

**THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL
CERTIFICATE OF SECONDARY EDUCATION EXAMINATION**

034/2

**AGRICULTURAL SCIENCE 2
(PRACTICAL)
(For School Candidates Only)**

Time: 2:15 Hours

Monday, October 22nd 2012 a.m.

Instructions

1. This paper consists of **three (3)** questions.
2. Answer **two (2)** questions.
3. Each question carries 25 marks.
4. Cellular phones and calculators are **not** allowed in the examination room.
5. Write your **Examination Number** on every page of your answer booklet(s).



1. You are provided with specimens A₁, A₂, A₃, A₄, A₅, A₆ and A₇. Observe each of the specimens carefully and answer the questions that follow:
- (a)
 - (i) Name two possible products of specimen A₁ when processed and give one use of each product. **(2 marks)**
 - (ii) Name the primary store pest for specimen A₁ and briefly explain the adaptation of the pest. **(2 marks)**
 - (b)
 - (i) Comment on the resistance of specimen A₂ to storage insect attack and give reason for your answer. **(1 mark)**
 - (ii) Groundnut rosette virus is a serious disease affecting plants of specimen A₂. Explain briefly two effects and two control measures of the disease. **(4 marks)**
 - (iii) Write down the scientific name of plant that produces specimen A₃. **(1 mark)**
 - (iv) Explain briefly how pests attacking the plant in (b) (iii) above can be controlled. **(2 marks)**
 - (c) Refer to specimens A₄ and A₅.
 - (i) Name two major pests of the plant from where the specimen A₄ was taken. **(1 mark)**
 - (ii) How would you control the pests named in (c) (i) above? **(3 marks)**
 - (iii) What is the use of specimen A₄? **(1 mark)**
 - (iv) Name the main pest attacking seeds of specimen A₅ when stored and state one control measure which farmers should undertake to control it. **(2 marks)**
 - (d) Briefly explain how you would establish plants of specimen A₆ in the field. **(3 marks)**
 - (e)
 - (i) Identify specimen A₇ by its common name and account for the origin of its name. **(2 marks)**
 - (ii) Briefly explain how is specimen A₇ able to compete with the crop plants. **(1 mark)**

2. You are provided with specimens B₁, B₂, B₃, B₄ and B₅. Observe them carefully and answer the questions that follow:
- (a) (i) Name specimens B₂ and B₃. (2 marks)
- (ii) Briefly explain the use of each of the specimens B₁, B₂ and B₄. (3 marks)
- (iii) State two advantages of the practice done using specimen B₁ in animal husbandry. (2 marks)
- (iv) Outline six symptoms of the condition tested by using specimen B₃. (3 marks)
- (v) Describe briefly the mechanism of functioning of specimen B₄. (2 marks)
- (b) (i) Identify specimen B₅. (1 mark)
- (ii) State three harmful effects of specimen B₅ to farm animals. (3 marks)
- (iii) You have been appointed as a Ranch Manager at Dakawa Ranch which is heavily infested with specimen B₅. Explain briefly four measures which you will take to control the specimen in the Ranch. (4 marks)
- (iv) Briefly explain the disease that is transmitted to farm animals by specimen B₅ using the following guidelines:
- Name of the disease.
 - Causative agent.
 - Two groups of animals affected.
 - Four symptoms.
- (5 marks)
3. You are provided with specimens C₁, C₂, C₃, C₄, C₅, C₆, C₇ and C₈. Observe each of the specimens and answer the questions that follow.
- (a) (i) Identify each of specimens C₁, C₂, C₃, C₄ and C₅. (5 marks)
- (ii) Explain briefly the use of each of the specimens C₁, C₂, C₃, C₄ and C₅. (5 marks)
- (b) (i) Differentiate between groups of materials represented by specimens C₆ and C₇. (2 marks)

- (ii) Enumerate four properties of specimen C₇. (2 marks)
- (iii) State four roles of specimen C₆ in the soil? (2 marks)
- (iv) Explain briefly why specimen C₆ needs to be applied at a high rate. (1 mark)
- (v) Suggest the best time and the reason for applying specimen C₈ in the field of maize. (2 marks)
- (vi) Explain why specimen C₇ should be applied in small amounts and at a considerable distance away from the growing parts. (2 marks)
- (vii) Suggest the proper application method for specimen C₇ and briefly explain how the method is done. (2 marks)
- (viii) Explain briefly why specimen C₈ should be placed in a zone within easy reach of the plant roots. (2 marks)