

Name: ..... Index no .....

School: ..... Candidate's sign .....

Date: .....

443/1  
 AGRICULTURE  
 PAPER 1  
 AUGUST/SEPT 2022  
 TIME: 2 HOURS

### SUKELLEMO JOINT EXAM

#### INSTRUCTIONS TO CANDIDATES:

- Write your **name** and **index number** in the spaces provided.
- Sign and write the date of the examination in the spaces provided above.
- This paper consists of three section **A,B** and **C**
- Answer **all** the questions in section **A** and **B**
- Answer any **two** questions in section **C**.
- Answers should be written in the spaces provided in this booklet.

#### For Examiner's Use Only:

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
A	1-18	30	
B	19-22	20	
C	23- 25	20	
		20	
	<b>TOTAL</b>	<b>90</b>	

This paper consists of 8 printed pages. Candidates should check to ascertain that all papers are printed as indicated and that no questions are missing

**SECTION A: (30MARKS)**

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

1. State **four** factors which determine the farming systems adapted by farmers. (2mks)  
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2. State four benefits of a good soil structure. (2mks)  
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3. Name **two** types of inventories used in the farm. (1mk)  
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4. Give **four** reasons for sub-soiling in a maize field. (2mks)  
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5. State **four** qualities considered when selecting seeds for planting. (2mks)  
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6. Give **four** conditions which make is necessary to use a nursery in crop establishment. (2mks)  
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7. State **two** factors that determine the amount of fertilizer to be used as a top dress in forage crops. (1mk)  
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8. State **four** effects of late defoliation. (2mks)  
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9. State **four** benefits of agro-forestry trees on terraces. (2mks)

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10. State four advantages of planting potatoes in ridged seedbeds. (2mks)

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11. Name two vegetative materials used in establishment of pineapples. (1mk)

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12. State **four** changes that would indicate improvement of labor efficiency in a farm. (2mks)

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13. Give **four** general symptoms shown by crops infected by viral disease. (2mks)

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14. What would happen to the price of a commodity if the supply of the commodity decreases without the demand changing? (1mk)

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15. What are complementary products? (1mk)

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16. State two problems that maybe brought by hardpans (2mks)

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17. Differentiate between thinning and pricking out. (2mks)

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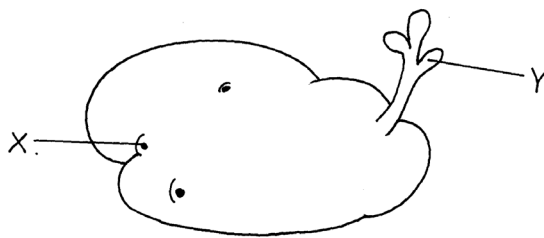
18. State two ways in which crop rotation controls weeds (1mk)

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**SECTION B: (20 MARKS)**

*Answers all questions in this section in the spaces provided.*

19. The diagram below illustrates a vegetative propagation material. Study it carefully and answer the questions that follow.



(a) Identify the organ. (1mk)

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(b) Label the party X and Y. (2mk)

X.....

Y.....

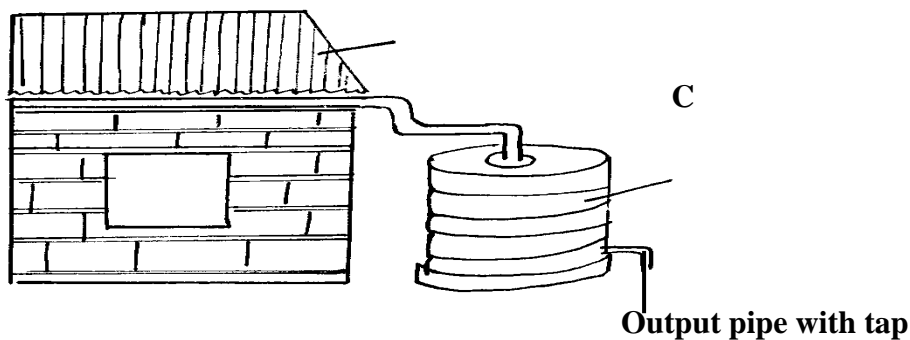
(c) Name the method that was used in preparing the above vegetative for planting. (1mk)

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(d) Name one environmental condition that are necessary for the success of this method of preparing the plant materials. (1mk)

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20. The diagram below shows a structure used to collect water in the farm.



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

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(b) Give **two** factors that will determine the amount of water collected from the above mentioned structures. (2mks)

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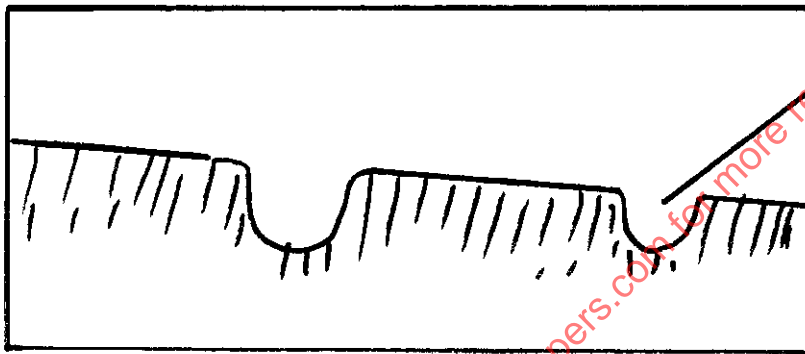
(c) Outline one maintenance practice that should be carried out on part labeled c above. (1mk)

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d) Name one other method used to collect water in the farm. (1mk)

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21. The diagram below is a type of a terrace.



(a) Name the type of terrace illustrated above. (1mk)

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(b) Give the name of the part labeled M in the diagram. (1mk)

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c) State one limitation of this terrace. (1mk)

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d) How does the above structure help in the control of soil and water conservation? (1mk)

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**SECTION C (40 MARKS)**

*Answer any two questions in this section in the spaces provided after question. 23*

- 23. (a) State four types of micro catchments. (4mks)
- (b) Outline four benefits of primary cultivation. (4mks)
- (c) A farmer has 160 hectares of arable land, 60 ha of which is under wheat, 32 ha under maize, 12 ha under fodder crops and the rest under pasture. He wishes to know whether replacing 12 ha of maize with Irish potatoes the following year would be worthwhile. The fertilizer rate would have to be increased from 5 bags per ha for maize to 7 bags per ha for Irish potatoes .An extra 100 man — days of casual labour per ha will be necessary as a result of the change. The average yield of maize and Irish potatoes is 45 and 115 bags / ha respectively. The prices are 1400/= per bag for maize and 1200/= per bag for Irish potatoes. Seed costs are 2500/= per ha for maize and 30,000/= per ha for Irish potatoes. Fertilizer costs are 1300/= per bag. Labour is paid at 150/= per man day. Draw up a partial budget and indicate the effects of the change. (12mks)

- 24. Describe the field production of sorghum under the following sub- headings.
  - i) Seedbed preparation. (5mks)
  - ii) Planting. (3mks)
  - iii) Harvesting (2mks)
- b) Explain **five** instances when it is advisable use herbicides to control weeds.(5mks)
- c) Outline **five** environmental factors that would determine the types of crop that a farmer should grow in an area. (5mks)

- 25. a) Explain four methods of preventing water pollution. (4mks)
- b) Explain four factors that influence seed rates. (8mks)
- c) Describe four methods of fertilizer application in crop production. (8mks)

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