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 **Year: 2005**

Instructions

1. This paper consists of sections **ten (10)** questions in sections A and B.
2. Answer **five (5)** questions choosing at least **two (2)** questions from each section.
3. Each question carries **twenty (20)** marks.
4. Cellular phones are **not** allowed in the examination room.
5. Write your **Examination Number** on every page of your answer booklet(s).

SECTION A

CROP SCIENCE AND PRODUCTION

Answer at least two questions from this section

1. Explain four types of crop damage caused by insect pests, giving one example for each.

2. Differentiate between the following terms in plant breeding:

   (a) Genotype and Phenotype

   (b) Inbreeding and Outbreeding

   (c) Homozygous and Heterozygous

   (d) Selection and Hybridization

3. Discuss five ways in which weeds are dispersed, giving a suitable example for each method.

4. Briefly explain the concept of Integrated Pest Management (IPM) and give five reasons for its importance in modern agriculture.

5. Describe the symptoms, causative agent, and control measures for three bacterial diseases of crops.

SECTION B.

LIVESTOCK SCIENCE AND PRODUCTION

Answer at least two questions from this section.

6. Explain what is meant by epiphytology in relation to livestock diseases and state four factors that influence its occurrence.

7. Briefly explain the role of the following hormones in the estrous cycle of a cow:

   (a) Follicle-Stimulating Hormone (FSH)

   (b) Luteinizing Hormone (LH)

   (c) Progesterone

   (d) Oestrogen

8. Discuss the importance of a well-designed livestock housing and enumerate six key features of a good house for dairy cattle.

9. Describe five signs that may indicate a cow is ready for calving.

10. Outline the process of semen collection using an artificial vagina and the process of freezing semen for long-term storage.