm Yard Manure over fertilizer. (5mks)

b. Describe **eight** cultural method of crop diseases control in the farm. (8mks)

c. Explain **seven** factors that contribute to the competitive ability of weeds. (7mks)

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