NAME………………………………………INDEX NUMBER………………………

SCHOOL…………………………………. CANDIDATE’S SIGNATURE…………………..

DATE………………………………….

443/1

AGRICULTURE

PAPER 1

TIME: 2 HOURS

JULY/AUGUST 2018

Kenya Certificate of Secondary Education

AGRICULTURE

PAPER 1

2 HOURS

INSTRUCTIONS TO CANDIDATES:

Write your name and index number in the spaces provided.

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

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

(d) Answer ALL the questions in Section A and B in the space provided.

(e) Answer any two questions in section C in the space provided.

(f) Candidates should check the question paper to ascertain that all the pages are printed as indicated

and that no questions are missing.

g) The paper has 11 printed pages

For Examiners Use Only

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| SECTION | QUESTION | MAXIMUM SCORE | | CANDIDATE’S SCORE |
| A | 1 - 19 | 30 |  | |
| B | 20 - 25 | 20 |  | |
| C | 26 | 20 |  | |
| 27 | 20 |  | |
| 28 | 20 |  | |
| 29 | 20 |  | |
| TOTAL SCORE | | 90 |  | |

1

SECTION A: (30 MARKS)

Answer all questions in this section in the spaces provided.

1.(a) State **three** factors that determine the method used to harvest a crop. (1½ marks)

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(b) Give **four** ways in which cereals are stored in Kenya. (2 marks)

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2 .Outline **two** disadvantages of tenancy system in farming. (1 mark)

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3. Outline **two** control measures of downy mildew in onions. (1 mark)

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4. Name **two** pasture legumes grown in medium altitude zones .(1 mark)

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5. Give **two** reasons why root pruning is done in the nursery management in agroforestry.

(1 mark)

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6. (a) Define the term joint products. (1 mark)

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(b) Outline **two** examples of joint products in crop production. (1 mark)

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7. State two benefits of optimum soil temperature in crop production. (1mk)

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8. State four factors which determine the depth of ploughing. (2mks)

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9 .Give two sub-branches of arable farming. 1mk

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10. Give two effects of scarcity in agricultural production. ( 1mk)

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11. State two conditions that must exist for a market to be purely competitive. (2mks)

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12. Name two types of pests with piercing and sucking mouth parts. (1mk)

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**13.** Give four ways in which land reform can be implemented in Kenya. (2 marks)

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**14.** Give four reasons why most farmers don’t use green manure in crop production. (2 marks)

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**15.** Name two crop production practices carried out after planting to achieve optimum plant population.

(1 mark)

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16. Name ***FOUR*** practices that increase light reaching a crop. [2marks]

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17. State **three** functions of the coffee Board of Kenya (1 ½ mks)

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**18 .** Give four reasons why it is difficult to control Sodom apple (Solanum incanum**)** in pasture (2mks)

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19. State four reasons for liming soils (2 marks)

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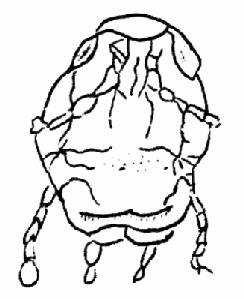
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Section b (20marks).

Answer all questions in the spaces provided.

**20.** Observe the diagram below and answer the questions that follow.



Compound eye

Mandible

Labrum

Labium

a) Identify the mode of feeding exhibited by a pest having such features. (1 mark)

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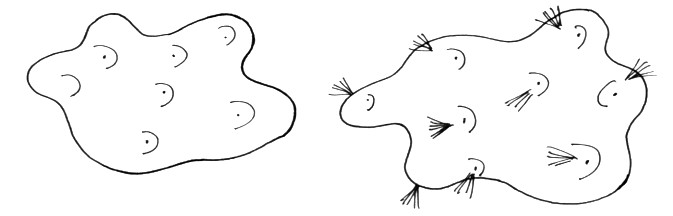
b) Name any FOUR pests with the above feeding habits. (2 marks)

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21. Below are two diagrams of Irish potato tubers after being subjected to some conditions before planting.

D1 D2



Before subjecting to the conditions After subjecting the conditions

1. Which process of potato treatment is illustrated above? (1mk)

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1. State **two** conditions necessary for the above process (2mks).

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1. Give **two** reasons for carrying out the above practice. (2mks)

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**22. a)** Using the information on the table below answer the questions that follow.

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| Fertilizer input (units | Maize yield (bags) | Marginal products (bags) |
| 0  1  2  3  4  5 | 50  62  66  68  69  69 | -  12  4  2  1  0 |

a) The cost of fertilizer is sh.1500 per unit and the price of maize is sh.1200 per bag.

i) At what unit of fertilizer input should the farmer be advised to stop applying any more fertilizer to the maize ? (1 mark)

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ii) Give reason for your answer in (i) above. (1 mark)

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1. Calculate the marginal return at the point of optimum production. (1 mark)

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**b)** State the law of diminishing return in a production function. (1 mark)

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**23.** The diagram below illustrates a physical method that is used to control soil erosion. Study it carefully and answer the questions that follow

**D**

a) Name the physical soil erosion control method illustrated by the diagram above (1 mk)

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b) Name the part labelled D on the diagram (1 mk)

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c) State four places where water from the structure named in (a) above is discharged (2 mks)

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**24.** The diagram below illustrate common weeds in arable land. Study them and answer the questions that follow.

**a)** Identify the weeds labelled D and C. (2 marks) C....................................................................................................................................................

D .........................................................................................................................................................

**b)** Classify the weed labeled C according to plant morphology. (1 mark)

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**c)** Give one reason why it is difficult to control the weed labeled D. (1 mark)

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**SECTION C (40MARKS)**

**Answer any two questions.**

25 [a] Explain seven ways in which farmers adjust to risks and uncertainties in farming . [7 marks]

[b] Explain five qualities of a good farm manager. [5 marks]

[c] The following are expenses of Pioneer Farm in the year 2014.

Concentrates shillings 5500

Seeds shillings 4500

Fertilizer shillings 7000

Fuel shillings 2000

Disc harrow shillings 175000

The farmer sold wheat to millers for shillings 120000

Sold cabbages to the market for shillings 40000

Sold milk to school for shillings 30000

Sold poles to a saw mill for shillings 25000

The opening valuation was shillings 150000

The closing valuation was shillings 250000

1. Prepare a profit and loss account for Pioneer farm for the year ending December 2014 [7 mark
2. Did the farm make a profit or a loss and of how much? [1 mark]

**27.** a) Describe the production of tomatoes under transplanting. (5mks)

b) Mention FIVE importance of organic matter in the soil. (5 marks)

c) State TEN uses of water in the farm. (10 marks)

29 a) Describe five management practices carried out on napier grass to maximize production. (5mks)

b) Explain five ways in which draining mashy/land encourage crop growth. (5mks)

c) Describe briefly the effects of mass wasting/solifluction. (5mks)

d) Explain five ways by which soil looses fertility (5mks)

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