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 **Friday, 18th November 2016 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, E, F and G. Observe them carefully and answer the questions that follow:

(a) (i) Identify each of specimens A and D by their botanical name. **(1 mark)**

(ii) Give two main reasons why seeds of specimen A have to be treated. **(2 marks)**

(iii) State any two importance of specimen A plant in core production. **(1.5 marks)**

(iv) Briefly explain three methods of harvesting specimen A. **(3 marks)**

(v) Name rhizobium strain which fix nitrogen in specimen D. **(1 mark)**

(b) (i) Identify specimens B and C by their scientific names. **(1 mark)**

(ii) How could you control specimens B and C? **(2 marks)**

(iii) State six ideal measures to be taken in order to reduce the rapid development of specimen C in storage of grain. **(3 marks)**

(c) (i) State four factors which determine the quality of specimen E. **(2 marks)**

(ii) Outline seven steps to be followed during hand baling of specimen E. **(3.5 marks)**

(iii) How could you improve the palatability of specimen E in livestock? **(0.5 mark)**

(d) (i) Identify specimens F and G by their scientific names. **(1 mark)**

(ii) State two control measures of specimen F. **(1 mark)**

(iii) Briefly describe three typical symptoms infection which can be observed in specimen G. **(1.5 marks)**

(iv) Briefly describe the 'mosaic' pattern of disease in specimen G. **(1 mark)**

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

(a) (i) State five microbial activities which takes place in specimen H. **(2.5 marks)**

(ii) Briefly describe the specimen H. **(2 marks)**

(b) (i) State five characteristics of specimen I. **(2.5 marks)**

(ii) What are the five factors to be considered in siting the apiary for specimen I? **(2.5 marks)**

(iii) Name four materials which are collected by specimen I for making its products. **(2 marks)**

(iv) Give two uses of processed specimen J. **(1 mark)**

(c) (i) Identify specimens L and M by their botanical name. **(1 mark)**

(ii) State six desirable qualities for specimens L and M in livestock keeping. **(3 marks)**

(iii) Outline ten practices that should be taken into consideration in order to manage specimens L and M for livestock keeping. **(5 marks)**

(iv) Provide four ingredients for making artificial of specimen K. **(2 marks)**

(d) (i) Identify specimen N. **(0.5 mark)**

(ii) What is the use of specimen N? **(1 mark)**

3. You are provided with specimens O, P, Q, R, S, T and U. Observe them carefully and answer the questions that follow:

(a) (i) Briefly describe the procedure for using specimen O. **(1.5 marks)**

(ii) What are the relationship between specimen O and P? **(1 mark)**

(b) (i) Identify specimen Q. **(0.5 mark)**

(ii) What is the use of specimen Q? **(1 mark)**

(iii) Account for three extreme effects of soil acidity which has not been controlled by application of specimen Q to plant growth. **(3 marks)**

(c) (i) Identify specimen R. **(0.5 mark)**

(ii) What are the four challenges of using specimen R in farming? **(2 marks)**

(iii) Briefly explain three agronomic practices to be adopted to maintain the soil organic matter content hence soil fertility apart from using specimen R. **(3 marks)**

(iv) Account for the effects of using specimen R which has a wide C:N ratio in the soil with deficient in Nitrogen. **(2 marks)**

(d) (i) State the process involved in using specimen S in oxenization. **(1 mark)**

(ii) Outline four components to be used in making specimen S. **(2 marks)**

(iii) Apart from specimen S, list other two types of specimen. **(1 mark)**

(iv) State four classes of animals used for draughtwork with specimen S. **(2 marks)**

(e) Propose three equipment which are used together with specimen T in its function. **(1.5 marks)**

(f) (i) With the aid of specimen U, name the main three types of plastering. **(1.5 marks)**

(ii) State three methods of laying specimen U in masonry work. **(1.5 marks)**