

[illegible]

NAME INDEX NO.

SCHOOL: CANDIDATE'S SIGNATURE

DATE.

443/1
AGRICULTURE
PAPER 1
July / Aug 2015
Time: 2 Hours

**NAROK SOUTH SUB-COUNTY SECONDARY SCHOOLS JOINT
EXAMINATION**

Kenya Certificate of Secondary Education (K.C.S.E)
AGRICULTURE
Paper 1

INSTRUCTIONS TO CANDIDATES

- Write your name and index number in the spaces provided above.
- Sign and write the date of examination in the spaces provided above.
- This paper consists of **THREE** Sections **A**, **B** and **C**.
- Answer all questions in Section **A** and **B**.
- Answer two questions in Section **C** in the spaces provided.

FOR EXAMINER'S ONLY

Section	Question	Maximum	Candidates Score
A	1 - 17	30	
B	17 - 21	20	
C	22 - 24	40	
TOTAL SCORE		90	

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

1. What is plantation farming system? (1 mark)

.....

2. State **three** characteristics of shifting cultivation (1½ marks)

.....

.....

.....

3. State **two** ways by which wind affects the growth of crops. (1 mark)

.....

.....

.....

4. Give **two** roles of micro-organisms in the soil that are beneficial to crops (2 marks)

.....

.....

5. Give **four** deficiency symptoms of phosphorous in crops. (2 marks)

.....

.....

6. State any **four** factors that determine the spacing of a crop (2 marks)

.....

.....

7. Give a reason for carrying out each of the following practices in a tomato nursery. (2 marks)

- (i) Hardening off

.....

- (ii) Pricking out

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

.....

.....

[illegible]

Agrim 433/1

9. Name a tree species you would recommend for the following areas (1½ mark)

(i) River banks

.....

(ii) Steep slopes

.....

(iii) Contours

.....

10. (a) State **four** factors that contribute to the competitive ability of weeds. (2 marks)

.....

.....

(b) Define the term "Economic Injury Level" of a crop. (1 mark)

(c) Give **two** ways by which pesticides kills crop pests (1mark)

.....

.....

11. State **four** factors that influence the rooting of cuttings (2 marks)

.....

12. State **three** reasons for processing agriculture produce (1½ mark)

.....

Agrim 433/1

SECTION C (40 marks)

Answer any TWO questions from this section in the spaces provided

13. Name **four** agricultural support services available to farmers in Kenya (2 marks)

.....

.....

.....

14. State **four** factors that determine the stage at which a crop is harvested (2 marks)

.....

.....

.....

.....

15. State **three** reasons for using green houses (1 ½ mks)

.....

.....

.....

16. Define the following terms as used in agricultural economics (2 marks)

- (i) Per capita income

.....

.....

- (ii) Gross Domestic Product

.....

.....

22. Describe the production of dry beans *Phaseolus vulgaris* under following sub-heading

- (a) Ecological requirements (2 marks)
- (b) Varieties (2 marks)
- (c) Preparation of planting materials (2 marks)
- (d) Planting (4 marks)
- (e) Describe the different methods a farmer can use to adjust to risks and uncertainties (10 marks)

23. The following information was extracted from Naiji farm for the year ending 31st December 2013. Study it carefully and answer the questions that follow.

	Kshs
Cash at hand	5,000
Layers	30,000
Beans in store	7,000
Calves	15,000
Dairy cattle	120,000
Buildings	75,000
Machinery	95,000
Land	200,000
Interest payable	7,000
Cash in the bank	20,000
Taxes payable	750
Wages payable	5,600
Bank loan	213,000
Eggs sales on credit	10,000
Milk sales on credit	13,000
Farm inputs purchased on credit	19,800
Vegetables sales on credit	5,000

- (a) Prepare a balance sheet for the farm (12 marks)

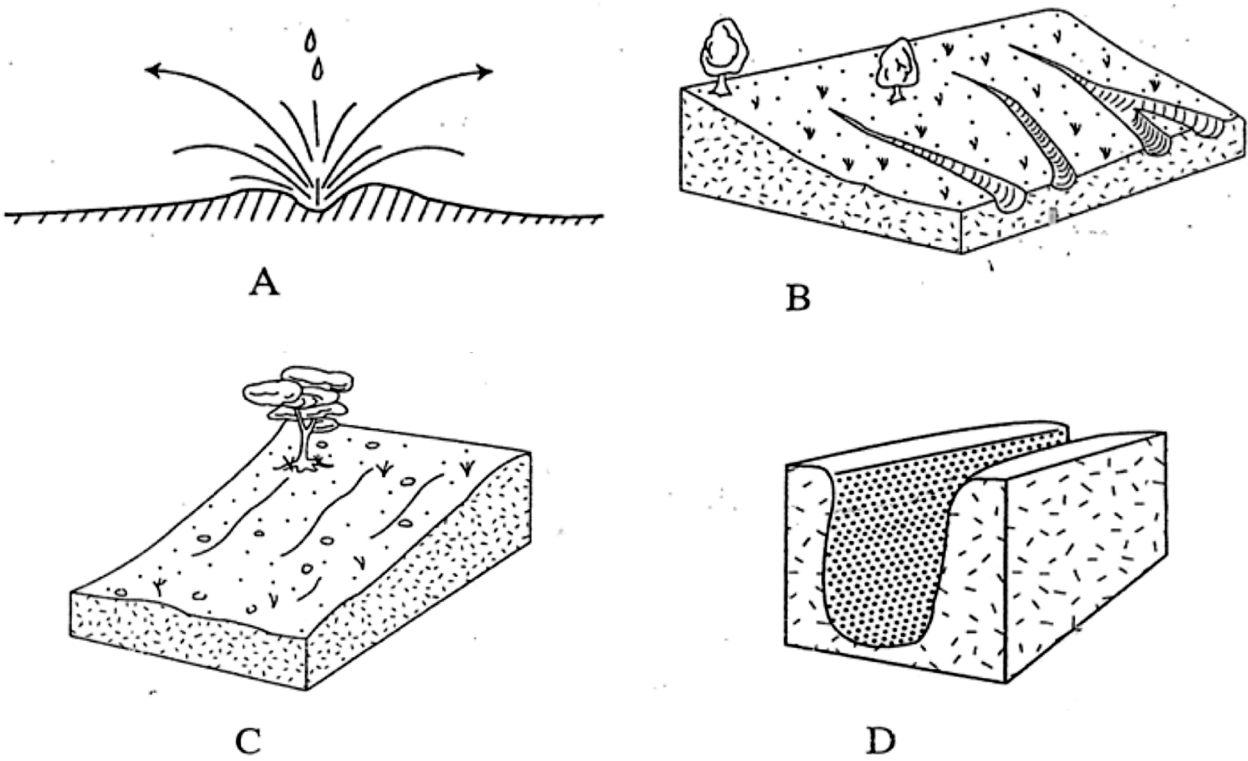
- (b) (i) Was Naiji's business solvent or insolvent? (1mark)
- (ii) Apart from a balance sheet, name two other financial statements which can be used in a farm business. (2 marks)

- (c) Outline the procedure for soil sampling on a site in preparation for establishing coffee (5marks)

24. a) Describe five general uses of water in the farm. (5marks)
- (b) Explain four methods that are used in breaking dormancy in seeds. (8marks)
- (c) Outline various cultural methods of controlling crop pests. (7marks)

21. The illustration below indicates type of soil that take place on cultivated farm land. Study them and answer the questions below.

SECTION B (20MARKS)
Answer ALL the questions in the spaces provided.



(a) Name the type of erosion represented by each of the illustrations A,B, C and D. (4 marks)

A
 B
 C
 D

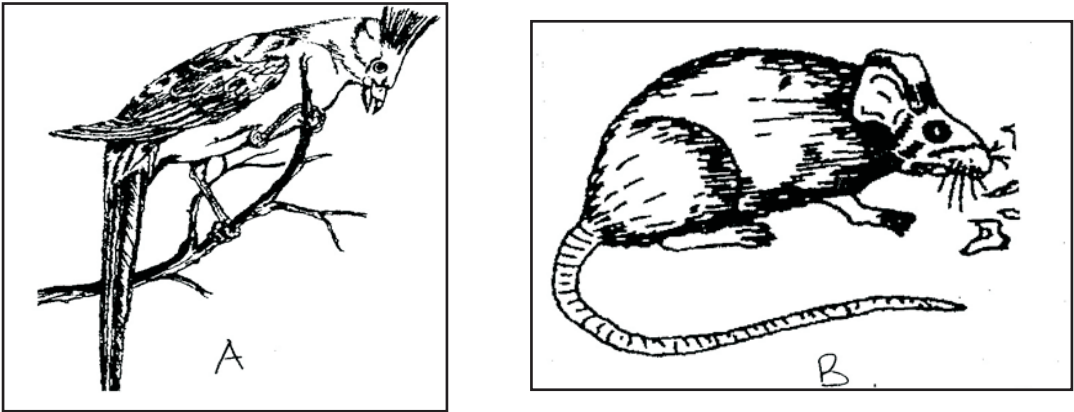
(b) Give practices that may reduce the impact of the type of erosion represented by A(1mk)

.....

(d) Apart from loss of soil, what type of destruction is caused by the type of erosion represented by A. (1 mark)

.....

17. (a) Study the diagram **below** carefully and answer the questions that follow.



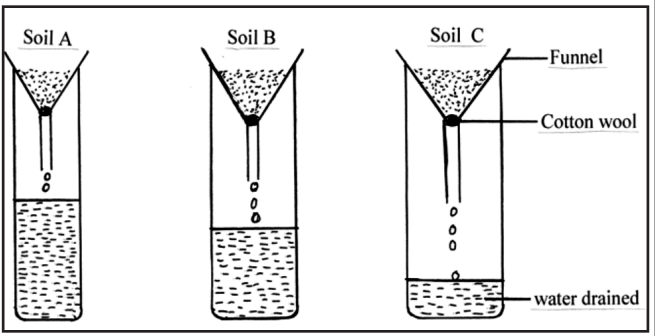
(a) Identify the field pest shown in the illustration **A** and **B** above. (2 marks)

A
B

(b) State **two** effect the pest expressed in **A** above has on maize plant. (2 marks)

.....

18. The diagrams below shows an experiment set up using three different types of soil and observation is made after 24 hours. Study it and answer the questions that follow



(i) What is the experiment set up above designed to study. (1mark)

.....

(ii) State how the farmer can improve the structure of soil A. (1 mark)

.....

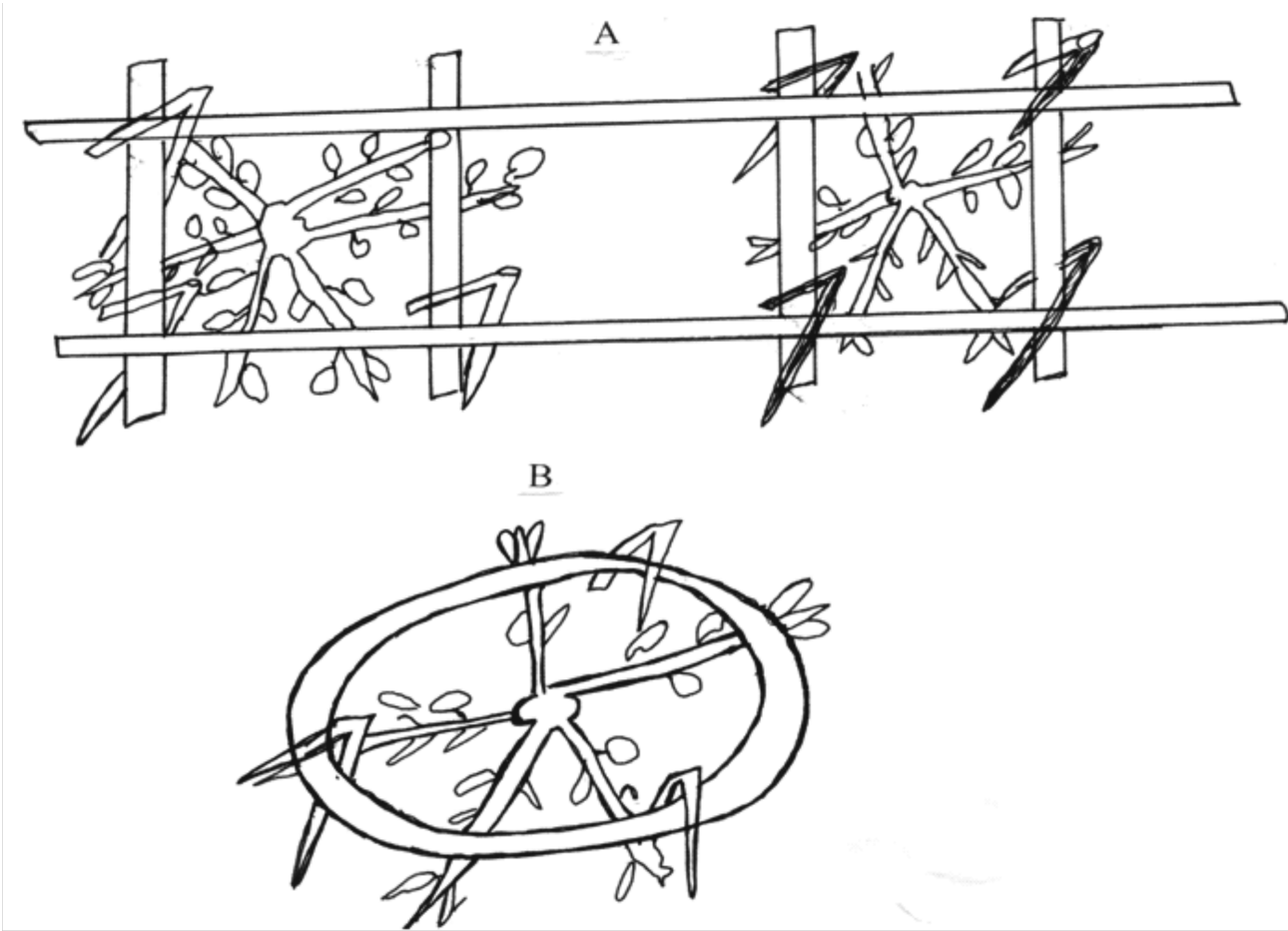
19. (a) State the law of diminishing returns in a production process (1 Mark)
 (b) Use the information on the table below to answer the questions that follow

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

The cost of fertilizer is Kshs 1500 per unit and the price of maize is Kshs 1200 per bag.

- (i) At what unit of fertilizer input should the farmer be advised to stop applying any more fertilizer to the maize? (1mk)
-
- (ii) Give a reason for your answer in (b) above (1mk)
-
-
- (iii) Calculate the marginal return at the point of optimum production (1mk)

20. Below are diagrams of table formation in tea pruning. Use them to answer the questions that follow.



- (a) Identify the methods of table formation. (1 mk)
- A.....
- B.....
- (b) Apart from the above, state two other table formation in tea production . (1mk)
-
-
- (c) Name the process of creating a flat and uniform plucking table in tea production(1mk)
-
- (d) Explain the processes of maintaining the plucking table of tea bushes. (2 mks)
-
-