

Name Index Number /
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AGRICULTURE
Paper 1
(THEORY)
Oct./Nov. 2014
2 hours

Candidate's Signature

Date



THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education
AGRICULTURE
Paper 1
(THEORY)
2 hours

Instructions to candidates

- (a) Write your name and index number in the spaces provided at the top of this page.
 (b) Sign and write the date of the examination in the spaces provided above.
 (c) This paper consists of **three** sections: **A, B and C**.
 (d) Answer **all** the questions in sections **A and B**.
 (e) Answer any **two** questions in section **C**.
 (f) All answers should be written in the spaces provided.
 (g) **This paper consists of 16 printed pages.**
 (h) **Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.**
 (i) **Candidates should answer the questions in English.**

For Examiner's Use Only

Section	Question	Maximum Score	Candidate's Score
A	1 – 15	30	
B	16 – 19	20	
C		20	
		20	
Total Score		90	



SECTION A (30 marks)

Answer all the questions in the spaces provided.

1 State **four** advantages of organic farming. (2 marks)

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2 Give **four** factors that can increase seed rates in crop production. (2 marks)

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3 State **four** roles of organic matter in sandy soils. (2 marks)

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4 Give **four** reasons for practising minimum tillage. (2 marks)

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5 What is meant by each of the following in crop production?

(a) Crop rotation; (1 mark)

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(b) Mulching. (1 mark)

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6 Give **four** reasons for inverting soil slices during primary cultivation. (2 marks)

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7 State **four** cultural ways of controlling couch grass (*Digitaria scalarum*). (2 marks)

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8 (a) Name **three** vegetative parts that can be used to propagate pineapples. (1½ marks)

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(b) State **three** disadvantages of vegetatively propagating pineapples. (1½ marks)

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9 Name **three** sources of underground water. (1½ marks)

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10 What is meant by each of the following in agroforestry?

(a) Pollarding; (1 mark)

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(b) Coppicing; (1 mark)

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(c) Lopping. (1 mark)

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11 State the information included in a sales receipt when a farmer is selling eggs. (2½ marks)

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12 State **two** reasons for practising agroforestry on a

(a) river-bank;

(1 mark)

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.....

(b) steep slope.

(1 mark)

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.....

13 State **three** disadvantages of using plastic pipes to convey water.

(1½ marks)

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14 State **three** causes of blossom end rot in tomatoes.

(1½ marks)

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15 What is meant by the term preference and choice as used in agricultural economics?

(1 mark)

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SECTION B (20 marks)

Answer all the questions in the spaces provided.

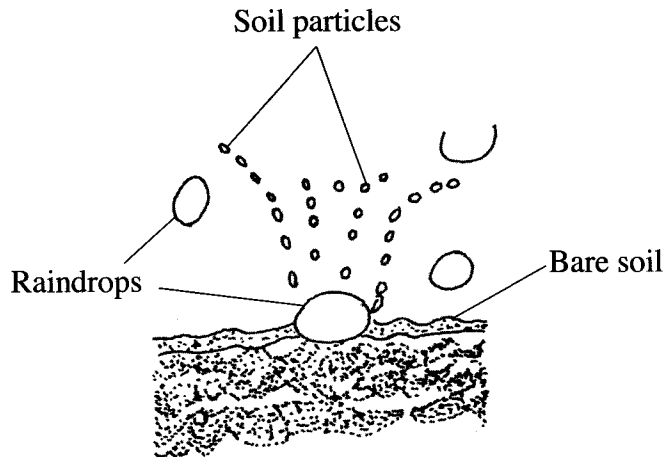
- 16 (a)** Distinguish between straight and compound fertilisers. (1 mark)

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- (b)** A farmer applied 200 kg of CAN (20%N) per hectare on his five hectares maize crop. Calculate the amount of nitrogen the farmer applied on his crop. Show your working. (4 marks)

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- 17** The diagram below illustrates a type of soil erosion.



- (a)** Identify the type of erosion. (1 mark)

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(b) How does the type of erosion shown above occur? (2 marks)

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.....

(c) How does cover cropping help to control the type of erosion shown above? (2 marks)

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.....

18 The table below shows the population and gross domestic products of countries A and B.

COUNTRY	GROSS DOMESTIC PRODUCT (million Ksh)	POPULATION (million)
A	1800	36
B	1200	15

(a) Calculate the per capita income for each country. Show your working. (2 marks)

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.....

(b) Which of the two countries is more developed economically? (1 mark)

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(c) Give a reason for your answer in (b) above. (1 mark)

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.....

(d) How can agriculture increase the gross domestic product of a country? (1 mark)

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.....

19 The photograph below shows weeds labelled A and B.



A



B

(a) Identify the weed labelled A. (1 mark)

A

(b) State **one** mechanical control measure for the weed labelled A. (1 mark)

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.....

- (c) Which category of herbicide will be most suitable to control the weeds labelled **A** and **B**?
- A** (1 mark)
- B** (1 mark)
- (d) Give a reason for your answer on weed **B** in (c) above.
-
(1 mark)

SECTION C (40 marks)

Answer any two questions from this section in the spaces provided after question 22.

- 20** (a) Describe the various risks and uncertainties in crop farming. (10 marks)
- (b) State the functions of Young Farmers Clubs in Kenya. (5 marks)
- (c) Give the reasons for land registration in Kenya. (5 marks)
- 21** (a) Explain **five** ways in which the Kenyan government can improve maize production to ensure food security in the country. (10 marks)
- (b) Why is pruning done in crop production? (10 marks)

- 22 (a) The tables below give information on the supply and demand schedules for tomatoes on a market.

Table 1: Prices and quantities of tomatoes supplied.

Tomatoes (kg)	Price per kg (Kshs.)
150	16.00
130	14.20
125	13.80
112	13.00
106	12.70
85	11.80
50	10.60
42	10.40
30	10.20
25	10.10

Table 2: Prices and quantities of tomatoes demanded.

Tomatoes (kg)	Price per kg (Kshs.)
80	18.00
87	16.70
101	15.50
119	14.10
135	13.20
155	12.40
171	11.80
185	11.30
191	11.10
205	10.80

- (i) Using the above data, plot supply and demand curves on the same axes. The axes have been labelled for you. (7 marks)
- (ii) Determine the price at which 120 kg of tomatoes were supplied on the market. (1 mark)
- (iii) How many kilograms of tomatoes were bought at a market price of Ksh. 13.00? (1 mark)
- (iv) What was the equilibrium price for tomatoes on the market? (1 mark)
- (b) Describe the production of maize under the following sub-headings:
- (i) seedbed preparation; (4 marks)
- (ii) planting; (3 marks)
- (iii) harvesting. (3 marks)

