

Entry Level Assessment Blueprint

Building Trades Maintenance



Specific Competencies and Skills Tested in this Assessment:

Safety

- Use tools and equipment safely
- Demonstrate electrical safety
- Respond to emergency situations (e.g., first aid)
- Demonstrate safe use of chemicals and hazardous materials (e.g., MSDS, OSHA standards)
- Use PPE (personal protective equipment)

Tools and Materials

- Select tools appropriate for task
- Select hardware, fasteners, and adhesives
- Demonstrate appropriate care of tools
- Read instruments and measuring devices
- Estimate and order materials



Carpentry

- Read and interpret drawings
- Identify and install rough carpentry including sub-flooring and framing
- Identify and install proper interior finish carpentry including insulation, drywall, trim work, and cabinetry
- Identify and install exterior rough carpentry and coverings (e.g., roof coverings, cornices, sheathings)
- Identify and install exterior finish carpentry including siding, decking and porches

Specific Competencies and Skills continued:

Painting and Wall Covering

- Demonstrate knowledge of cleaning and surface preparation
- Display knowledge of interior wall and ceiling finish products
- Display knowledge of painting and staining applications

Masonry

- Install moisture barriers
- Lay and repair bricks and blocks
- Form and place concrete
- Install ceramic floor and wall tiles



Electrical

- Install or replace electrical equipment, components, and appliances
- Install and troubleshoot low-voltage circuits
- Identify electrical architectural symbols
- Maintain electrical systems and emergency generators
- Identify and maintain (GFCI) ground fault circuit interrupters

Plumbing

- Identify, maintain, and install plumbing equipment
- Install, maintain, and repair piping
- Repair and replace plumbing fixtures
- Identify plumbing architectural symbols
- Perform weatherization procedures
- Identify and maintain various pumps

Specific Competencies and Skills continued:

General Maintenance

- Identify and measure appropriate filters for various equipment
- Employ various practices of weather proofing and energy conservation
- Identify and maintain security and property equipment
- Identify general principles of welding

Grounds and Equipment Maintenance

- Maintain power equipment (e.g., filters, oil changes, spark plugs, belts, blade sharpening, batteries)
- Exhibit knowledge of proper lawn installation and maintenance
- Plant and maintain trees and shrubs

HVAC (Heating, Ventilation, and Air Conditioning)

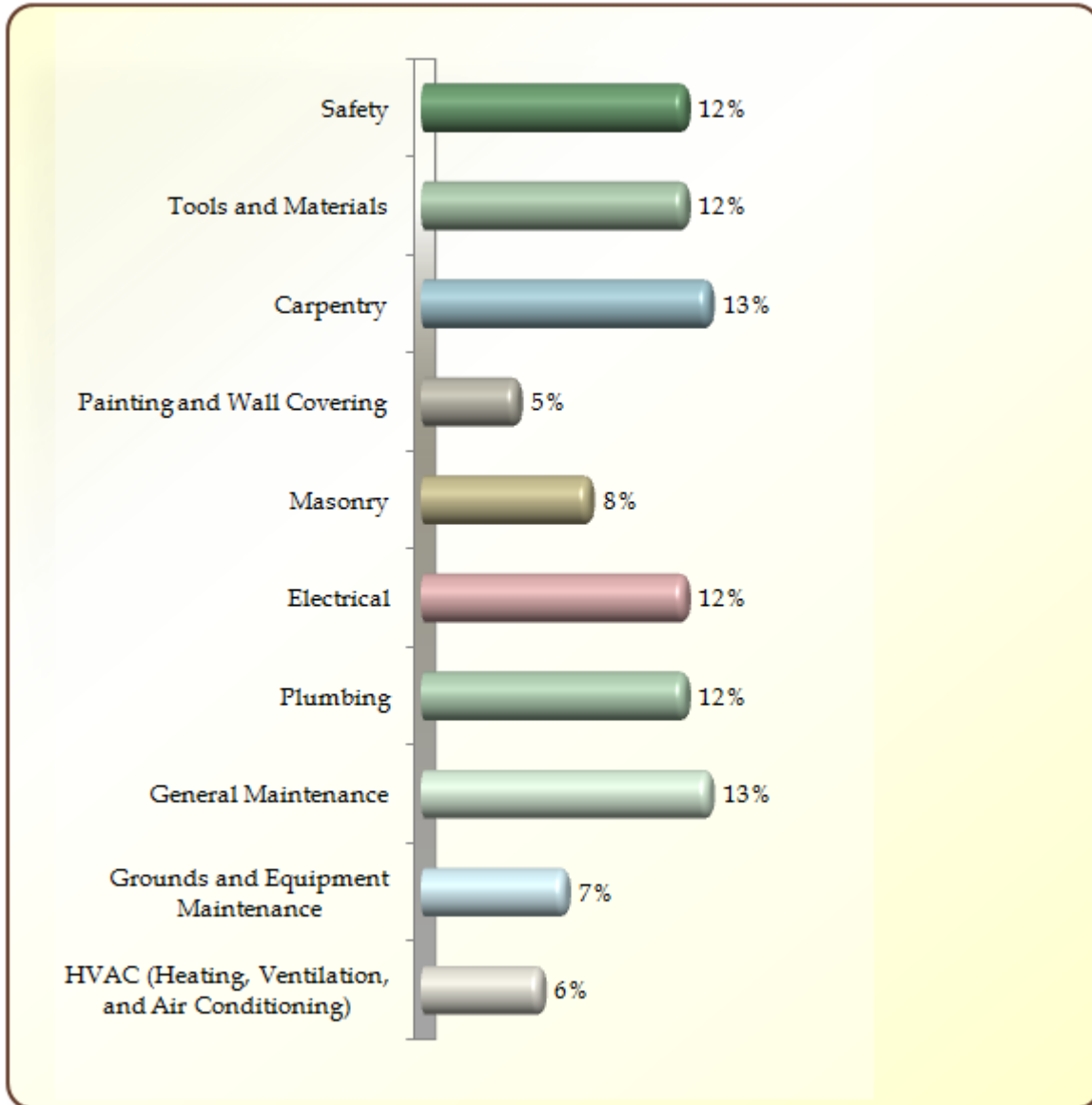
- Demonstrate knowledge of HVAC fundamentals
- Maintain HVAC systems

Written Assessment:

Administration Time: 3 hours

Number of Questions: 171

Areas Covered:



Sample Questions:

The first action to be taken at an accident scene is to

- A. direct traffic
- B. call for help
- C. check for blood loss
- D. initiate CPR

The letters, AFF, on a set of blueprints stand for

- A. Average Floor Fastening
- B. Above Finish Floor
- C. Almost Flat Formica
- D. Already Form Fitting

Which size wire is normally connected to a doorbell transformer?

- A. 00 gauge
- B. 10 gauge
- C. 18 gauge
- D. 30 gauge

Which material is a good, lightweight insulator?

- A. foam board
- B. drywall
- C. cellulose
- D. fiberglass

The most frequent maintenance needed on HVAC systems is

- A. lubricating the motor brushes and belts
- B. recharging the condenser apparatus
- C. cleaning the unit and changing filters
- D. bleeding the coolant lines

Performance Assessment:

Administration Time: 2 hours and 45 minutes
Number of Jobs: 5

Areas Covered:

31% Carpentry: Construct Frame

Selection and use of tools, cutting, techniques for assembly, accuracy of measurements, and appearance of frame, and time to complete Job 1.

21% Plumbing: Sweat Piping

Use of tools, joining and soldering techniques, accuracy of measurements, piping support, leak testing, and time to complete Job 2.

17% Electricity: Rough Wiring

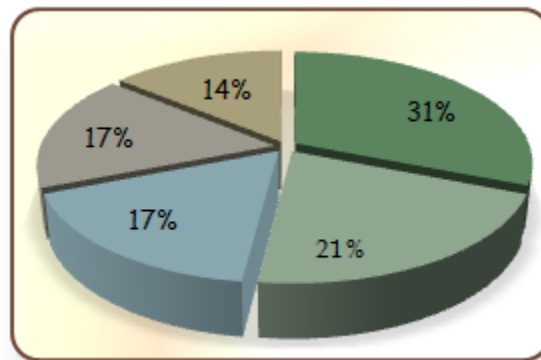
Mount electrical boxes, install nonmetallic cable, and preparation of wires in box, and time to complete Job 3.

17% Drywall

Accuracy of measurements and cuts, installation of drywall, and finishing techniques, and time to complete Job 4.

14% Electricity: Finish Wiring

Installation of switching device, installation of light fixture, and testing of installation, and time to complete Job 5.



Sample Job: Electricity: Finish Wiring

Maximum Time: 15 minutes

Participant Activity: The test participant will use the rough wired frame with the drywall installed from the previous job, finish wiring the switch and light according to code, install cover plate, connect test leads and test, and install fixture to box.

