

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

**034/2**

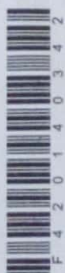
**AGRICULTURAL SCIENCE 2  
(PRACTICAL)  
(For School Candidates Only)**

**Time: 2:15 Hours**

**Thursday, 20<sup>th</sup> 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<sub>1</sub>, M<sub>2</sub>, M<sub>3</sub>, M<sub>4</sub>, M<sub>5</sub>, M<sub>6</sub> and M<sub>7</sub>. Study them carefully and answer the questions that follow.

- (a) (i) Identify specimens M<sub>2</sub>, M<sub>3</sub> and M<sub>5</sub> by their scientific names. **(3 marks)**
  - (ii) Outline damage caused by each of the specimens M<sub>1</sub> and M<sub>4</sub> to crop plants. **(1 mark)**
  - (iii) Briefly explain two control measures which farmers may take to control each of the specimens M<sub>1</sub> and M<sub>4</sub>. **(4 marks)**
- (b) (i) Examine the importance of 'formative pruning' in specimen M<sub>6</sub>. **(2 marks)**
  - (ii) Briefly explain why specimen M<sub>6</sub> 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<sub>7</sub> for consumption after harvest. **(2 marks)**
  - (iv) Name one important disease affecting specimen M<sub>6</sub> and propose one effective control measure for the disease. **(2 marks)**
  - (v) Suggest suitable climatic and soil requirements for specimen M<sub>6</sub>. **(2.5 marks)**
  - (vi) One of the most serious diseases affecting specimen M<sub>7</sub> 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<sub>2</sub>? **(1 mark)**
  - (ii) Briefly explain how specimen M<sub>3</sub> causes loss in maize plants. **(1 mark)**
  - (iii) How can specimen M<sub>5</sub> be controlled in heavy infestation? **(2 marks)**

2. You are provided with specimens N<sub>1</sub>, N<sub>2</sub>, N<sub>3</sub>, N<sub>4</sub>, N<sub>5</sub>, N<sub>6</sub>, N<sub>7</sub> and N<sub>8</sub>. Observe them carefully and answer the questions that follow.

- (a) (i) Identify each of the specimens N<sub>2</sub>, N<sub>4</sub> and N<sub>5</sub>. **(3 marks)**
  - (ii) Mention four ways in which specimen N<sub>1</sub> is adapted to the function it performs. **(4 marks)**
  - (iii) State the function of each of the specimens N<sub>2</sub>, N<sub>4</sub> and N<sub>5</sub> in animal management. **(3 marks)**
  - (iv) Briefly explain how specimen N<sub>4</sub> performs its function. **(2 marks)**
  - (v) What is the importance of the practice done by using specimen N<sub>2</sub>? **(1 mark)**
  - (vi) Briefly explain why specimen N<sub>2</sub> 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)