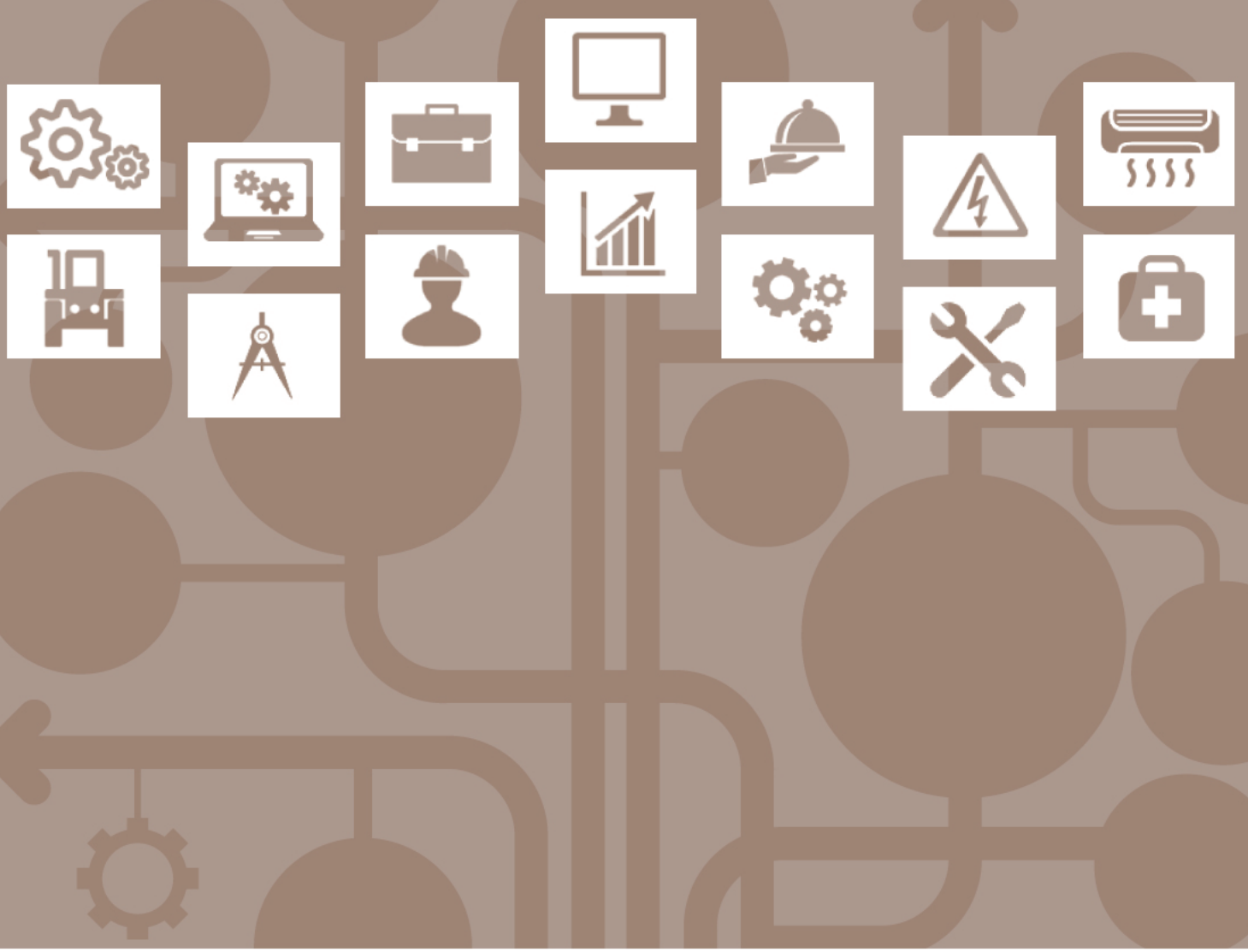
Nocti Business Solutions®
Your Corporate Assessment Provider
www.noctibusiness.com

Entry Level Assessment Blueprint

Agriculture Mechanics (NAEDA Endorsed)



Test Code: 2303 / Version: 01

Specific Competencies and Skills Tested in this Assessment:

Health and Safety

- Identify and explain basic first aid
- Define and identify appropriate PPE and proper work attire
- Define and identify regulatory standards
- Describe and identify electrical, hydraulic, and mechanical systems safety

Welding, Fabrication, and Repair (CNC)

- Demonstrate knowledge of safety in welding, fabrication, and repair
- Explain measurement and measurement techniques
- Identify welding shop materials and requirements
- Identify and compare types of welding processes
- Identify and compare cutting and machining techniques

Power Equipment and Machinery (Infield Equipment)

- Demonstrate knowledge of equipment operation and operational safety
- Explain maintenance requirements and techniques
- Demonstrate the understanding of sensors and basic control systems
- Identify and compare engines and motors
- Demonstrate knowledge and usage of manuals and schematics
- Identify and explain power trains

Agricultural Structures

- Identify and list types of buildings
- Identify electrical and control systems
- Demonstrate knowledge of building layout/surveying/blueprints
- Identify and describe usage of tools and equipment
- Identify and explain plumbing and irrigation
- Demonstrate knowledge of framing and framing techniques
- Identify and describe environmental and natural resource systems

Specific Competencies and Skills continued:

Agribusiness

- Demonstrate knowledge of business and farm operations
- Demonstrate knowledge of record keeping
- Demonstrate knowledge of general economics, business, and loan options
- Demonstrate understanding of customer, client, and labor relations

Agriculture Engineering

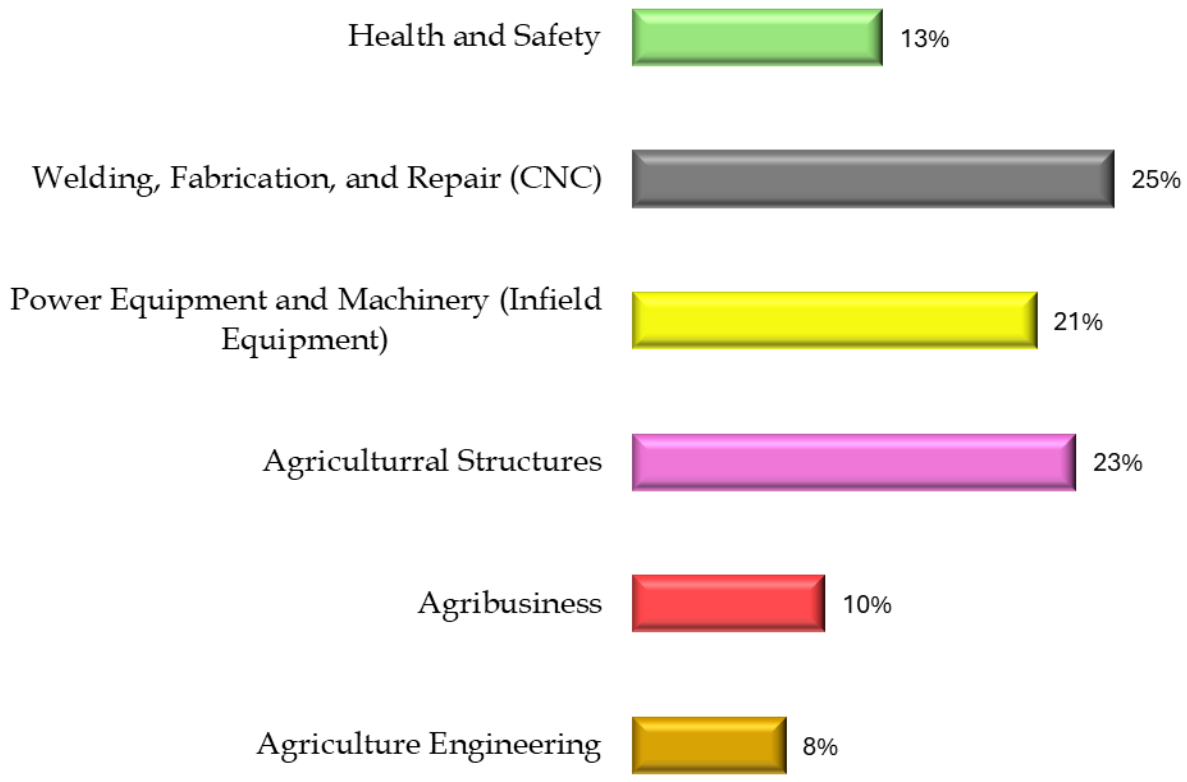
- Define types of satellite-based technology
- Define types of computer-based (shop and manufacturing) technology/systems
- Define types of software-based (office and field) technology/systems

Written Assessment:

Administration Time: 2 hours and 30 minutes
Number of Questions: 120

Areas Covered:

13% Health and Safety
25% Welding, Fabrication, and Repair (CNC)
21% Power Equipment and Machinery (Infield Equipment)
23% Agricultural Structures
10% Agribusiness
8% Agriculture Engineering



Sample Questions:

It is important to only move someone with a suspected _____ injury if there are imminent danger concerns.

A. head
B. spinal
C. leg
D. arm

The center of a wall stud is indicated with a _____ at 16 inches on a measuring tape.

A. red dot
B. red square
C. black diamond
D. black arrow

Oxygen and flammable gas are used in _____ processes.

A. plasma
B. laser
C. waterjet
D. oxy-fuel

Three points of contact are recommended when clumbing in and out of machinery to avoid

A. falling
B. tripping
C. slipping
D. stumbling

A battery serves as the source of power for most

A. engine ignition systems
B. hydraulic lift mechanisms
C. fuel injection systems
D. power steering systems

A circuit is a completed _____ through which electricity flows.

A. path
B. trail
C. loop
D. lane

A header is the structural component of a doorway that

A. supports the movement of the door
B. provides insulation for the frame
C. connects the trim to the studs
D. carries the load of the wall

A tract of land measuring 43,560 square feet is considered a/an

A. hectare
B. acre
C. furlong
D. mile

A pentagon is used by OSHA to indicate a/an

A. fire hazard
B. health risk
C. corrosive material
D. explosion

The physical location of input costs versus crop value is <u>most</u> clearly detailed using _____ maps.

A. yield
B. soil
C. profit
D. drainage

Performance Assessment:

Administration Time: 3 hours
Number of Jobs: 6

Areas Covered:

22% **Horizontal Square Groove Butt Weld - SMAW**
Safety, select correct electrodes, attach the ground clamp, set amperage correctly, set the gap, tack, position metal, and quality of bead.

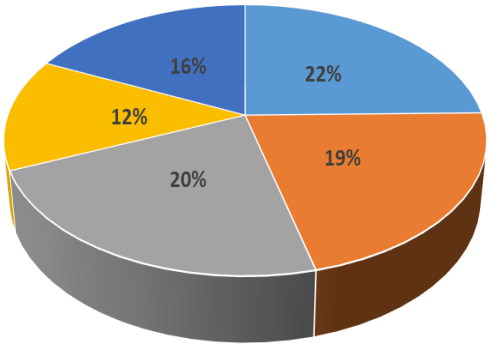
19% **Oxyacetylene Cutting**
Safety, adjust regulators, light and adjust flame, cutting, and product evaluation.

20% **Troubleshoot and Diagnose a Gas Engine**
Safety, engine model number, compression reading, gap measurement, spark intensity, determination of engine performance, and explanation.

12% **Install a Switch to Control a Light**
Safety, circuit grounded, boxes grounded, attach wires to switch terminals, and light switch controlled.

16% **Mark a Common Rafter**
Safety, correct measurements, upper plumb cut, lower plumb cut, and bird's mouth cut.

11% **Set Up and Instrument Leveling of the Farm Level**
Care of instruments and equipment, set up and leveling of instrument, and rod reading.



Sample Job: Set Up and Instrument Leveling of the Farm Level

Maximum Time: 30 minutes

Participant Activity: The participant will set up and level the instrument and take a rod reading on a road at a predetermined fixed location.