Name………………………………………………………. Index No………………

Signature……………………………………..……………. Date……………………

**443/1**

**AGRICULTURE**

**PAPER 1**

**MARCH/APRIL, 2020**

**2 HOURS**

**MOKASA 1 JOINT EXAMINATION**

**K.C.S.E MOKASA EXAMINATION**

443/1

**AGRICULTURE**

PAPER 1

MARCH/APRIL, 2020

2 HOURS

***INSTRUCTIONS TO CANDIDATES***

*1. Write your name and index number in the spaces provided above.*

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

*3. Answer* ***all*** *questions in Section A and B*

*4. Answer any* ***two*** *questions from Section C*

*5. Answer to* ***ALL*** *questions* ***MUST*** *be written in this booklet.*

**FOR EXAMINER’S USE ONLY**

|  |  |  |  |
| --- | --- | --- | --- |
| **SECTION** | **QUESTIONS** | **MAXIMUM SCORE** | **CANDIDATE’S SCORE** |
| **A** | **1-18** | **30** |  |
| **B** | **19-22** | **20** |  |
| **C** |  | **20** |  |
|  | **20** |  |
|  | **TOTAL SCORE** | **90** |  |

**SECTION A: (30 MARKS)**

***Answer ALL questions in the spaces provided.***

1. Give **four** activities that may be undertaken in organic farming. (2 marks)

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

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

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

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

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

2. State **four** harmful effects of wind on crop production (2 marks)

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

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

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

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

3. Give the general name of chemicals used to control;

a) Weeds (½ mark)

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

b) Leaf rust in coffee (½ mark)

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

4. State **four** practices that can be used to improve water logged clay soils (2 marks)

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

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

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

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

5. State **four** factors considered when selecting planting materials (2 marks)

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

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

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

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

6. Give **two** causes of blossom-end rot in tomatoes (1 mark)

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

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

7. Give **four** pieces of information contained in a land title deed. (2 marks)

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

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

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

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

8. Name **three** macro-nutrient elements whose deficiency symptom is chlorosis (1½ marks)

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

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

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

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

9. State **two** water treatment processes that take place in the coagulation and sedimentation tank.

(1 mark)

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

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

10. State **four** reasons for pruning fruit crops (2 marks)

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

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

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

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

11. State **four** disadvantages of intercropping (2 marks)

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

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

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

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

12. Name **three** practices carried out to improve and maintain permanent pastures (1½ marks)

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

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

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

13. State **four** cultural practices of weed control in beans (2 marks)

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

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

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

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

14. State **four** advantages of timely harvesting of crops (2 marks)

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

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

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

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

15. List **three** tertiary operations that may be carried out in a seedbed (1½ marks)

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

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

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

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

16. Give **two** reasons for locating a nursery bed at a well sheltered place (1 mark)

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

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

17. List **four** disadvantages of using compost manure in crop production (2 marks)

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

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

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

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

18. Give **three** reasons why timely ploughing of the seedbed is important in crop production.

(1½ marks)

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

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

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

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

**SECTION B: (20 MARKS)**

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

19. A farmer has four plots P1, P2, P3 and P4 as shown in the diagram below. Each of the plots has an agronomic problem as indicated.

P1 P2 P3 P4

Prone to soil erosion

Deficient in nitrogen

Infested with witchweed (Striga species)

Infested with bacterial wilt

1. The farmer intends to grow maize, tomatoes, groundnuts and Rhodes grass. Indicate the crop the farmer should grow in each of the plots (2 marks)

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

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

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

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

1. Outline the procedure of transplanting tree seedlings from polythene sleeves. (3 marks)

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

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

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

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

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

1. Identify the management practice indicated above. (1 mark)

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

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

1. Give **three** problems that could arise if the above practice is not carried out. (3 marks)

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

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

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

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

21. The diagram below illustrates an experiment carried out by a Form one student on soil. Study it carefully and answer the questions that follow.

1. State the aim of experiment above. (1 mark)

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

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

1. Identify the soil samples in each of the funnels labeled Q and R (2 marks)

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

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

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

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

1. Give **two** ways in which the soil structure of the sample labeled S above can be improved.

(2 marks)

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

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

22. The diagram below illustrates a method of preparing compost manure. study it and answer the questions that follow.

1. Identify the method illustrated above. (1 mark)

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

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

1. By using arrows, indicate the direction of the materials form X to the field (2 marks)
2. State **two** desirable factors considered when siting compost manure pit. (2 marks)

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

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

**SECTION C: (40 MARKS)**

***Answer any TWO questions from this section in the answer sheets attached.***

23. a) Describe the production of beans under the following sub-topics;

(i) Planting (4 marks)

(ii) Field practices (4 marks)

(iii) Harvesting (4 marks)

b) Outline **six** safety measures undertaken in the use of herbicides to minimize environmental pollution. (6 marks)

c) Describe the precautions taken into account during harvesting of cotton (4 marks)

24. a) Explain **ten** farming practices carried out to control crop diseases (10 marks)

b) Outline **six** steps followed in the adjudication of land (6 marks)

c) Explain the **four** different methods of farming (4 marks)

25. a) Explain **ten** factors that can encourage soil erosion (10 marks)

b) Explain **five** effects of liberalization of agricultural markets to farming in Kenya

(10 marks)

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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