

**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: 2006**

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**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) Explain the meaning of irrigation.  
(b) Describe two methods of surface irrigation.  
(c) State two limitations of surface irrigation.
2. (a) Describe the construction of an ox-plough.  
(b) Explain how animal power is harnessed in ploughing.  
(c) State two advantages of animal traction.
3. (a) Explain the purpose of drainage in agriculture.  
(b) Describe two types of farm drainage systems.  
(c) State two effects of poor drainage on crops.
4. (a) Define farm workshop.  
(b) Describe four uses of a farm workshop.  
(c) State two safety rules observed in farm workshops.
5. (a) A water pump discharges 1,200 litres per hour.  
(i) Calculate the amount of water pumped in 6 hours.  
(ii) Convert the answer into cubic metres.  
(b) State two uses of water pumps on farms.

## **SECTION B**

### **SOIL SCIENCE**

6. (a) Define soil salinity.
- (b) Explain three causes of soil salinity.
- (c) State two effects of soil salinity on crops.
7. (a) Explain the term nutrient deficiency.
- (b) Describe deficiency symptoms of nitrogen and phosphorus in crops.
8. (a) Define soil microorganisms.
- (b) Explain four roles of soil microorganisms in agriculture.

## **SECTION C**

### **RURAL ECONOMY**

9. (a) Explain the meaning of enterprise budgeting.
- (b) A poultry farmer incurred the following costs per cycle:
- Chicks Tshs 600,000
- Feeds Tshs 1,800,000
- Vaccines Tshs 200,000
- Labour Tshs 400,000
- Sales amounted to Tshs 3,600,000.
- (i) Calculate total cost.

(ii) Calculate net profit.

(iii) Calculate profit per bird if 1,200 birds were sold.

(c) State two uses of enterprise budgets.

10.(a) Explain the meaning of market information.

(b) Describe four sources of market information.

(c) Explain four benefits of market information to farmers.

(d) State two problems associated with unreliable market information.