Agriculture Equipment Technician Apprenticeship Level 1
Test Type: The apprenticeship level assessments are based on industry standards determined by Equipment Dealerships in the Northeast. Participants can earn certification and a digital badge.
Written Assessment

This written assessment consists of questions to measure an individual’s factual theoretical knowledge.

**Administration Time:** 2 hours  
**Number of Questions:** 58  
**Number of Sessions:** This assessment may be administered in one session.

**Areas Covered**

- **Basic Skills:** 19%
- **Interpersonal Skills:** 9%
- **Safety:** 14%
- **Engine Systems: 4-Stroke Gasoline:** 3%
- **Machinery Systems: Powertrains:** 14%
- **Farm Equipment Systems: Planting, Harvesting, Tillage:** 19%
- **Material Fabrication and Welding:** 2%
- **Problem Solving/Critical Thinking:** 3%
- **Hydraulic/Hydrostatic (Fluid Power) Systems:** 3%
- **Electrical Systems:** 14%
Specific Competencies and Skills Tested in this Assessment

Basic Skills
- Demonstrate understanding of basic math
- Demonstrate effective use of computers and software to access or retrieve data
- Demonstrate proper selection and use of basic tools
- Demonstrate proper writing and reading skills for the workplace
- Communicate clearly, honestly, and appropriately with coworkers, management, and customers

Interpersonal Skills
- Demonstrate proper work dress and grooming
- Demonstrate active listening skills and clarification of communication
- Demonstrate respect for customers and coworkers
- Demonstrate organizational skills and effective time management
- Practice good housekeeping procedures
Specific Competencies and Skills (continued)

Safety
- Use the proper personal protective equipment (PPE) required for the various tasks
- Identify safety signs, safety data sheets, and icons in the agriculture industry
- Define safety procedures that promote avoidance of shop hazards and accidents
- Define “Lockout/Tagout”
- Identify the safety requirements before operating machines and equipment

Engine Systems: 4-Stroke Gasoline
- Locate the name plate and engine information

Machinery Systems: Powertrains
- Research and institute procedures for required periodic services
- Describe the physical and mechanical principles of mechanical, hydraulic, pneumatic, and electrical power transfer
- Properly identify different parts (bearings and hardware)
Specific Competencies and Skills (continued)

Farm Equipment Systems: Planting, Harvesting, Tillage
- Identify and describe agricultural equipment and operations
- Review operating and service manuals, schedules, and conduct procedures as needed
- Perform safety inspection on equipment before operation
- Properly lubricate machinery, equipment, and parts

Material Fabrication and Welding
- Demonstrate welding jobsite safety procedures

Problem Solving/Critical Thinking
- Determine and evaluate the problem

Hydraulic/Hydrostatic (Fluid Power) Systems
- Explain the theory and principles of hydraulic systems

Electrical Systems
- Identify a simple electrical circuit and its components (battery, fuse, switch, light, and ground)
- Describe the differences between alternating (AC) and direct current (DC)
- Use a digital multimeter to determine voltage and current
Sample Questions

**Use of a brass hammer can prevent**
A. oxidation  
B. sparks  
C. fluxation  
D. rust

**The major goal of good housekeeping around the work area is to**
A. enhance appearance  
B. halt the spread of disease  
C. prevent accidents  
D. attract new business

**Loose clothing is a hazard in the shop because it could**
A. cause an excessive amount of heat  
B. catch on rotating machinery  
C. not look neat  
D. slow the mechanic's movements

**A combine is used to**
A. harvest  
B. plant  
C. till  
D. bale

**A restricted air filter will cause**
A. a decrease in fuel consumption  
B. white exhaust smoke  
C. a loss of power  
D. cooler exhaust temperatures