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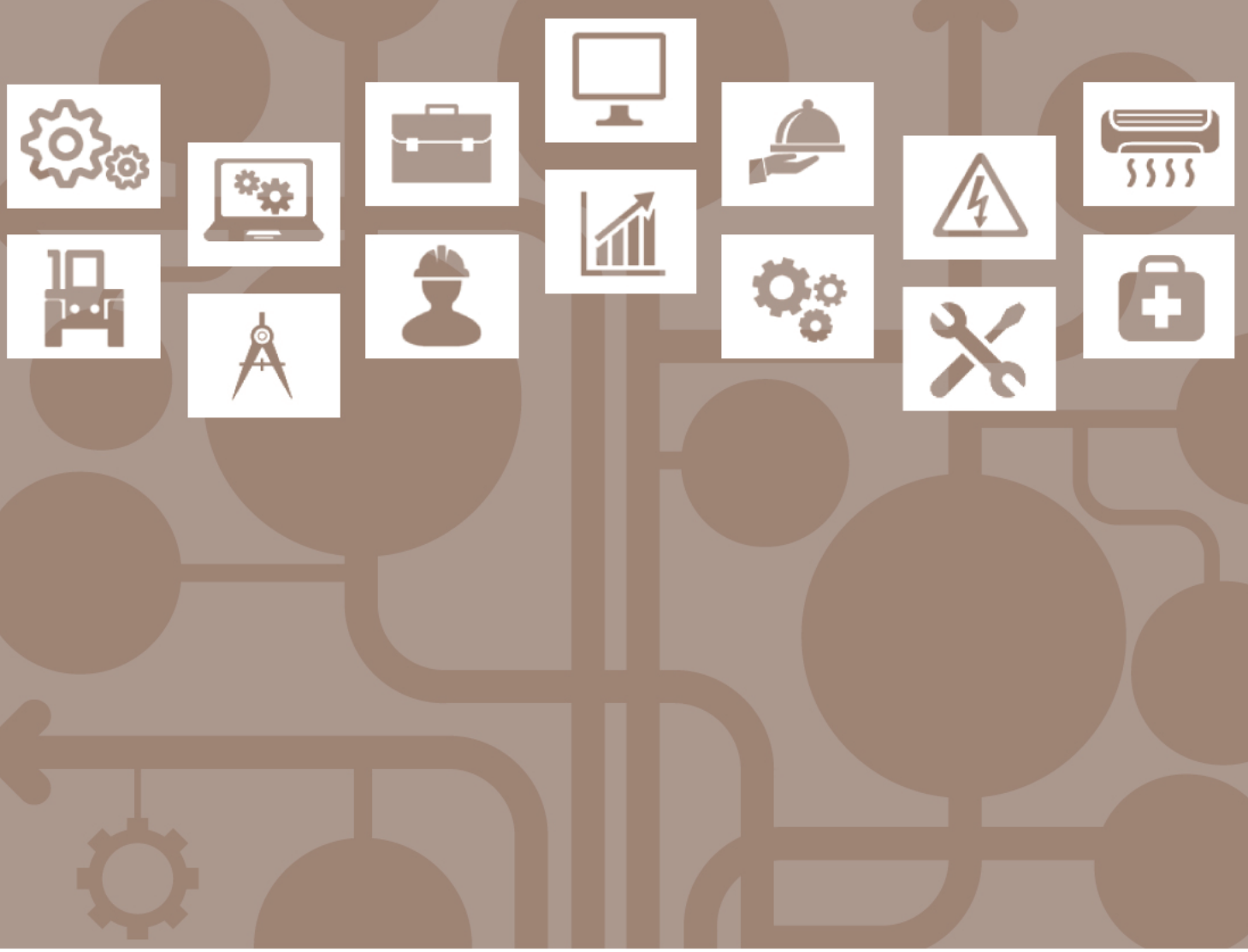
Entry Level Assessment Blueprint

Fundamentals of Construction



Test Code: 0177 / Version: 01

Specific Competencies and Skills Tested in this Assessment:

Foundations of Safety

- Demonstrate understanding of the role that safety plays in the construction industry
- Demonstrate understanding of the idea of a safety culture and its importance in the construction industry
- Demonstrate understanding of the meaning of jobsite safety

Jobsite Safety and Safety Regulations

- Demonstrate understanding of the role of OSHA in jobsite safety
- Demonstrate knowledge of on-the-jobsite safety, including basic first aid, fire prevention, and proper lifting
- Demonstrate understanding of appropriate safety precautions to take around common jobsite hazards
- Demonstrate understanding of safe behavior on and around ladders and scaffolds
- Define safe work procedures to use around electrical hazards

Personal Protective Equipment

- Demonstrate the use and care of appropriate personal protective equipment (PPE)
- Exhibit knowledge of how to properly don and remove personal protective equipment (safety goggles, hard hat, personal fall protection, etc.)

Hazard Analysis

- Identify causes of accidents and the impact of accident costs
- Define hazard recognition and risk assessment techniques
- Identify struck-by hazards and demonstrate safe working procedures and requirements
- Identify caught-in-between hazards and demonstrate safe working procedures and requirements
- Identify other construction hazards on the jobsite, including hazardous material exposure, environmental elements, welding and cutting hazards, confined spaces, and fires
- Identify construction site hazards dealing with work around cranes, loaders, excavation equipment, all-terrain forklifts, etc.

Specific Competencies and Skills (continued):

Hand Tools

- Demonstrate understanding of how to visually inspect hand tools to determine if they are safe to use, and use tools safely
- Exhibit understanding of the basic procedures for taking care of hand tools
- Demonstrate understanding of the use of hammers (e.g., claw, ball-peen, sledge)
- Demonstrate understanding of the use of ripping bars and nail pullers
- Demonstrate understanding of the use of chisels and punches
- Demonstrate understanding of the use of screwdrivers (e.g., Phillips, spade, slotted)
- Demonstrate understanding of the use of wire cutters and pliers (e.g., crimping/lineman's, locking nose, tongue in groove)
- Demonstrate understanding of the use of wrenches (e.g., combination, crescent)
- Demonstrate understanding of the use of sockets and ratchets
- Demonstrate understanding of the use of levels (e.g., laser, torpedo, 2-foot, 4-foot and 6-foot) and squares (e.g., rafter, combination, T)
- Demonstrate understanding of the use of plumb bob and chalk lines
- Demonstrate understanding of the use of utility knives, jab saw, coping saw (dull v. sharp)

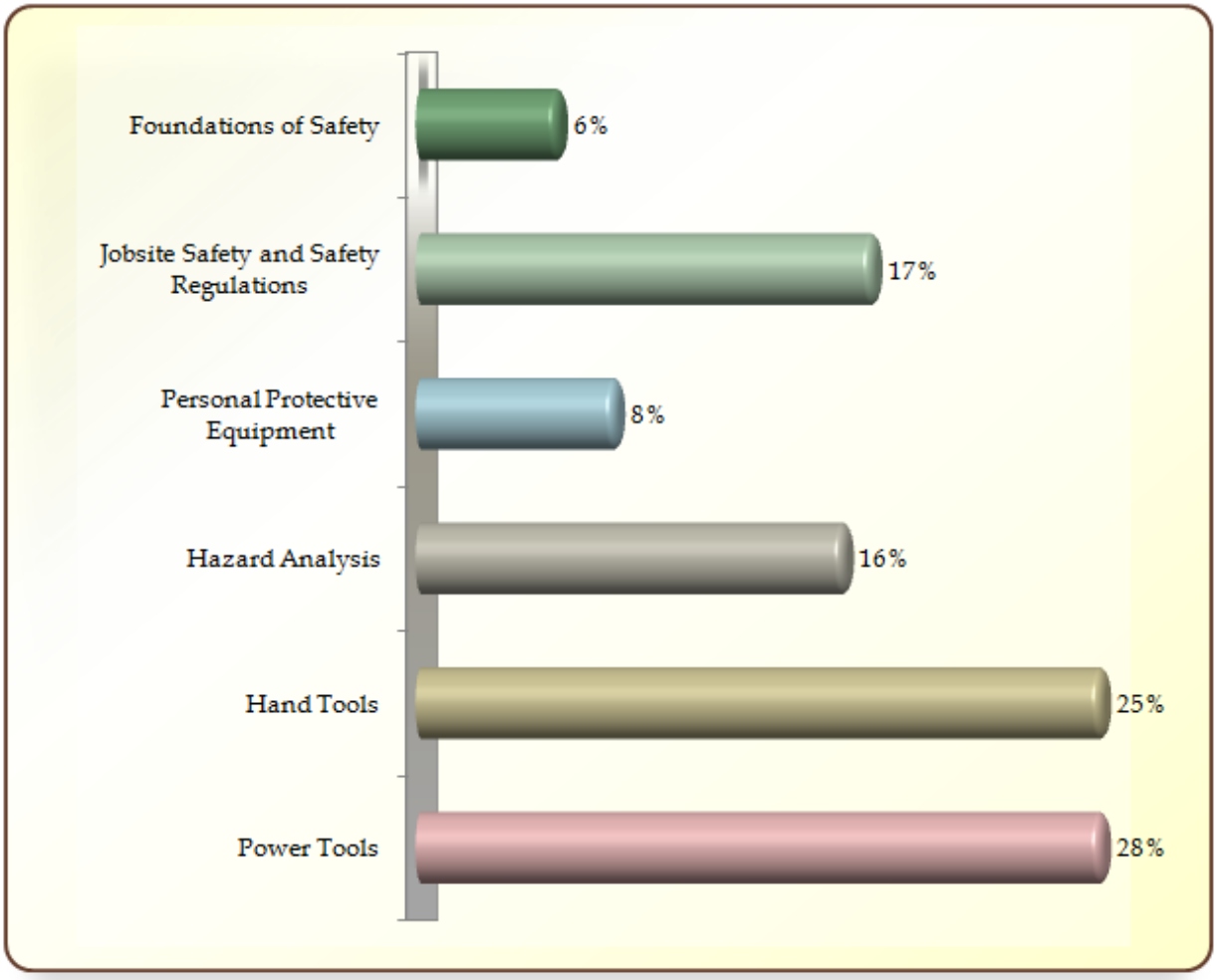
Power Tools

- Identify the general safety rules for operating all power tools, regardless of type
- Identify the general safety rules for properly maintaining all power tools, regardless of type
- Identify, exhibit understanding of, and use stationary power tools in a safe and appropriate manner
- Demonstrate understanding of the use of drills (e.g., power, cordless, hammer and impact wrenches)
- Demonstrate understanding of the use of saws (e.g., table, miter, compound, slide, chop, circular, saber/jig)
- Demonstrate understanding of the use of grinders (e.g., angle) and sanders (belt, palm, and orbital)
- Demonstrate understanding of the use of pneumatically-powered nail guns

Written Assessment:

Administration Time: 3 hours
Number of Questions: 169

Areas Covered:



Sample Questions:

Which of the following agencies is responsible for national workplace safety regulations?

A. ANSI
B. OSHA
C. NIOSH
D. HAZCOM

Wearing steel-toed boots helps to prevent injuries caused by

A. impact from falling tools and materials
B. electrical shock from exposed wire
C. chemical spills on the jobsite
D slippery surfaces due to inclement weather

Most accidents are caused by

A. human error
B. faulty equipment
C. an unsafe environment
D. poor laws

Hand tools are capable of causing injuries, including

A. electrocutions, abrasions, lacerations, and contusions
B. punctures, ulcers, lacerations, and contusions
C. punctures, abrasions, chemical burns, and contusions
D. punctures, abrasions, lacerations, and contusions

What tool would a worker use to make sure that the wall is aligned top and bottom?

A. chalk line
B. builder's level
C. plumb bob
D. torpedo level

One of the most common safety grounding systems in extension cords used to protect the worker from shock is the _____ system.

A. two-wire
B. three-wire
C. four-wire
D. five-wire

Fundamentals of Construction (continued):

The splitter on a table saw
- A. adds strength to the saw
- B. prevents binding of stock
- C. should be removed
- D. makes a guide unnecessary

The operator of heavy equipment on a jobsite must be
- A. certified
- B. experienced
- C. qualified
- D. educated

Four tools used to repair drywall are
- A. screw gun, combination square, cross-cut saw, and coping saw
- B. screw gun, hand saw, utility knife, and spackle knife
- C. screw gun, tape measure, combination square, and utility knife
- D. screw gun, utility knife, keyhole saw, and spackle knife

What is a safe and practical working air pressure for nail guns?
- A. 0-30 psi
- B. 50-70 psi
- C. 80-110 psi
- D. 150-200 psi

Performance Assessment:

Administration Time: 1 hour and 35 minutes
Number of Jobs: 4

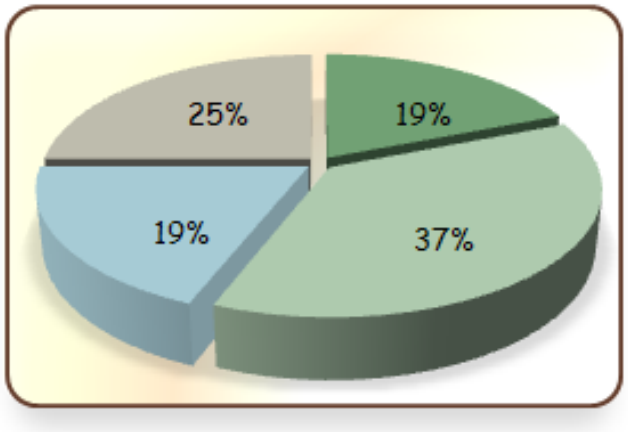
Areas Covered:

19% Circular Saw
Participant will select and set up proper equipment to make an accurate rip, and clean area when finished.

37% Drill Holes
Participant will select and set up proper equipment to drill holes in several types of material, and clean area when finished.

19% Pneumatic Fasteners
Participant will select and set up proper tools and fasteners for framing, sheathing, and roofing.

25% Jobsite Hazards
Participant will identify hazards that are present on a simulated jobsite, and correct the hazards when possible.



Sample Job: Circular Saw

Maximum Time: 20 minutes

Participant Activity: Adhere to safety procedures throughout the job, put on appropriate PPE, replace blade in circular saw, mark dimensions, and rip the board. Clean up work area.