

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

034/2

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

Time: 2:15 Hours

Friday, 23rd November 2018 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, calculators and any unauthorised materials 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 and I. Observe them carefully and answer the questions that follow:

- (a) (i) Identify each of specimens A, B, F, H and I by their botanical names. (2.5 marks)
- (ii) Why it is not advised to plant more than one variety of specimens A at the same place at a time? (1 mark)
- (iii) Distinguish three types of specimen B by its flowers. (3 marks)
- (iv) State the male: female plant ratio for specimen B to be observed in farming. (1 mark)
- (v) Why it is not recommended to apply nitrogen fertilizer for growing specimen F? (2 marks)
- (vi) Name six commonly grown specimen H varieties in Tanzania. (3 marks)
- (vii) Give four common names of most frequently occurring pests of specimen H. (2 marks)
- (viii) Briefly explain the three types of vegetative propagating materials for specimen I. (3 marks)
- (b) (i) Identify each of specimens C, D and E by their botanical name. (3 marks)
- (ii) What are the five benefits of specimen D to a farmer? (2.5 marks)
- (c) (i) How many suckers are recommended to be left in a stool of specimen G? (1 mark)
- (ii) Give two names of suckers recommended to be left in a stool of specimen G. (1 mark)

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

- (a) (i) Briefly describe the composition and functions of shell in the specimen J. (2 marks)
- (ii) In which part of reproduction system of a bird where shell part of specimen J is added? (1 mark)
- (iii) State five composition of newly laid specimen J? (2.5 marks)
- (b) (i) Suggest two materials and five equipment apart from specimen K which are to be used during harvesting of specimen L. (3.5 marks)
- (ii) Briefly describe the procedure for harvesting specimen L by using hands. (6 marks)
- (c) State six harmful effects of specimen M to farm animals. (3 marks)
- (d) (i) Examine the procedures for using specimen N in animal management practices. (1.5 marks)
- (ii) Name other three methods which are used for the same purpose as specimen N. (1.5 marks)

- (iii) Give the name of specimen O. (1 mark)
- (iv) How specimen O is used for its function? (1 mark)
- (v) Identify specimen P by its botanical name. (1 mark)
- (vi) Propose two other materials as specimen P that are suitable for planting in pasture by giving their common names. (1 mark)

3. You are provided with specimens Q, R, S, T, U, V, W, X, Y and Z. Observe them carefully and answer the questions that follow:

- (a) (i) Identify the specimens Q, R, S, T and U. (2.5 marks)
- (ii) Briefly explain the function of each of the specimens Q, R, S, T and U. (5 marks)
- (iii) In which process in workshop technology does specimen U is used? (0.5 mark)
- (iv) What is the function of mortar with which specimen S is used for? (1 mark)
- (b) (i) Identify the specimen V. (0.5 mark)
- (ii) Name other three types of materials that are used for the same purpose as specimen V. (1.5 marks)
- (iii) State the use of specimen V. (1 mark)
- (iv) Why is specimen V not recommended in sheep houses? (1 mark)
- (c) (i) Identify specimens W and X by their scientific name. (2 marks)
- (ii) Where does specimen W absorb its nutrients in the soil profile? (1 mark)
- (iii) Briefly explain what will happen if specimen W is not used with a shallow root-system crop in the farm. (2 marks)
- (iv) What is the role of specimen X in improving soil fertility and productivity? (1 mark)
- (v) Elaborate two types of biological nitrogen fixation for specimen X. (3 marks)
- (d) (i) Briefly explain two considerations you will take in storage and handling of specimen Y. (2 marks)
- (ii) Account for effects of solubility of specimen Z in farming. (1 mark)