

**THE UNITED REPUBLIC OF TANZANIA**  
**NATIONAL EXAMINATIONS COUNCIL OF TANZANIA**  
**ADVANCED CERTIFICATE OF SECONDARY EDUCATION**  
**EXAMINATION**

**134/1**

**AGRICULTURE 1**

(For Both School and Private candidates)

**Time: 3 Hours**

**Year: 2019**

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**Instructions**

1. This paper consists of sections **A** and **B** with a total of **nine (9)** questions.
2. Answer **three (3)** questions in section **A**, and **One (1)** question from each of the section **B** and **C**
3. Section **A** carries **sixty (60)** marks and section **B and C** carry **twenty (20)** marks each.
4. Cellular phones and any unauthorized materials are **not** allowed in the examination room.
5. Non-programmable calculators may be used.
6. Write your **Examination Number** on every page of your answer booklet (s)

## SECTION A (60 marks)

Answer **three (3)** questions in this section

1. (a) Name the engine component which convert reciprocating motion to rotary motion,  
(b) Identify eight systems which are commonly found on a tractor engine and give a function for each  
(c) Briefly describe the operations of petrol and diesel fuel engines  
(d) outline the function of each of the following components of battery ignition system in a petrol fuel engine:
  - (i) coil
  - (ii) distributor
  - (iii) condenser
  - (iv) spark plug and
  - (v) battery.
2. (a) (i) give the meaning of the term protective gears as used in farm workshop  
(ii) describe five protective gears used in the farm workshop  
(b) (i) suggest three main safety precaution to be considered in farm workshop  
(ii) briefly explain the use of fire extinguisher in the farm workshop  
(c) account for six factors to be considered when siting a farm workshop.
3. (a) Differentiate
  - (i) concrete block and mud brick
  - (ii) concrete and mortar
  - (iii) foundation and footing  
(b) Briefly explain three factors influencing the design of farm structures  
(c) Enumerate six features of a good storage structure  
(d) Suggest five farm structures and for each give its importance to farmers.

4. (a) Compare a seed drill with a planter  
(b) Briefly explain seven functions of the seed drill components  
(c) Elaborate four functions of double mouldboard plough.  
(d) Briefly describe the mode of operation performed by a combine harvester.
5. (a) Enumerate three equipment used to carry out overhead irrigation at the home garden  
(b) Explain the following surface irrigation methods
  - (i) free flooding
  - (ii) checks
  - (iii) borders
  - (iv) basin
  - (v) furrow  
(c) Outline seven factors to be considered when operating sprinkler irrigation system.

### **SECTION B (20 Marks)**

Answer **one(1)** questions in this section

6. (a) Define the term weathering as used in soil formation  
(b) Briefly explain two types of rock weathering and show how they relate to each other  
(c) Explain the four main agents of weathering work on rocks.  
(d) give one chemical equation in each case, explain any five processes involved in chemical weathering of rocks.
7. (a) Explain five factors affecting composition of farmyard manure.  
(b) briefly explain the following terminologies as used in fertilizer application:
  - (i) fertilizer
  - (ii) fertilizer analysis
  - (iii) fertilizer grade

- (iv) fertilizer ratio.
- (c) outline any six function of essential plant nutrients.

### **SECTION C (20 Marks)**

Answer **one (1)** questions in this section

8. (a) study the given curves of different product - product relationships and describe the relationships between
- (i) Y1 and Y2,
  - (ii) Y3 and Y4,
  - (iii) Y5 and Y6,
  - (iv) Y7 and Y8,
- (b) give the meaning of the following as used in production economics
- (i) production function
  - (ii) total products
  - (iii) average product
  - (iv) marginal product
- (c) briefly explain two characteristics of each of the three regions of the production functions.
9. (a) (i) Give the meaning of the term oligopoly
- (ii) Give four characteristics of oligopoly market condition
- (b) briefly describe the following functions of marketing:
- (i) standardization
  - (ii) financing
  - (iii) risk bearing
  - (iv) market intelligence
  - (v) price setting.
- (c) give the difference between black market and open market.