**NAME:……………………………..……………………..ADM. NO……………..………**  
**SCHOOL:………………………………………STUDENT’S SIGN ……………………**

**DATE……………………………….**

**443/1 FORM ONE**

JULY, 2019  
**Time: 2 Hours**

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

**INSTRUCTIONS TO CANDIDATES**

a) Write your name and Admission number 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 section A and B and any **two** questions in section C.

e) ALL answers must be written in the spaces provided in this booklet.

**FOR EXAMINER’S USE ONLY**

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| --- | --- | --- | --- |
| **SECTION** | **QUESTIONS** | **MAX. SCORE** | **CANDIDATE’S SCORE** |
| **A** | **1 – 17** | **30** |  |
| **B** | **18– 20** | **20** |  |
| **C** | **21-22** | **20** |  |
| **20** |  |
| **TOTAL SCORE** | | **70** |  |

*This paper consists of 10 printed pages. Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing.*

SECTION A 20MRKS

*Answer all questions in the spaces provided*

1. State two effects of temperature on agricultural production. (1mk)

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1. List **three** physical weathering agents in the soil formation process (11/2mrks)

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1. State two mechanical methods of separating soil particles according to size

during soil analysis (1mks)

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1. State **four** roles of organic matter in sandy soils. (2 mks)

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1. Give **four** reasons for minimum tillage. (2 mks)

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1. Name **three** sources of underground water. (1 ½ mks)

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1. Give **four** advantages of intensive farming. (2 mks)

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1. Give **four** reasons why land should be prepared early in readiness for planting. (2 mks)

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1. State **four** biotic factors that influence crop production. (2mks)

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1. State **three** advantages of shifting cultivation. (1 ½ mks)

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1. **Give four** factors that influence the number of secondary cultivations in

seedbed preparation. (2 mks)

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1. Give **two** disadvantages of intensive system of fanning. (1 mk)

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1. List **four** methods of farming. (2 mks)

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1. State **four** features that should be considered when choosing water pipes

for use on the farm. (2 mks)

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1. Give **four** reasons for treating water for use on the farm. (2 mks)

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1. Give **two** reasons for carrying out each of the following operations in land preparation:

(a) rolling; (1 mk)

…………………………………………………………………………………………..

…………………………………………………………………………………………..

(b) levelling. (1 mk)

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1. Name **three** recommended practices that should be carried out when clearing

the bush during land preparation. (1 ½ mks)

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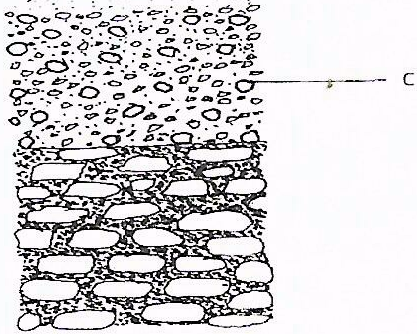
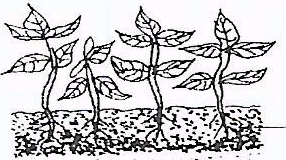
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**SECTION B** (20 MRKS)

***Answer ALL the questions in this section in the spaces provided***

1. The diagram below illustrates a feature observed after digging the soil several

metres deep. Study the diagram carefully and answer the questions that follow.



C

B

A

D

a) Identify the feature that the diagram above represents in the study of soil (1mk)

……………………………………………………………………………………………

(b) Name the parts of the diagram labelled A, B, C and D. (2 mks)  
 A ………………………………………….

B …………………………………………..

C …………………………………………..

D …………………………………………..

(c) State **two** ways in which the knowledge of the above feature would be of benefit

to a farmer. (2 mks)

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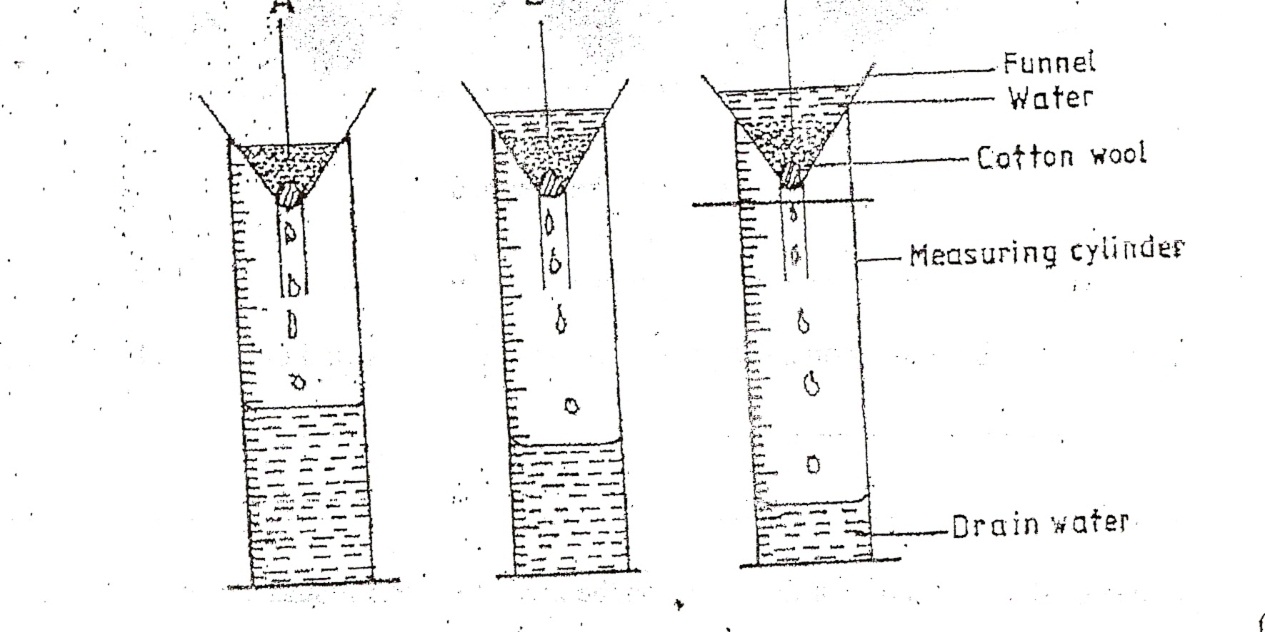
1. The diagram below illustrates an experiment on soil. Study it carefully and

answer the questions that follow.

C

B

A



**Cotton wool**

**Drain water**

**Measuring cylinder**

**Water**

**Funnel**

1. State the aim of the experiment (1mk)

……………………………………………………………………………………………….

1. If the volume of water illustrated in the measuring cylinder was observed

after one hour identify the soil sample labeled A, B and C. (3mrks)

A……………………………………………………………………………………

B……………………………………………………………………………………

C ……………………………………………………………………………………

1. State Two ways in which the soil structure of the sample labeled C

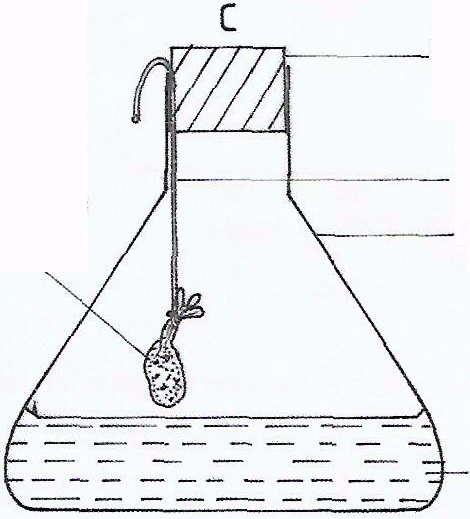
above can be improved (2 mks)

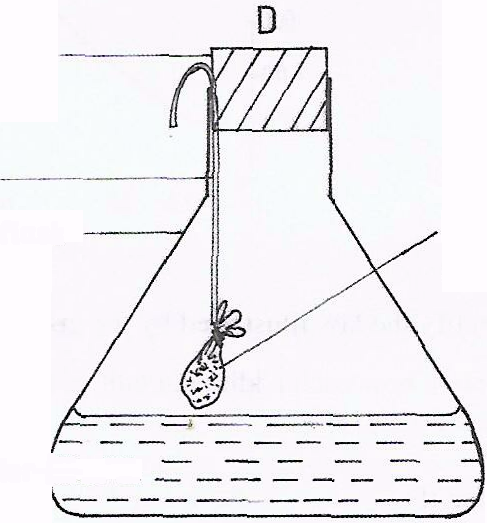
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21 The diagrams below show a set up of an experiment to study an aspect of soil. The

set up was left undisturbed for rive hours. Study it and answer the questions that follow.





Rubber corks

String

Fresh garden soil in muslin bag

Strongly heated garden soil in muslin bag

Conical flask

Lime water

(a) What was the aim of the experiment? (1 mk)

…………………………………………………………………………………………..

(b) State **one** observation that was made in each of the flasks labelled C and D (2mrks)

C…………………………………………………………………………

D………………………………………………………………………...

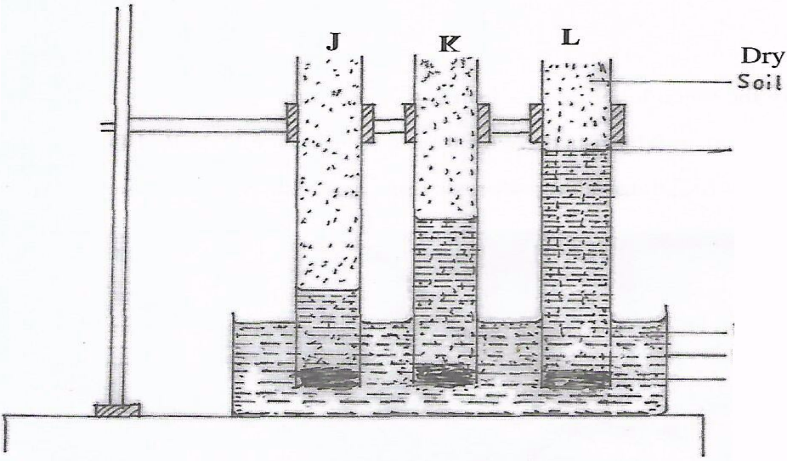
c) Give a reason for each of your answers in (b) above

C……………………………………………………………………….. (1mk)

D………………………………………………………………………… (1mk)

1. The diagram below illustrates an investigation on a property of soil using soil

samples labelled J, K and L.



Water trough

Cotton wool

Glass tube

Water level

Dry soil

a) If the levels of water shown in the diagram were observed after three hours, name

the property of soil being investigated. (1mk)

………………………………………………………………………………………………….

b) What is the relationship between the soil property named in (a) above and

the size of soil particles? (2mk)

…………………………………………………………………………………………….

…………………………………………………………………………………………….

c) Which soil sample would be suitable for growing paddy rice? (1mk)

……………………………………………………………………………………………

**SECTION C** (40 MKS)

***Answer any two questions from this section in the spaces provided after question***

1. (a) Discuss the importance of irrigation if farming ( 12 mks)

(b) Explain the factor that influence the type of irrigation to be used in a farm ( 8 mks)

1. (a) State and explain five roles of agriculture in economic development of Kenya (10 mks)

(b) Explain four ways in which:

(i) HIV/AIDS limits agricultural production (4 mks)

(ii) Government policy improves agricultural production (2 mks)

(iii) Low level of education and technology influences agriculture. (4 mks)

1. (a) State and explain various stages involved in chemical water treatment process (12mrks)

(b) State and explain four factors that determine the number of times of secondary

cultivation (8mrks)

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