

Name..... Index No.
 School Candidate's Signature.....
 Date.....

443/1
 AGRICULTURE
 Paper 1
 July/ August 2010
 Time: 2 Hours

BUNGOMA JOINT EVALUATION TEST - 2010
Kenya Certificate of Secondary Education (K.C.S.E)

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 AGRICULTURE
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INSTRUCTIONS TO CANDIDATES

- Write your name and index no in the spaces provided above
- This paper consists of **THREE** sections **A, B and C**.
- Answer **ALL** the questions in section **A and B** and **two** questions in section **C** in the spaces provided

FOR EXAMINER'S USE ONLY.

SECTION	QUESTION	MAXIMUM MARKS	CANDIDATES SCORE
A	1-20	30	
B	21-24	20	
C	25-27	40	

*This paper consists of 12 printed pages.
 Candidates should check the question paper to ensure that all pages are printed as indicated
 and no questions are missing*

SECTION A (30 MARKS.)

Answer all questions

1. Name **two** examples of liabilities in a balance sheet. (1mk).
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2. Give **two** ways by which plants react to water shortage. (1mk).
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3. State **three** properties of soil that is influenced by soil texture. (1 ½ mks).
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4. Give **two** management practices carried in a banana stool. (1mk).
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5. State **two** functions of polythene sheet when used as mulch material (1mk).
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6. (a) What is an incomplete compound fertilizer? (½ mks).
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(b) State **four** reasons why a maize crop continued showing deficiency of potassium despite application recommended amount of potassic fertilizer. (2mks)
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7. Give **three** benefits of timely planting of annual crops. (1 ½ mks).
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8. Why are farmers encouraged to conserve excess forage in the farm (1mk).
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9. When does opportunity cost not exist? (1 ½ mk).
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10. Give **four** crops requiring training (2mks).

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11. Name **four** diseases caused to man by drinking untreated water. (2mks)

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12. State **two** reasons why cereal grains are dried before storage. (1mk)

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13. State **four** ways of improving farm labour productivity. (2mks)

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14. Give **four** characteristics that good agro-forestry tree should possess. (2mks)

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15. State **four** points to be observed when pruning mature tea. (2mks)

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16. State **four** factors determining the depth of ploughing land. (2mks).

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17. Name any **three** agents of biological weathering. (1 ½ mks)

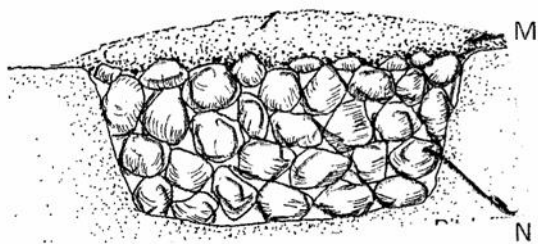
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18. State the functions of the following chemicals used in water treatment.
- (a) Chlorine.
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- (b) Aluminum sulphate(Alum) (1mk).
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19. State **three** symptoms of coffee berry disease. (1 ½ mk).
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20. Give **two** factors affecting the quality of hay (1mk)
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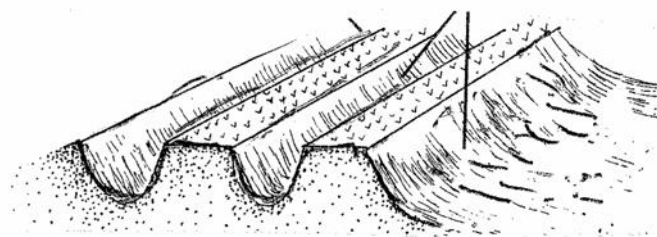
SECTION B - (20 MARKS.)

Answer all questions

21. The diagrams labeled S and T illustrate some methods of draining waterlogged fields; use it to answer the questions that follow.



S



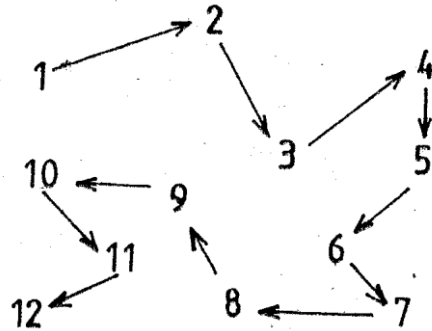
T

- (a) Identify the methods illustrated (1mk)
- S.....
- T.....
- (b) What are the materials in S labeled M and N (1mk)
- M.....
- N.....
- (c) Name **two** types of crops that can be planted in the field instead of carrying out the practice illustrated in S and T. (1mk)

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(d) What is the importance of carrying out land reclamation? (1mk)

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22. The diagram below shows a soil sampling method.



(a) Identify the method illustrated above (1mk)

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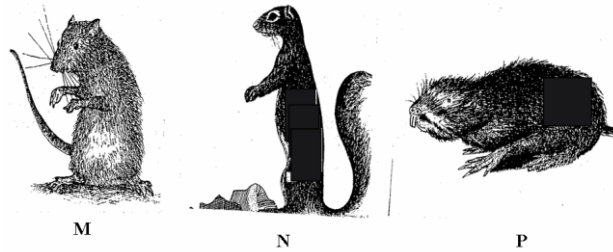
(b) Name any **two** spots in a farm that should be avoided during sampling (2mks).

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(c) Describe the steps followed while carrying out the exercise in (a) above (4mks)

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23 (i) Use the diagrams below to answer the question that follow.



(a) Identify the crop pests labeled M N and P (3mks)

M.....

N.....

P.....

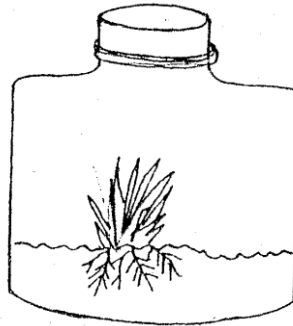
(b) State one control measures of crop pests labeled M (1mk)

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(c) State the damage caused to crops by crop pest labeled N (1mk).

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24. The diagram below shows a banana tissue culture. Study it and answer the questions that follow.



(i) Name **two** way of inducing the rooting of plantlets (2mks)

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(ii) State the importance of propagating crops by tissue culture technique (2mks)

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SECTION C (40 MARKS)

Answer any two questions

25. A farmer had a plot of land measuring 5 hectares in which he intended to plant maize. He was advised to apply 150 kg of P_2O_5 per hectare at planting and 200kg N per hectare during top dressing. The fertilizer available in the market was Calcium Ammonium Nitrate containing 20% N and Di-ammonium phosphate 46% P_2O_5 . Calculate.

(i) The amount of Di-ammonium phosphate required (2mks)

(iii) The amount of calcium ammonium nitrate required (2mks)

(b) Baraka farm manager plans to grow Irish potatoes or maize for grains. Study the information below and answer the questions that follow:

Irish potatoes

Cost of fertilizers/ha _____ Kshs 10,000.

Labour requirements/ha _____ Kshs 50 man —days

Yield /ha _____ 10,000kg

Seed potato/ha _____ Kshs20, 000

Cost of labour _____ Kshs 200 per man day

Cost of fungicides _____ Kshs 5000

Cost of ploughing _____ Kshs 4000

Selling price of potatoes per kg _____ Kshs 30.

Maize

Yield per hectare _____ 7,500kg

Selling price of maize per kg _____ Kshs 20.

Labour requirement/ha _____ 200 man days.

Cost of ploughing /ha _____ Kshs 4000

Seed maize /ha _____ Kshs 3000
Cost of fertilizers /ha _____ Kshs 10,000
Cost of top dressing fertilizers _____ Kshs 4,800
Cost of labour _____ Kshs 150 per man - day

(i) What is gross margin? (1mk)

(ii) Calculate the gross margin of each of the crops. (4mks)

(iv) From the calculation above which crop should the farm grow? (1mk)

(d) Describe the environmental factors that may lead to poor yields in crop production (10 mks)

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26. Describe the production of beans under the following sub headings.

(a) Ecological requirements (4mks)

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(b) Seedbed preparation (5mks)

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(c) Planting (5mks)

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