

**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

Thursday, 16th November 2017 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 and H. Observe them carefully and answer the following questions:

- (a) (i) Identify each of specimens A, B, C and D by their botanical names. (2 marks)
- (ii) How is specimen A used? (1 mark)
- (iii) Why specimen A should not be fed freshly to animals? (1 mark)
- (iv) Name the major common five diseases which affect specimen B and C. (5 marks)
- (v) Suggest one crop which can be intercropped with both specimens B and C. (1 mark)
- (vi) Name two crop pests which attack specimen D. (1 mark)
- (vii) How is specimen E useful over specimen B? (2 marks)
- (viii) Give four processed by-products of specimen E. (2 marks)
- (b) (i) Propose six good qualities of specimen F. (3 marks)
- (ii) Among the organic acids made up in the process of making specimen F, which one is the best indication of good quality for specimen F in a silo? (1 mark)
- (c) Describe briefly two sites to be avoided in planting specimen G and give reasons to support it. (3 marks)
- (d) (i) Identify specimen H by its common and scientific name. (1 mark)
- (ii) Describe briefly why specimen H has been given such a common name. (2 marks)

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

- (a) (i) Identify specimen O. (1 mark)
- (ii) Briefly explain the purpose of specimen O. (1 mark)
- (iii) Deduce five observations you would check through specimen O with respect to specimen I. (2.5 marks)
- (iv) Enumerate six characteristics for specimen I to be used for incubation. (3 marks)
- (b) (i) How could you train the calf to drink specimen J in bucket feeding? (2.5 marks)
- (ii) Name two by-products of specimen J. (1 mark)

- (iii) State five characteristics of a high quality of specimen J. (2.5 marks)
- (c) (i) Describe briefly the five steps for harvesting specimen K. (2.5 marks)
- (ii) Describe briefly eight steps for processing specimen L. (4 marks)
- (d) (i) State five considerations to be observed in order to get good quality of specimen M. (2.5 marks)
- (ii) Propose five practices to be carried out on specimen N before preservation. (2.5 marks)
3. You are provided with specimens P, Q, R, S, T, U, V and W. Observe them carefully and answer the following questions:
- (a) (i) Identify the given specimens P, Q and R. (3 marks)
- (ii) Describe briefly the difference between specimens P and R. (3 marks)
- (iii) State four general properties of specimen R. (2 marks)
- (b) (i) Describe briefly why specimen S is called 'a reciprocated part'. (2 marks)
- (ii) Name other three reciprocating parts in a tractor engine. (1.5 marks)
- (c) (i) Identify each of the specimens T and U. (1 mark)
- (ii) Explain briefly the uses of the two classes of specimen T blades. (2 marks)
- (iii) Name four joints made up from the work of specimen U. (2 marks)
- (d) (i) Considering quality and durability, what other four types of pipes apart from specimen V could be useful in plumbing? (2 marks)
- (ii) Propose seven pipe fittings for joining or changing direction in specimen V. (3.5 marks)
- (e) (i) Give four uses of specimen W in a tractor system. (2 marks)
- (ii) Recommend two parts to be applied using specimen W in a tractor system. (1 mark)