

**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: 2003

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).

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SECTION A

CROP SCIENCE AND PRODUCTION

Answer at **least two** questions from this section.

1. Differentiate between the following terms in plant breeding:
 - (a) Mass selection and pure line selection
 - (b) Progeny testing and performance testing
 - (c) Gene pool and germplasm
 - (d) Hybrid vigour and inbreeding depression
2. Briefly explain the concept of crop rotation and its significance in controlling soil-borne diseases.
3. Describe the life cycle of a major insect pest of a staple crop in your country, and outline two methods to control it.
4. Explain what is meant by biological control of weeds as used in crop protection. State three potential benefits and three limitations of this method.
5. State four reasons why fungi are considered the most important group of plant pathogens, giving two examples of diseases they cause.

SECTION B

LIVESTOCK SCIENCE AND PRODUCTION

Answer at least **two** questions from this section.

6. Explain the meaning of the following terms as used in animal health:
 - (a) Epidemiology
 - (b) Zoonotic disease
 - (c) Etiology
 - (d) Quarantine
7. Discuss the importance of a balanced ration in livestock production.
8. Briefly explain five factors that predispose livestock to diseases.

9. Outline the main events that occur in the different sections of the hen's reproductive tract during egg formation.
10. Differentiate between artificial selection and natural selection as applied in animal breeding.