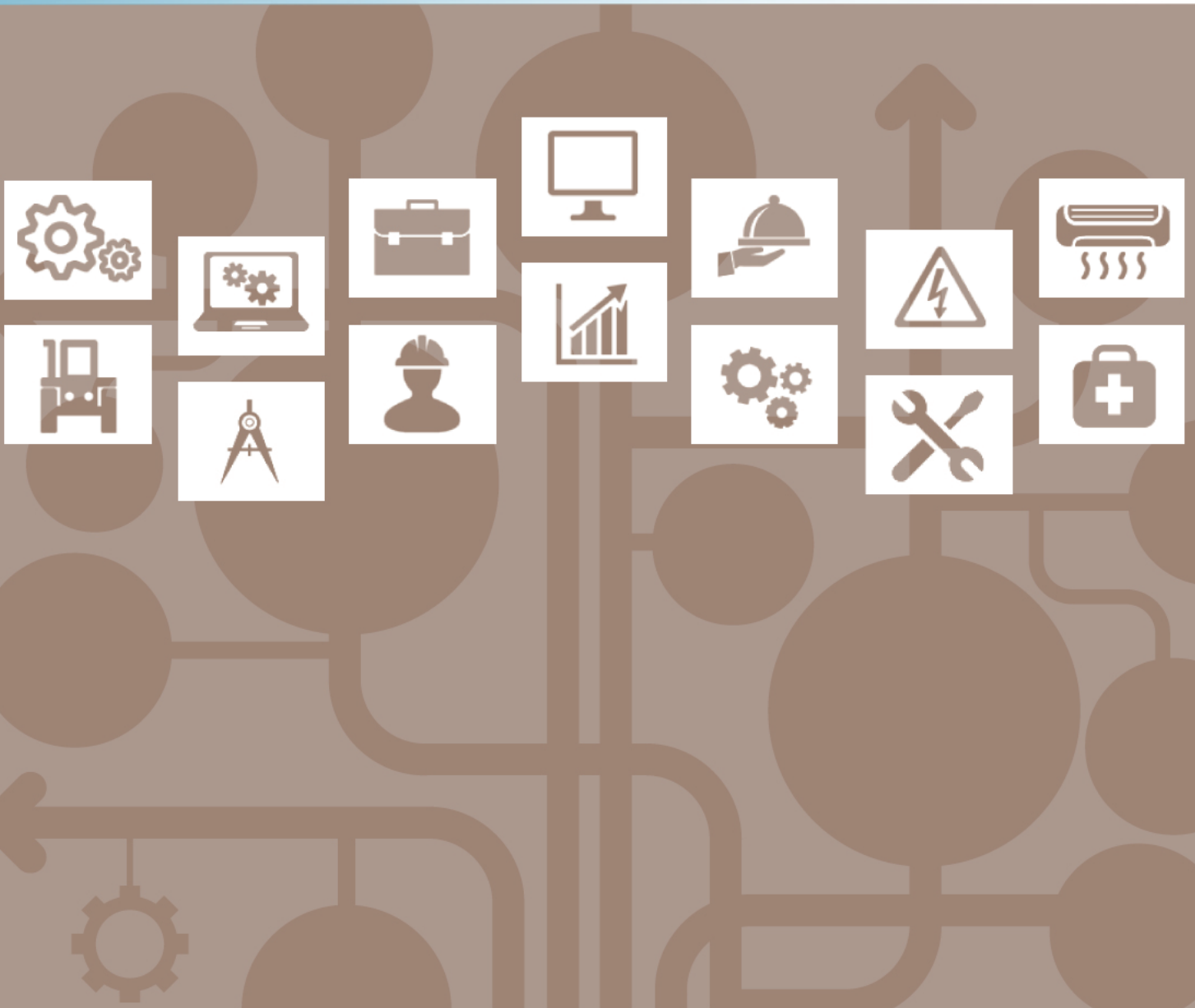




Entry Level Assessment Blueprint

Construction Masonry - Brick



Test Code: 4125 / Version: 01

Specific Competencies and Skills Tested in this Assessment:

Safety

- Identify and use PPEs (personal protective equipment)
- Demonstrate knowledge of workplace/jobsite safety procedures, including lock-out/tag-out
- Exhibit understanding of OSHA safety standards and MSDS
- Erect and use scaffolds safely
- Display understanding of ladder safety

Craft Knowledge

- Explain the history of the craft
- Identify job opportunities in the masonry industry
- Identify craft terminology

Hand and Power Tools

- Identify, use, and properly care for hand tools
- Identify, use, and properly care for power tools

Materials

- Identify and select materials, including synthetic stone and brick products
- Identify various mortars (M, S, N, O) and cements (Type I, II, III) and their uses
- Identify material sizes

Blueprints and Specifications

- Read and interpret written specifications
- Identify and interpret lines and symbols
- Read and interpret drawings and plans



Specific Competencies and Skills continued:

Project Layout

- Square a building, use of 3-4-5/Pythagorean theory
- Install a corner/story pole and determine heights
- Identify masonry bond types
- Install a metal door/window frame
- Layout and construct control joints
- Identify and install anchor bolts and masonry fasteners

Brick

- Set up job site
- Lay brick to the line
- Tool off/joint units
- Build brick leads and corners
- Identify and construct steps and components
- Install masonry pavers
- Identify and install wall ties and accessories
- Identify and position various types of lintels
- Identify types of arches
- Exhibit understanding of arch applications

Fireplaces and Chimneys

- Identify parts of fireplace/chimney
- Install fireplace/chimney components
- Display familiarity with building codes

Flashing, Weeps, Insulation

- Install flashing correctly
- Install weep holes correctly
- Install insulation correctly

Math and Measurements

- Exhibit comprehension of construction masonry-related mathematics
- Exhibit understanding of measurements and conversions
- Estimate/calculate materials needed



Specific Competencies and Skills continued:

Masonry Structure Maintenance

- Restore and repoint masonry units
- Select and use masonry cleaning agents

Professionalism

- Exhibit understanding of communication/leadership skills
- Display understanding of professional ethics and behavior

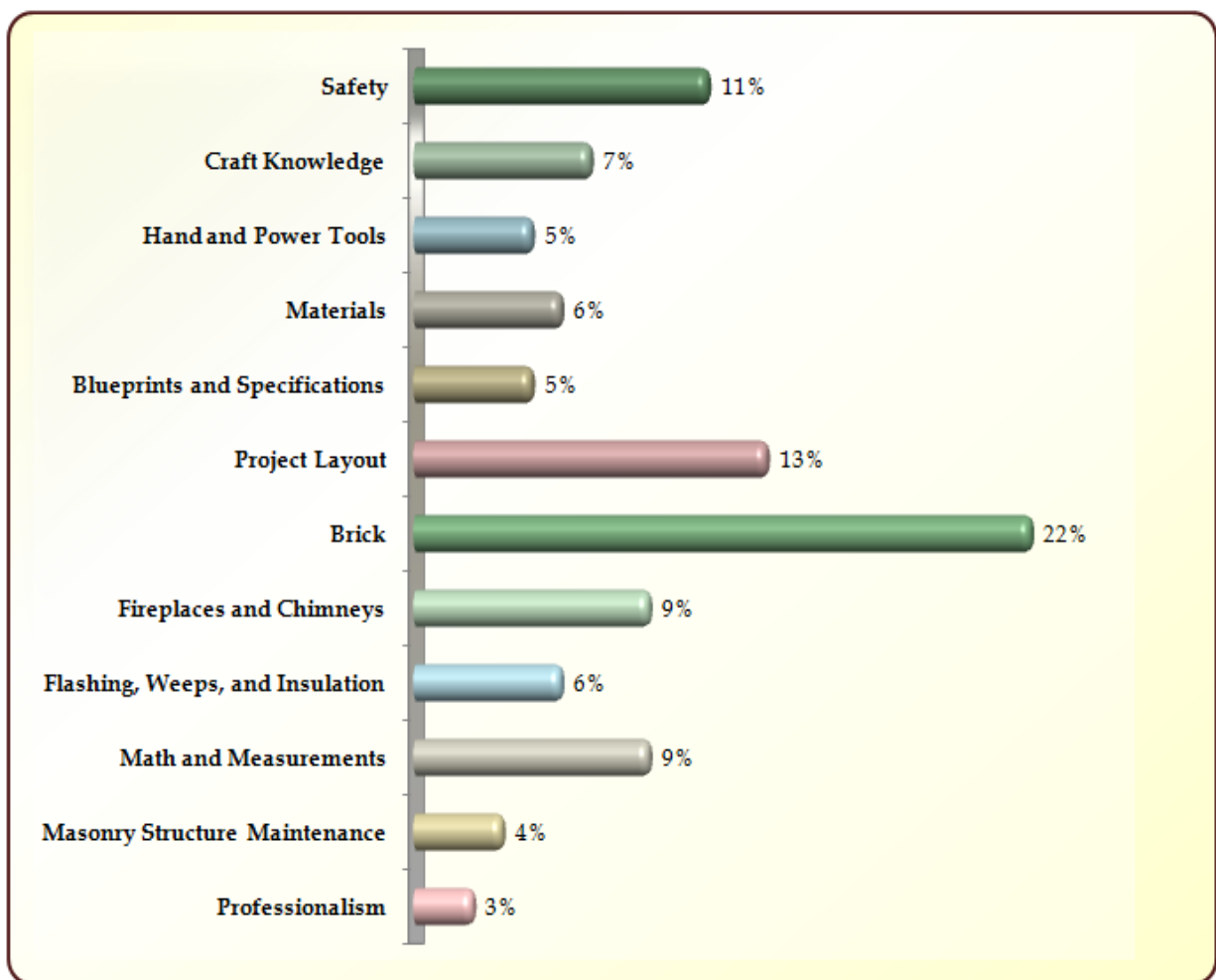


Written Assessment:

Administration Time: 3 hours

Number of Questions: 172

Areas Covered:



Sample Questions:

To avoid accidents, ladders must be kept away from

- A. walkways and traffic lanes
- B. a level floor
- C. the boiler room
- D. carpeting

A piece of metal used for securing line at both ends of course height is a

- A. brick tie
- B. line block
- C. line pin
- D. brick set

Expansion and control joints are used to

- A. provide strength
- B. improve appearance
- C. allow for movement
- D. eliminate movement

Place a strip of wood in the cavity during construction to

- A. prevent mortar from falling in the cavity
- B. use as a guide to keep the units from moving
- C. prevent wall ties from moving
- D. prevent water from entering the cavity in case of rain

Flashing around a brick chimney requires a

- A. base and counter
- B. base and silicone
- C. membrane and tar
- D. coat of epoxy

Performance Assessment:

Administration Time: 3 hours and 10 minutes

Number of Jobs: 3

Areas Covered:

18% **Job Layout**

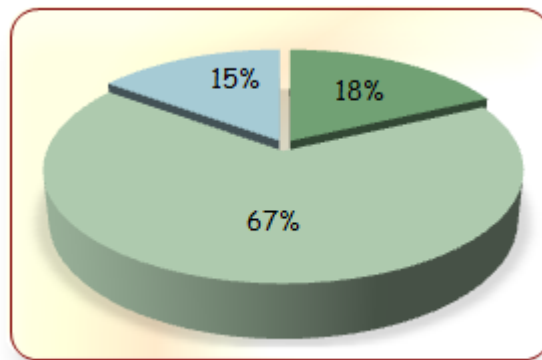
Selection and safe use of tools, project length measured according to drawing specifications, squared the project, and time to complete Job 1.

67% **Construct a Brick Wall/Pier in Stretcher/Running Bond**

Level top course; plumb points A, B, C, D, E, F, G, and H; pier and wall are square and in range; stayed on coursing dimensions; fullness of joints; maintained proper half-bond; and time to complete Job 2.

15% **Project Jointing**

Jointing, overall project appearance, and time to complete Job 3.



Sample Job: Job Layout

Maximum Time: 15 minutes

Participant Activity: The participant, using appropriate tools, will measure project size according to drawing specifications. Snap a chalk line, dry bond the first course using 3/8 inch mortar joints. Mark off dimensions for the project, and square the project.

