

# 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**

<b>Section</b>	<b>Question</b>	<b>Maximum Score</b>	<b>Candidates Score</b>
<b>A</b>	<b>1 - 20</b>	<b>30</b>	
<b>B</b>	<b>21 - 26</b>	<b>40</b>	
<b>C</b>	<b>27-29</b>	<b>20</b>	
<b>Total Score</b>		<b>90</b>	

1. State **two** methods which can be used to detect mineral deficiency in crops. (1mk)  
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2. State **two** conditions under which shifting cultivation is favourable. (1mk)  
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3. State **two** 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? (1mk)  
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7. Give **two** roles of additives in silage making. (1mk)  
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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 inoculating 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)

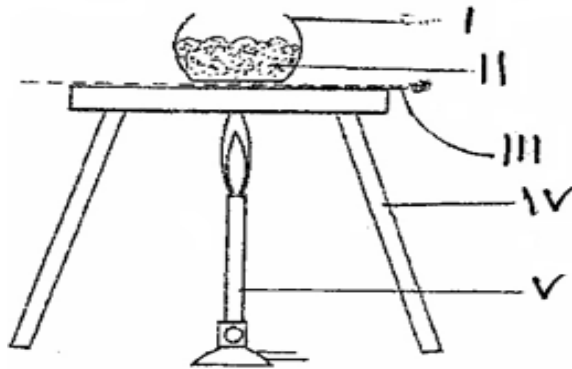
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20. Give **three** stages of controlling devils horsewhip by mechanical means. (1½ marks)

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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 .....

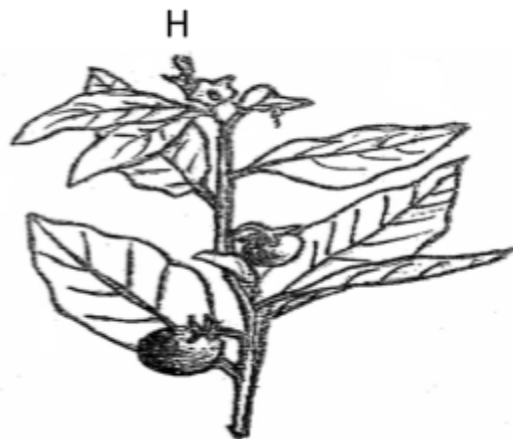
- (b) Outline the steps followed in carrying out the illustrated experiment. (3 marks)

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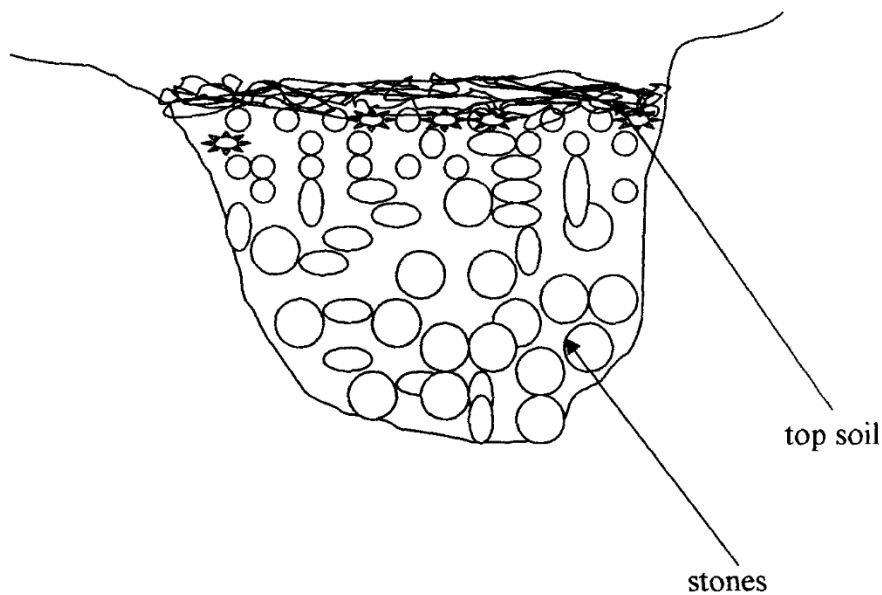
(ii) State three reasons for carrying out the practice. (3 marks)

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(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)

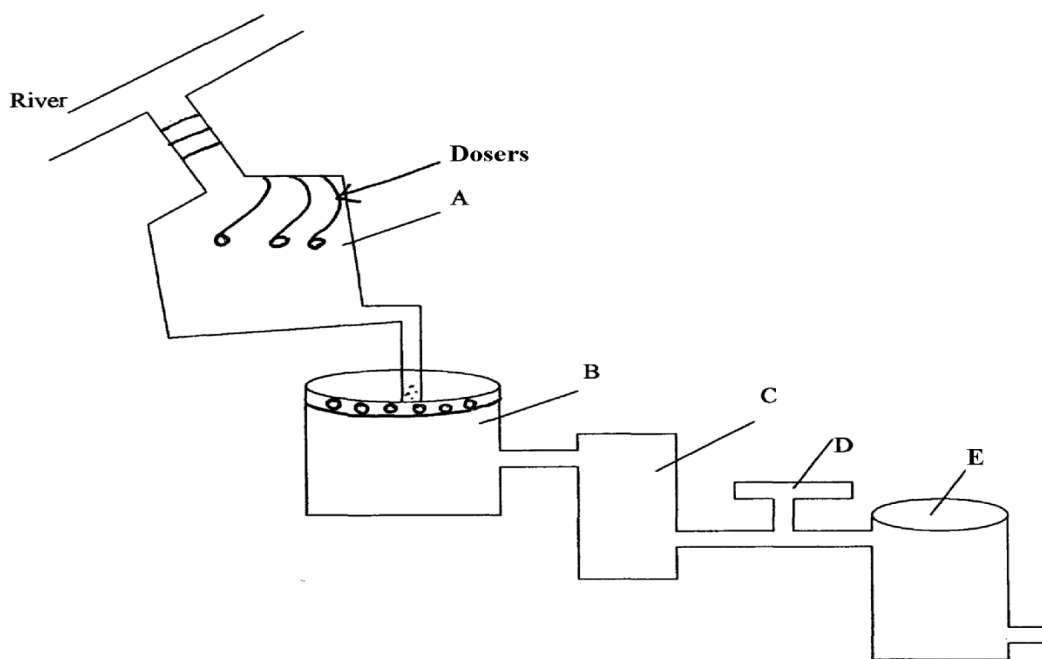
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(b) State other **three** methods used to drain swampy areas. (3mks)

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

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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)

**SECTION C (20MKS)**

27. (a) Describe the cultural methods of weed control in crop production. (10mks)

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

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

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

a) Seedbed preparation (3 marks)

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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