**Test Type:** The Wyoming Agricultural Mechanics Assessment was developed based on a Wyoming statewide competency task list and contains a multiple-choice component. This assessment is meant to measure technical skills at the occupational level and includes items which gauge factual and theoretical knowledge.

**Revision Team:** The assessment content is based on input from Wyoming educators who teach in approved career and technical education programs.
NOCTI written assessments consist of questions to measure an individual's factual theoretical knowledge.

**Administration Time:** 3 hours  
**Number of Questions:** 132  
**Number of Sessions:** This assessment may be administered in one, two, or three sessions.

### Areas Covered

- **Safety**  
- **Hand and Power Tools**  
- **Compact Engines**  
- **GMAW, SMAW, and Oxyfuel Welding**  
- **Metal Fabrication**  
- **Agricultural Structures**  
- **Employability Skills**

Percentages:
- Safety: 17%  
- Hand and Power Tools: 11%  
- Compact Engines: 8%  
- GMAW, SMAW, and Oxyfuel Welding: 26%  
- Metal Fabrication: 14%  
- Agricultural Structures: 14%  
- Employability Skills: 10%
Specific Standards and Competencies Included in this Assessment

Safety
- Understand appropriate use of clothing protection and personal protective equipment (PPE)
- Identify safe practices for fire and electrical dangers
- Explain how to create a safe work environment

Hand and Power Tools
- Recondition and maintain tools
- Select appropriate hand and power tools
- Use portable and stationary power tools

Compact Engines
- Understand combustion processes
- Identify components of compact engines
- Maintain compact engines

GMAW, SMAW, and Oxyfuel Welding
- Perform safety inspections of equipment and accessories
- Set up and operate for gas metal arc welding (GMAW) operations on mild steel
- Apply oxyfuel welding and cutting processes and techniques
- Set up and operate shielded metal arc welding (SMAW) on mild steel
- Perform and identify proper joint positions, set-up, and welding rod selection

(Continued on the following page)
Specific Standards and Competencies (continued)

**Metal Fabrication**
- Identify metals according to type and shape
- Interpret and plan projects with a bill of materials
- Use basic math and measuring skills

**Agricultural Structures**
- Explain elements of electricity
- Understand basic framing
- Select, apply, and calculate for concrete application

**Employability Skills**
- Read, comprehend, and interpret technical materials and publications
- Produce technical reports and research papers
- Produce employment documents (e.g., resumé, cover letter)
- Identify careers in the agriculture industry
Sample Questions

**Personal Protective Equipment (PPE)** is designed to protect the body from

A. exhalation  
B. injury  
C. physical barriers  
D. discomfort

**Broken or damaged equipment** should be

A. turned in when the job is finished  
B. marked as damaged and put away  
C. reported to a supervisor/instructor  
D. fixed on the spot to avoid interruption of work

**What is a possible cause of an engine producing blue smoke?**

A. too lean of a fuel mix  
B. too rich of a fuel mix  
C. engine burning oil  
D. low engine temperature

**When selecting an OFC tip, the size is based on**

A. material thickness  
B. acetylene working pressure  
C. atmospheric temperature  
D. gas pressure

**A unit of measure of electrical pressure is**

A. volt  
B. amp  
C. watt  
D. ohm