

**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, 19th November 2015 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, G, H, I and J. Observe them carefully and answer the following questions:

- (a) (i) Identify each of specimens A, B, C and D. (2 marks)
- (ii) State how are specimens A and B used? (1 mark)
- (iii) Explain briefly the mechanism of functioning of specimen C in a four stroke engine. (4 marks)
- (iv) How specimen D assists in forming a combustion chamber in the engine? (2 marks)
- (b) (i) Identify each of specimens E and F. (1 mark)
- (ii) What is the relationship between specimens E and F? (2 marks)
- (iii) Outline four considerations to be observed when using specimen E. (2 marks)
- (c) (i) State two qualities of how specimen G should be. (1 mark)
- (ii) Briefly explain how specimen G performs its function. (2 marks)
- (d) (i) Identify each of specimens H, I and J. (1.5 marks)
- (ii) Describe briefly how specimen H works. (2 marks)
- (iii) State five conditions in which the use of specimen I is more appropriate than specimen J. (2.5 marks)
- (iv) Why is specimen J not preferred for use in some crops especially in the dry season? (2 marks)

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

- (a) (i) State two damage symptoms for specimen K. (1 mark)
- (ii) Briefly explain three outcome of feeding behaviour for specimen K. (3 marks)
- (iii) Suggest two control measures for the pest in specimen L. (2 marks)
- (b) (i) Name the disease affecting plant in specimen M. (1 mark)
- (ii) State four effects caused by the pathogen in specimen M. (2 marks)

- (iii) Elaborate the physiological effect caused by the presence of galls on the roots of specimen M. (2 marks)
 - (iv) Propose six ways of preventing fungal infection in specimen N that is to be stored after harvest. (3 marks)
 - (c) (i) State four damage symptoms that specimen O cause to the host plant. (2 marks)
 - (ii) Examine three management measures for specimen O. (3 marks)
 - (iii) Why is specimen P difficult to control? (1 mark)
 - (d) (i) Explain briefly what you should do when planting specimen Q in an area known to have banana weevils. (1 mark)
 - (ii) What are the two preventive measures to take against nematodes when planting specimen Q? (2 marks)
 - (iii) Briefly describe the process of propagating specimen R. (2 marks)
3. You are provided with specimens S, T, U, V, W, X, Y and Z. Observe them carefully and answer the following questions:
- (a) (i) Describe briefly how specimen S is used for its purpose. (3 marks)
 - (ii) Account for three reasons for trimming specimen T. (3 marks)
 - (b) (i) Describe briefly the method of castrating a bull calf using specimen U. (3 marks)
 - (ii) Explain briefly the management practice done by using specimen V in poultry and state two importance of the practice. (3 marks)
 - (c) (i) Account for the structural adaptation and the effect of specimen W in the animal body. (3 marks)
 - (ii) Outline three importance of specimen X to the newly born animal. (3 marks)
 - (d) (i) What is the importance of specimen Y to farm animals? (2 marks)
 - (ii) Describe the process of making specimen Z. (3 marks)
 - (iii) How is specimen Z important in animal production? (2 marks)