

**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

Thursday, 20th November 2014 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 the specimens M_1 , M_2 , M_3 , M_4 , M_5 , M_6 and M_7 . Study them carefully and answer the questions that follow.
- (a) (i) Identify specimens M_2 , M_3 and M_5 by their scientific names. (3 marks)
 - (ii) Outline damage caused by each of the specimens M_1 and M_4 to crop plants. (1 mark)
 - (iii) Briefly explain two control measures which farmers may take to control each of the specimens M_1 and M_4 . (4 marks)
 - (b) (i) Examine the importance of 'formative pruning' in specimen M_6 . (2 marks)
 - (ii) Briefly explain why specimen M_6 should not be grown in areas with a lot of wind and suggest what should be done in such a situation. (2 marks)
 - (iii) Suggest how a farmer should store specimen M_7 for consumption after harvest. (2 marks)
 - (iv) Name one important disease affecting specimen M_6 and propose one effective control measure for the disease. (2 marks)
 - (v) Suggest suitable climatic and soil requirements for specimen M_6 . (2.5 marks)
 - (vi) One of the most serious diseases affecting specimen M_7 is the viral disease. What are the symptoms and control measure for the viral disease? (2.5 marks)
 - (c) (i) Briefly explain why is it difficult to control specimen M_2 ? (1 mark)
 - (ii) Briefly explain how specimen M_3 causes loss in maize plants. (1 mark)
 - (iii) How can specimen M_5 be controlled in heavy infestation? (2 marks)
2. You are provided with specimens N_1 , N_2 , N_3 , N_4 , N_5 , N_6 , N_7 and N_8 . Observe them carefully and answer the questions that follow.
- (a) (i) Identify each of the specimens N_2 , N_4 and N_5 . (3 marks)
 - (ii) Mention four ways in which specimen N_1 is adapted to the function it performs. (4 marks)
 - (iii) State the function of each of the specimens N_2 , N_4 and N_5 in animal management. (3 marks)
 - (iv) Briefly explain how specimen N_4 performs its function. (2 marks)
 - (v) What is the importance of the practice done by using specimen N_2 ? (1 mark)
 - (vi) Briefly explain why specimen N_2 is not commonly used for the function it performs and name the other three methods that are used for the purpose. (2 marks)

- (b) (i) Under what type of feed stuff will you classify each of the specimens N_3 and N_8 ? (1 mark)
- (ii) Outline four characteristics of a class of feed stuff to which specimen N_8 belongs. (2 marks)
- (iii) Categorize specimens N_7 and N_8 into the types of feed stuff on the basis of nutrients they contain. (1 mark)
- (iv) Briefly explain four functions of specimen N_7 in the bodies of animals. (4 marks)
- (c) (i) Give the scientific name of specimen N_6 . (0.5 mark)
- (ii) State the importance of specimen N_6 in agriculture. (1.5 marks)

3. You are provided with specimens Q_1 , Q_2 , Q_3 , Q_4 , Q_5 , Q_6 and Q_7 . Observe them carefully and answer the questions that follow.

- (a) (i) Identify each of the specimens Q_5 , Q_6 and Q_7 . (3 marks)
- (ii) State the function of each of the specimens Q_5 and Q_7 . (2 marks)
- (iii) Briefly explain how specimen Q_6 functions when it is both engaged and not engaged. (2 marks)
- (iv) Outline six ways to show how you would care and maintain specimen Q_7 . (3 marks)
- (b) (i) Using feel method, identify each of the specimens Q_2 , Q_3 and Q_4 . Give reason for your identification. (3 marks)
- (ii) Mixing Q_2 , Q_3 and Q_4 results into an ideal soil, give the name of the resulting soil and suggest the proportion of each of the specimens to be mixed to result into an ideal soil. (2 marks)
- (iii) What would be the consequences of having a high proportion of specimen Q_4 in the soil? (2 marks)
- (iv) Explain the major agronomic problems which face the soil with high proportion of specimen Q_3 . (2 marks)
- (c) (i) Q_1 is of special importance to the soil. State six benefits of specimen Q_1 to the soil. (3 marks)
- (ii) Comment on the residual effect of specimen Q_1 . (2 marks)
- (iii) Briefly explain why specimen Q_1 should be kept compact and moist but not wet. (1 mark)