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

034/2 **AGRICULTURAL SCIENCE 2**
(PRACTICAL)
(For Both School and Private Candidates)

Time: 2:15 Hours **Thursday, 21st November 2013 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 A, B, C, D and E. Observe them carefully and answer the questions that follow:

(a) (i) Give the common names for each of the specimens A and B. **(2 marks)**

(ii) Which crop does each of the specimens A and B attack? **(1 mark)**

(iii) Explain in brief one important cultural method of controlling specimen A. **(2 marks)**

(b) (i) Give the botanical name of specimen C. **(1 mark)**

(ii) What is the family in which specimen C belongs? **(1 mark)**

(iii) Briefly explain why it is not advised to splash water on to the leaves of specimen C when watering. **(1 mark)**

(iv) What is the importance of cutting the growing tip of specimen C when about 4 to 6 branches of fruit have been formed? **(1 mark)**

(v) Give four reasons as to why the soil in which specimen C is grown should be covered with mulch. **(2 marks)**

(vi) Identify six important pests of specimen C. **(3 marks)**

(vii) Browning and rotting of fruits of specimen C normally indicate the symptoms of a disease. Identify the disease and its causative agent. **(1 mark)**

(c) (i) Identify specimen D. **(1 mark)**

(ii) Briefly explain why organic manures are not used when growing specimen D. **(2 marks)**

(iii) Name one important disease of specimen D and suggest how the disease can be controlled. **(2 marks)**

(iv) Suggest the suitable climatic requirements for growing specimen D. **(1 mark)**

(d) (i) Identify specimen E. **(1 mark)**

(ii) Why should specimen E be stored in a heap under shelter? **(1 mark)**

(iii) Briefly describe the process of formation of specimen E. **(2 marks)**

2. You are provided with specimens F, G, H, I, J, K and L. Observe them carefully and answer the following questions:

(a) (i) Identify each of specimens F and G. **(1 mark)**

(ii) Outline four methods for preserving a product which bring about specimen F. **(2 marks)**

(iii) Account for four usefulness of a method with which specimen G is used for in farm animal management. **(2 marks)**

(b) (i) Name specimen K. **(0.5 mark)**

(ii) Describe the mechanism functioning of specimen K. **(3 marks)**

(iii) What are the other materials used for the same purpose as specimen K? **(1 mark)**

(c) (i) Identify specimens H, I and J by giving their botanical names. **(3 marks)**

(ii) Examine the adaptations of specimens H, I and J in the field. **(2 marks)**

(iii) What is the importance of specimens H, I and J to farm animals? **(1 mark)**

(iv) Briefly explain two disadvantages of chemical control of specimens H, I and J. **(2 marks)**

(d) (i) Identify specimen L by giving its common name. **(0.5 mark)**

(ii) Describe the life cycle of specimen L. **(3 marks)**

(iii) Give four ways of controlling specimen L. **(4 marks)**

3. You are provided with specimens M, N, O, P, Q and R. Observe them carefully then answer the following questions:

(a) (i) Identify each of specimens M, N and O. **(1.5 marks)**

(ii) Give five properties of each of the specimens M and N. **(5 marks)**

(iii) Comment on the workability as far as cultivation is concerned for areas with high proportions of each of specimens M and N. **(2 marks)**

(iv) Giving reasons, compare the fertility status in each of specimens M and N. **(2 marks)**

(b) (i) Identify each of specimens P, Q and R. **(1.5 marks)**

(ii) Suggest the best time for applying specimens P, Q and R. Give reasons for your answer. **(3 marks)**

(iii) State the effects of specimens P, Q and R on soil acidity upon repeated application. **(3 marks)**

(iv) Why too much application of specimens P, Q and R should be avoided especially on cereal crops? **(2 marks)**

(v) Specimens P, Q and R should be applied in every cropping season. Briefly explain. **(2 marks)**

(c) (i) Identify each of specimens S and T. **(1 mark)**

(ii) State the use of each of specimen above. **(2 marks)**