Name: _____ Index No: _____/_____

2013
AGRICULTURE
P.T.E
July/August 2013
Time: $2\frac{1}{2}$ hours

Candidate's Signature: _____

Date: _____

THE KENYA NATIONAL EXAMINATIONS COUNCIL

PRIMARY TEACHERS EXAMINATION

AGRICULTURE

$2\frac{1}{2}$ hours

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** the questions in sections **A** and **B**.*
*Answer any **THREE** questions from section **C**.*
*Answers to **ALL** the questions must be written in the spaces provided in this booklet.*
Do not remove any pages from this booklet.
Candidates should answer all the questions in English.

For Examiner's Use Only

Section	Question	Maximum Score	Candidate's Score
A	1 - 5	30	
B	6 - 26	40	
C		10	
		10	
		10	
		Total Score	

This paper consists of 12 printed pages.

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

SECTION A (30 marks)

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

1. (a) State **two** factors considered when preparing a table of specifications in test development. (2 marks)

(b) Explain **three** factors that make the use of group experiment suitable in teaching. (3 marks)

2. (a) Give **two** reasons why the discussion method is used in the teaching of science. (2 marks)

(b) State **three** preparations that a teacher should make before engaging learners in a group discussion. (3 marks)

(c) State **six** characteristics of an ideal model for learning purpose. (3 marks)

3. (a) A teacher is expected to lead learners through an experiment in a science lesson. State **four** preparations that the teacher should put in place before the lesson. (2 marks)

(b) State **three** ways in which a lesson can be introduced. (3 marks)

(c) Give **four** reasons why a lesson should have a conclusion. (2 marks)

4. (a) Explain **three** ways in which a teacher can handle a learner's response when using the questioning technique. (3 marks)

(b) During scheming, a teacher has a lesson topic; seedbed preparation:

(i) state **one** skill objective the teacher can have for the topic; (2 marks)

(ii) give **two** learning activities the teacher can have for the lesson so as to achieve the above objective. (2 marks)

5. In a multiple choice science test, candidates' selection of the four options provided for a question was as follows:

OPTION	NUMBER OF CANDIDATES
A	7,048
B	195
C	186
D	171

If option **A** was the key:

(a) determine the difficult index of the question; (1 mark)

(b) explain the appropriateness of the question in the test. (2 marks)

SECTION B (40 marks)

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

6. State **four** roles of agriculture in the economic development of Kenya. (2 marks)

7. State **four** ways in which the crop museum section in a school farm should be used for teaching. (2 marks)

8. State **four** physical characteristics of the dromedary species of camels in livestock production. (2 marks)

9. Name **three** systems of outbreeding used in livestock improvement. ($1\frac{1}{2}$ marks)

10. State **three** reasons why soil is important in crop production. ($1\frac{1}{2}$ marks)

11. Give **two** functions of the Queen bee in the colony. (2 marks)

12. List **four** harmful effects of strong wind on growing crops. (2 marks)

13. Name **two** methods of reclaiming semi-arid areas. (1 mark)

14. Why is tsetsefly control considered a land reclamation method? (1 mark)

15. State **four** body conformation features of a good dairy cow for breeding. (2 marks)

16. The diagram below shows a tool used on the farm.

(a) Identify the tool. ($\frac{1}{2}$ mark)

(b) State **two** uses of the tool. (1 mark)

17. State **three** functions of Agricultural research services in livestock production. ($1\frac{1}{2}$ marks)

18. The diagram below illustrates a type of vegetative propagation used in crop production. Study it and answer the questions that follow.

(a) Name the type of propagation shown in the diagram. ($\frac{1}{2}$ mark)

(b) Describe the procedure followed when carrying out the propagation illustrated above. (4 marks)

19. Name **two** intensive poultry rearing systems. (1 mark)

20. State **four** methods of utilising pastures. (2 marks)

21. (a) Differentiate between macro-nutrients and micro-nutrients as used in soil fertility. (1 mark)

(b) State **four** symptoms of nitrogen deficiency in crops. (2 marks)

22. State **one** use for each of the following farm structures:

(a) crush; ($\frac{1}{2}$ mark)

(b) green house; ($\frac{1}{2}$ mark)

(c) brooder; ($\frac{1}{2}$ mark)

(d) silo. ($\frac{1}{2}$ mark)

23. Name any **three** types of beehives used in Kenya. ($1\frac{1}{2}$ marks)

24. State **four** advantages of keeping livestock healthy. (2 marks)

25. State **four** requirements for clean milk production. (2 marks)

26. State **four** effects of soil pH on crop production. (2 marks)

SECTION C (30 marks)

*Answer any **THREE** questions from this section in the spaces provided after question 30.*

27. Explain the factors considered when determining spacing in crop production. (10 marks)

28. Describe the management of piglets from birth to weaning. (10 marks)

29. (a) Explain **five** disadvantages of land ownership through concession. (5 marks)

    (b) Describe the roles of an effective farm manager. (5 marks)

30. (a) State **five** effects of aphids on vegetable crops. (5 marks)

    (b) State **five** advantages of adding manure to sandy soils. (5 marks)