THE UNITED REPUBLIC OF TANZANIA

NATIONAL EXAMINATIONS COUNCIL

ADVANCED CERTIFICATE OF SECONDARY EDUCATION EXAMINATION

134/1 SCIENCE AND PRACTICE OF AGRICULTURE 1

(For Both School and Private Candidates)

Time 2:30 Hours **Year: 2008**

Instructions

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

SECTION A

AGRICULTURAL ENGINEERING AND LAND PLANNING

1. (a) Describe the construction of a wheelbarrow.

   (b) Explain four uses of a wheelbarrow on the farm.

2. (a) Explain the meaning of farm layout.

   (b) Describe four components of a good farm layout.

3. (a) Distinguish between renewable and non-renewable farm power sources.

   (b) Give two examples of each.

   (c) State one advantage of renewable farm power.

4. (a) Explain the purpose of fencing on farms.

   (b) Describe two types of farm fencing.

   (c) State two materials used in fencing.

5. (a) A farmer harvested 3,600 kg of maize from 1.5 hectares.

   (i) Calculate yield per hectare.

   (ii) State two factors that may influence maize yield.

SECTION B

SOIL SCIENCE

6. (a) Define soil depth.

   (b) Explain four factors that influence soil depth.

7. (a) Explain soil compaction.

   (b) Describe three causes of soil compaction.

   (c) State two effects of soil compaction on crops.

8. (a) Define mulching.

   (b) Explain four advantages of mulching in crop production.

SECTION C

RURAL ECONOMY

9. (a) Explain the meaning of production economics.

   (b) Describe four factors of production in agriculture.

   (c) A farmer uses land, labour, capital, and management.

   Explain how each factor contributes to farm output.

10. (a) Explain the meaning of break-even analysis.

    (b) A farmer produces tomatoes at a total cost of Tshs 1,200,000.

    Each crate sells at Tshs 30,000.

    (i) Calculate the number of crates needed to break even.

(ii) If 60 crates are sold, calculate profit or loss.

(c) State two uses of break-even analysis in farm planning.