SUNRISE EVALUATION EXAMS FORM 4 - 2021

NAME……ADM NO……. CLASS…….

DATE: …….. **SIGN: ……**

443/1 AGRICULTURE

PAPER 1

(THEORY)

SEPTEMBER 2021

DURATION:: 2HRS

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

Instructions to candidates

a) Write your name and index in the spaces provided above

b) Sign and write the date of examination in the spaces provided above

*c) This paper consists of **three** sections **A, B** and **C**.*

*d) Answer **all** the questions in sections **A** and **B**.*

*e) Answer any **two** questions in section **C***

*f) **All** answers should be written in the spaces provided in the question paper.*

For Examiner's Use Only

Section	Question	Maximum Score	Candidates Score
A	1 – 20	30	
B	21 - 26	40	
C	27-29	20	
Total Score		90	

1. State t**wo** methods which can be used to detect mineral deficiency in crops. (lmk)

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2. State **two** conditions under which shifting cultivation is favourable. (lmk)

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3. State t**wo** conditions under which seeds are seeded at a high seed rate. (2mks)

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4. State **three** ways in which trees improve soil fertility. ($1\ ^{1}/_{2}$ mks)

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5. Give **three** causes of hardpans in cultivation. ($1\ ^{1}/_{2}$ mks)

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6. Under what **two** conditions does opportunity cost not exist? (lmk)

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7. Give **two** roles of additives in silage making. (lmk)

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8. Outline **four** advantages of mixed farming. (2mks)

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9. Give **three** reasons why bulbils make good planting materials than suckers. (2mks)

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10. Give **three** reasons why agriculture is defined as a science. ($1\ ^{1}/_{2}$ mks)

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11. Give **four** characteristics of large scale farming system. (2mks)

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12. State **four** farming practices which help to improve soil structure. (2mks)

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13. Give **four** effects of top dressing on a pasture. (2mks)

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14. What are the two reasons for innoculating legume seeds before planting . (1mk)

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15. State **two** advantages of carrying out pruning in banana production. (1mk)

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16. In maize hybrid 614 what do the following figures stand for? (1mk)

(i) 6……

(ii) 4…….

17. Give **two** ways in which pastures are classified. (1mk)

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18. Name **four** practices carried out to improve and maintain permanent pasture. (2mks)

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19. Give **four** advantages of tissue culture. (2mks)

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20. Give **three** stages of controlling devils horsewhip by mechanical means. (1½ marks)

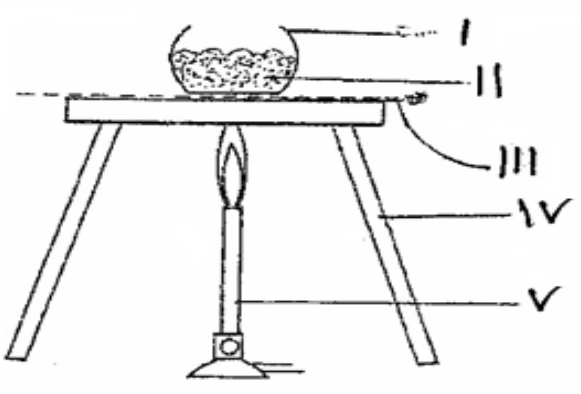
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SECTION B

21. The diagram below shows a set up of apparatus for finding the percentage of humus contents in a soil by ignition.



(a) Label the apparatus. (2 marks)

I ……

II ……...

III ……..

IV ……...

(b) Outline the steps followed in carrying out the illustrated experiment. (3 marks)

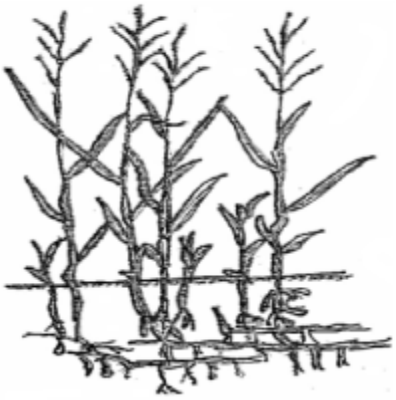
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G



H



22.

(i) Identify the weeds above. (2 marks)

G ……

H ……

(ii) State the economic importance of the weed shown in diagram **G**. (2 marks)

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(iii) Why is it difficult to control weed in diagram **G**? (1 mark)

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23. Study the pest below and answer the questions below.



(a) Identify the pest (1 mark)

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(b) State two methods of controlling the pest. (2 marks)

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(c) Name the crops attacked by the pest. (2 marks)

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24. The diagram below illustrates a field management practices in tomatoes



(i) Identify the practice (1 mark)

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(ii) State three reasons for carrying out the practice. (3 marks)

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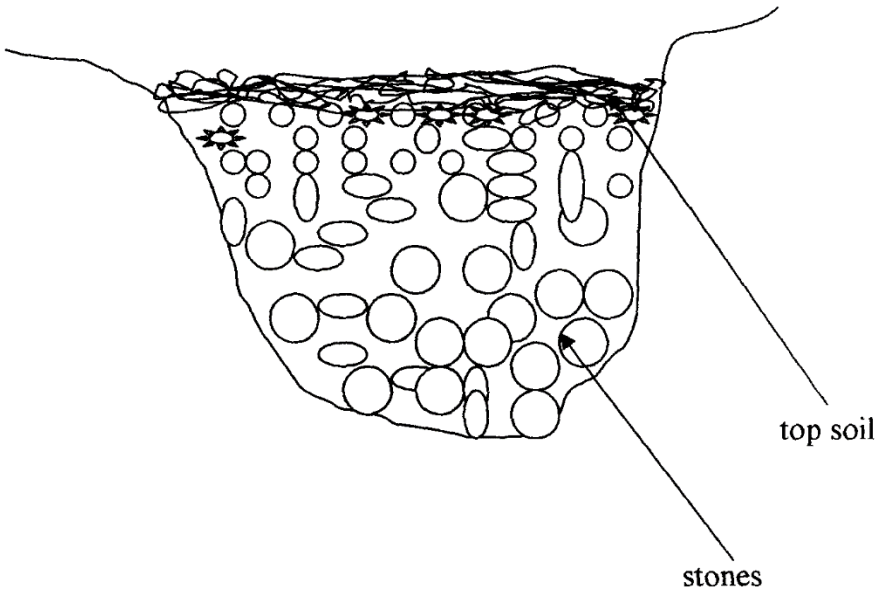
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(iii) Give another practice that could be carried out to give the same results. (1 mark)

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25. Study the diagram below then answer the questions that follow:



(a) Identify the method of drainage above. (1mk)

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(b) State other **three** methods used to drain swampy areas. (3mks)

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(c) Give **four** importance of drainage. (4mks)

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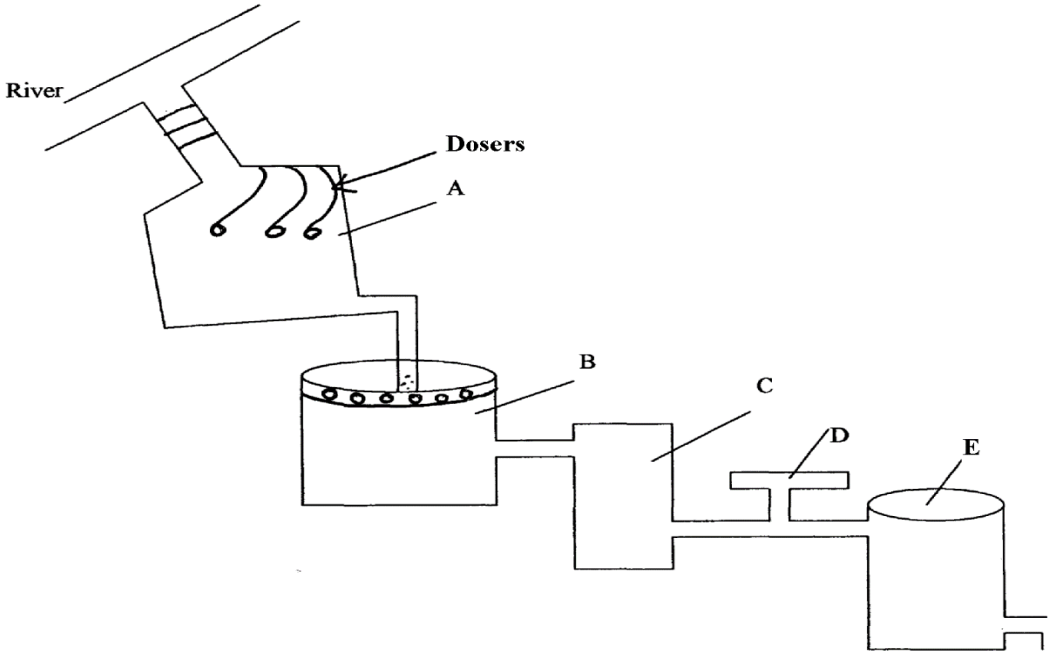
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26. Study the processes of chemical water treatment below and answer the questions that follow:



(a) Identify the parts labeled: (2mks)

A ……

B ……

C ……

D ……

(b) State **two** chemical substances added at part labeled B and give their functions.

(2mks)

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(c) State **two** factors which influence the quantity of the chemical used in part labeled D**.** (2mks)

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(d) State **three** uses of water in crop production. (3 mks)

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(e) State **three** types of production functions in agriculture. (3mks)

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SECTION C (20MKS)

27. (a) Describe the cultural methods of weed control in crop production. (l0mks)

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(b) Describe the harmful effects of pests on crops (10mks)

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28. (a) Discuss the human factors which influence agriculture. (10 marks)

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(b) Explain **five** factors to consider when choosing the planting time. (10 marks)

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29. Describe the production of carrots under the following sub headings

a) Seedbed preparation (3 marks)

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b) Harvesting (4 marks)

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c) Explain five cultural methods of weed control in beans production. (10 marks)

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d) Outline three roles of sulphur in crop production. (3 marks)

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