THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS COUNCIL

ADVANCED CERTIFICATE OF SECONDARY EDUCATION EXAMINATION

134/2 **AGRICULTURE 2**

(For Both School and Private Candidates)

Time : 3 Hours **ANSWERS** **Year : 2009**

Instructions

1. This paper consists of sections **three (3)** questions.
2. Answer **two (2)** questions.
3. Question one (1) carries **twenty (20)** marks and questions **two (2)** and **three (3)** carries **fifteen (15)** marks each.
4. Non-programable calculators may be used.
5. Cellular phones are **not** allowed in the examination room.
6. Write your **Examination Number** on every page of your answer booklet(s).

1. You are provided with specimens: AC1, AC2, AC3, and AC4.

(a) (i) Identify specimens AC1, AC2, AC3, and AC4 by their scientific names

AC1 is Maize (Zea mays), AC2 is Sorghum (Sorghum bicolor), AC3 is Cattle tick (Boophilus spp.), and AC4 is Tsetse fly (Glossina morsitans).

(ii) State how AC1 and AC2 can be preserved for farmers' use

Grains can be dried below 13% moisture and stored in sealed containers or silos. Hermetic bags and insecticide treatment prevent post-harvest pest infestations.

(iii) Give three reasons why conservation of AC1 and AC2 is important

It ensures seed availability for planting, protects against post-harvest losses, and maintains food security and income stability.

(b) (i) Describe how specimen AC4 can infest livestock

Tsetse flies bite livestock to suck blood, transmitting trypanosome parasites that cause sleeping sickness in animals.

(ii) Name two animals commonly attacked by specimen AC4

Cattle and goats.

(iii) Explain the relationship between specimen AC3 and AC4

Both are ectoparasites affecting livestock externally. AC3 transmits tick-borne diseases, whereas AC4 transmits trypanosomiasis; both reduce animal productivity if uncontrolled.

(iv) State three measures to prevent infestation of AC4

Use tsetse traps, insecticide spraying on animals, and clearing bushy vegetation that serves as fly habitat.

2. You are provided with specimens: AD1, AD2, and AD3.

(a) (i) Identify specimens AD1 and AD2

AD1 is CAN fertilizer, and AD2 is farmyard manure.

(ii) Mention two uses of specimen AD2 in crop production

Improves soil structure and moisture retention, and supplies slow-release nutrients for crops.

(iii) Give one problem caused by excessive application of specimen AD1

Excessive CAN can cause leaf burn, overgrowth, and environmental pollution.

(b) (i) Identify specimen AD3 by its scientific name

AD3 is Maize weevil (Sitophilus zeamais).

(ii) State two economic losses caused by specimen AD3

Reduced grain quantity due to feeding and boring, and decreased grain quality affecting market value.

3. You are provided with specimens: AE1, AE2, AE3, and AE4.

(a) (i) Identify each specimen AE1 to AE4

AE1 is Napier grass, AE2 is a pesticide (Malathion), AE3 is Rhodes grass, and AE4 is a tsetse fly.

(ii) State two functions of AE1 on the farm

Provides high-protein fodder and controls soil erosion.

(iii) Mention three safety measures when handling AE2

Wear gloves and masks, avoid skin contact or inhalation, and store safely away from feed and children.

(b) (i) Describe two methods of controlling specimen AE4

Use tsetse traps and insecticide sprays on livestock or vegetation to reduce fly populations.