

Teacher Assessment Blueprint

Building Trades Maintenance



Test Code: 5264 / Version: 01

General Assessment Information

Blueprint Contents

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Test Type: The Building Trades Maintenance assessment is included in NOCTI's Teacher assessment battery. Teacher assessments measure an individual's technical knowledge and skills in a proctored proficiency examination format. These assessments are used in a large number of states as part of the teacher licensing and/or certification process, assessing competency in all aspects of a particular industry. NOCTI Teacher tests typically offer both a written and performance component that must be administered at a NOCTI-approved Area Test Center. Teacher assessments can be delivered in an online or paper/pencil format.

Revision Team: The assessment content is based on input from subject matter experts representing the following states: Kentucky, New Jersey, New York, Oklahoma, Pennsylvania, and Wisconsin.



46.0401- Building/Property
Maintenance



Career Cluster 2-
Architecture and
Construction



49-9071.00- Maintenance
and Repair Workers,
General



In the lower division
baccalaureate/associate degree
category, 1 semester hour in
Building Trades or Methods and
Materials

Written Assessment

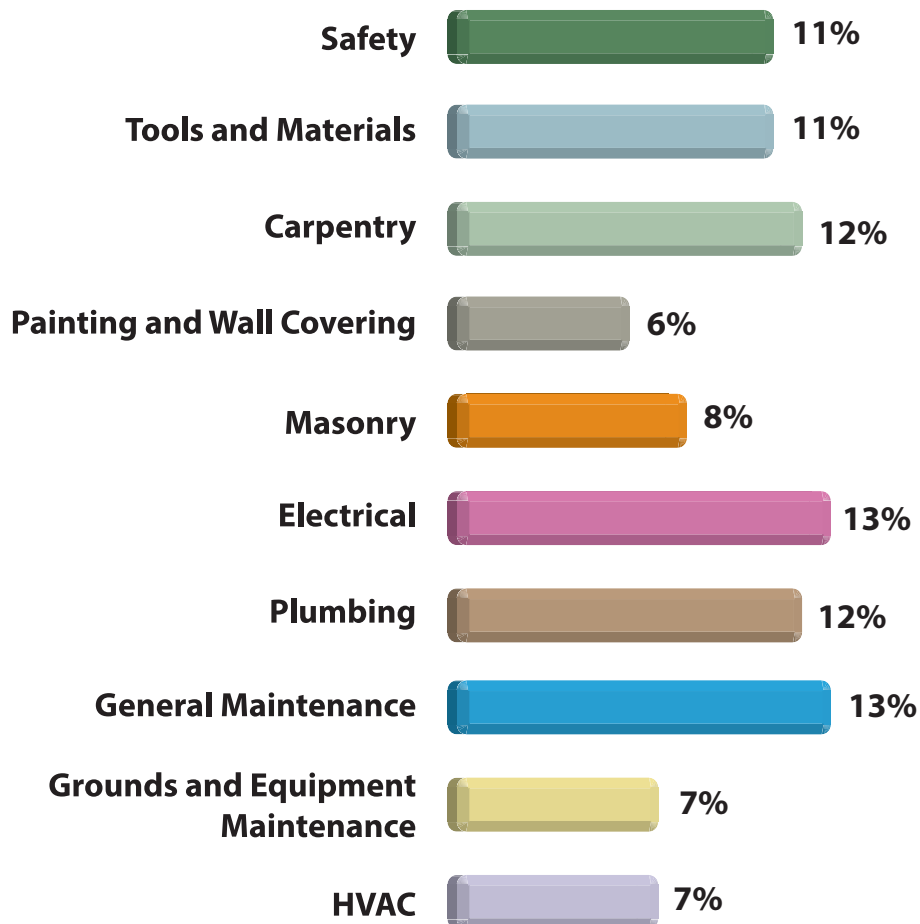
NOCTI written assessments consist of questions to measure an individual's factual theoretical knowledge.

Administration Time: 3 hours

Number of Questions: 166

Number of Sessions: This assessment may be administered in one, two, or three sessions.

Areas Covered



Specific Standards and Competencies Included 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 appropriate 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



(Continued on the following page)

Specific Standards and Competencies (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

(Continued on the following page)

Specific Standards and Competencies (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



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

NOCTI performance assessments allow individuals to demonstrate their acquired skills by completing actual jobs using the tools, materials, machines, and equipment related to the technical area.

Administration Time: 2 hours, 45 minutes

Number of Jobs: 5

Areas Covered:

31% Carpentry: Construct Frame

Participants will correctly select tools, cut joints, assemble joints with accurate measurements and frame appearance.

21% Plumbing: Sweat Piping

Participants will select the correct tools, assemble joints, accurately measure, install piping, and test for leaks.

17% Electricity: Rough Wiring

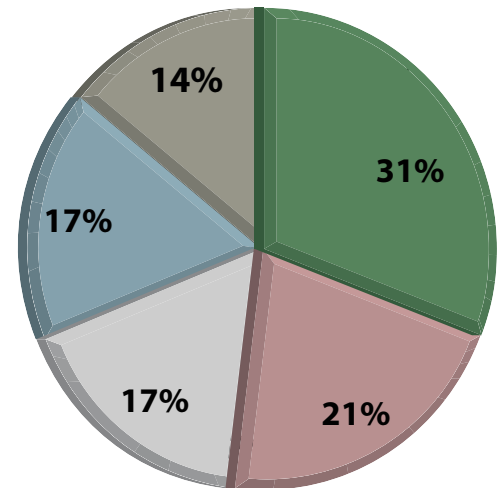
Participants will mount electrical boxes, install nonmetallic cable, and prepare wires in a box.

17% Drywall

Participants will accurately measure, cut, install, and finish drywall.

14% Electricity: Finish Wiring

Participants will install and test a switching device and light fixture.



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.

