

Massachusetts Technical Teacher Testing Program Building & Property Maintenance Content Outline

Written and Performance Exam General Overview

- The intent of this exam is to assess your ability to teach the skills found in the Massachusetts Technical Education Framework.
- This exam is aligned to the frameworks which can be accessed [here](#).
- Many questions and tasks require a synthesis of knowledge based on experience in the field and may not be found in any book.
- Candidates are encouraged to prepare for their exam by reviewing textbooks and reference material which has been listed as part of this exam outline. These resources can be found using online search tools, online vendors, and websites.
- Contact the Technical Teacher Testing Office if you need further assistance in locating resources listed in the exam outline.
- Use this exam outline and the Massachusetts Technical Education Framework to focus your preparation for the exam.

Written Exam

- Number of Questions: 100
- Administration Time: 3 hours
- Administration Method: Remote Proctoring Online Session

Written Exam Content Coverage

9%	<i>Building Alteration, Preparatory Painting and Repair of Wood Plaster, Concrete, or Brick</i>
12%	<i>Building Maintenance</i>
11%	<i>Building Repair Materials</i>
5%	<i>Energy Efficiency and Green Building Technology</i>
10%	<i>Heating, Ventilation, and Air Conditioning Troubleshooting</i>
16%	<i>Landscaping and Grounds Maintenance</i>
6%	<i>Building and Property Maintenance-Related Mathematics</i>
5%	<i>Painting and Finishing</i>
3%	<i>Record Keeping</i>
7%	<i>Safety</i>

5% *Technical Drawings and Blueprints*

11% *Tool and Equipment Use*

Written Exam Reference Materials (Reference Current Edition)

- **Home Repair and Maintenance** by Jack M. Landers (Goodheart-Willcox)
- **Modern Carpentry** by Willis H. Wagner (Goodheart-Willcox Co)
- **Masonry Skills** by R. T. Kreh, Sr. (Delmar Publishers)
- **Basic Construction Blueprint Reading** by Mark W. Huth (Delmar Publishers)
- **Fundamentals Of Carpentry Tools, Materials And Practices** by Walter Durbahn and Robert Putnam (Sterling Publication Company)
- **Low Pressure Boilers** by Frederick Steingross (American Technical Publishing)
- **New Garden Book** (Better Homes and Gardens)
- **Horticulture Gardner’s Desk Reference** by Anne Moyer Halpin (John Wiley & Sons Inc)
- **Garden Doctor** (Better Homes and Gardens)
- **Scotts Lawns: Your Guide To A Beautiful Yard** by Nick Christmas and Ashton Ritchie (Meredith Books)
- **American Horticultural Society Gardening Manual** by American Horticulture Society (DK Publishing)
- **Landscape Design, Construction and Maintenance** by Ronald J. Biondo and Charles B. Schroeder (Pearson)
- **Construction and Building Technology** by Keith Blankenbaker (Goodheart-Willcox)

Materials Needed for the Written Exam

- A four-function calculator is included in the online testing system. No other calculators are permitted.
- Scrap paper and pencil/pen are permitted.

Written Exam Sample Items

Each question on the exam consists of one incomplete sentence or question followed by four choices. Some items reference an image or diagram. A few sample items are included below; the correct answer is designated with an asterisk (*).

The size of a portable drill is determined by:

- a. horsepower of the motor.
- b. highest rpm capability.
- c. length of the drill body.
- *d. capacity of the chuck.

The three numbers on a bag of fertilizer always represents:

- *a. nitrogen, phosphate and potash in that order.
- b. nitrogen, lime and potash in that order.
- c. nitrogen, potash and phosphate in that order.
- d. potash, lime and nitrogen in that order.

Performance Exam

- Administration Time: 4 hours
- Administration Method: Onsite at an approved Teacher Testing Location

Performance Exam Content Coverage

22% Outdoor Power Equipment Basic Repairs

- Install Head
- Gap Sparkplug
- Sharpen Mower Blades
- Identify Small Engine Components

24% Building Maintenance Skills

- Maintain Hand & Power Tools
- Construct a Copper Tubing Project
- Troubleshoot an HVAC Common Problem

48% Building Repair and Alteration

- Construct Basic Window Frame
- Prepare Door Jamb
- Install Hinge
- Repair Drywall

6% Safety

- Use of Appropriate PPE
- Industry & OSHA Recommended Safety Procedures
- Tool Use
- Cleanliness

Materials Required for the Performance Exam (Candidate Must Supply)

- Face mask (cotton face covering or respirator which fully cover the nose and mouth)
- Eye Protection
- Disposable Gloves
- Industry-Approved Work Clothes and Boots/Shoes

Note: All necessary tools will be available, however, candidates are allowed to bring any personal tools they feel will assist them in completing the exam. No books or notes will be allowed. Cell phones are prohibited during the exam administration.

Onsite Performance Exam Requirements

- Candidate must practice social distancing and wear the appropriate face covering that covers the nose and mouth while at the exam site.
- Testing sites may have individual requirements based on location and the current guidance from the Center for Disease Control and Prevention (CDC).

Performance Exam Reference Materials (Reference Current Edition)

- **Safety Orientation** by NCCER (Pearson Prentice Hall) www.crafttraining.com
- **OSHA Regulations** www.osha.gov
 - [1910.1200 - Hazard Communication](#)
 - [1910 Subpart I - Personal Protective Equipment](#)