

Massachusetts CTE Teacher Testing Program Mason and Tile Setting Content Outline

Written and Performance Exam General Overview

- The intent of this exam is to assess the candidate’s ability to teach the skills found in the Massachusetts Technical Education Framework.
- The written exam is a state-developed exam aligned to the frameworks which can be accessed [here](#). The performance exam is a NOCTI-developed teacher test and has been determined by DESE to align to the state frameworks.
- Many questions and tasks require a synthesis of knowledge based on experience in the field and may not be found in any book.
- Use this exam outline and the Massachusetts Technical Education Framework to focus your preparation for the exams.
- Candidates are encouraged to prepare for their written exam by reviewing textbooks and reference material which have been listed as part of this exam outline. These resources can be found using online search tools, online vendors, and websites.

Written Exam

- Number of Questions: 100
- Administration Time: 3 hours
- Passing Score: 70.0%
- Administration Method: Remote Proctored Online Testing Session

Written Exam Content Coverage

13% Fundamentals of Health and Safety

10% Fundamentals of Masonry

- Read and Interpret Prints
- Set-up and Layout

20% Brick and Block Laying

- Bonds, Leads, and Corners
- Masonry Walls and Reinforcement

2% Scaffolding

10% Brick Paving

10% Tile Setting Procedures

5% Chimneys, Fireplaces, Arches, and Ornamental Masonry

10% Hand and Power Tools

5% ***Finishing, Restoration, Reinforcement, and Waterproofing***

10% ***Masonry Measurements and Mathematics***

5% ***Concrete and Mortar Applications***

Written Exam Reference Materials (Reference Current Edition)

- **Masonry Skills** by Richard T. Kreh, Sr. (Delmar)
- **Concrete Technology** by George White (Delmar)
- **Concrete Form Construction** by Cairl Moore (Delmar)

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 (*).

Flue lining is made of a very strong material called:

- a. gypsum.
- b. terra-cotta. (*)
- c. concrete.
- d. asbestos.

The normal steps to align brick in a corner lead with a mason's level are:

- a. plumb, straight edge, level.
- b. plumb, level, straight edge.
- c. level, plumb, straight edge. (*)
- d. straight edge, plumb, level.

NOCTI Performance Exam

- Administration Time: 3 hours
- NOCTI Criterion-Referenced Cut Score/Passing Score: 97.6%
- Administration Method: Onsite at a DESE approved Massachusetts Area Testing Center (MATC) location. Candidates must register and schedule their exam session through NOCTI.

Performance Exam Content Coverage

12% Job Layout

Participants will select and safely use tools to measure project size according to the drawing specifications provided. Participants will then snap a chalk line, dry bond the first course using 3/8-inch mortar joints, mark off the dimensions, and square the project.

44% Construct a Block Wall

Participants will lay appropriate masonry units according to the drawing specifications provided and maintain 3/8-inch head joints. Participants will then re-square the inside corner on the first course and measure the course height from the specified point. Participants will be required to level, plumb, range each course, and tool all exposed joints, cut (tags), brush, and retool the project.

44% Construct a Brick Veneer

Participants will construct a brick veneer according to the drawing specifications provided. Steps will include laying the appropriate masonry units, re-squaring the corner on the first course, and measuring the course height from a specified point. Participants will be required to level, plumb, and range each course, tool all exposed joints and cut (tags), and brush and retool the project.

Performance Exam Requirements

Candidate Supplied

Candidates must bring all appropriate Personal Protective Equipment (PPE), attire/uniform, and any other safety items as is routinely expected to be used by an employee in the related industry. If the candidate does not bring what is needed to safely complete all jobs on the exam as required in the workplace, the testing session will need to be rescheduled at the candidate's expense.

Site Supplied

Additional equipment and supplies needed to complete the jobs on the performance test will be provided by the testing site.

Performance Exam Site Requirements

Testing sites may have individual requirements based on location and any relevant and current guidance from the Center for Disease Control and Prevention (CDC).