

# Massachusetts CTE Teacher Testing Program Automotive Collision Repair & Refinishing 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

<b>20%</b>	<b>Health and Safety</b>	<ul style="list-style-type: none"> <li>• Health and Safety Regulations and Practices</li> <li>• High Pressure Systems</li> <li>• Electrical Circuits</li> <li>• Tools</li> <li>• Refinishing Operations</li> </ul>
<b>6%</b>	<b>Measuring Procedures and Power Tools</b>	<ul style="list-style-type: none"> <li>• Measuring Tools and Gauges</li> <li>• Pneumatic and Electric Powered Tools</li> </ul>
<b>8%</b>	<b>Structural Damage</b>	<ul style="list-style-type: none"> <li>• Set-up and Measure Structural Damage</li> </ul>
<b>20%</b>	<b>Cutting and Welding</b>	<ul style="list-style-type: none"> <li>• Weldable and Non-Weldable Materials</li> <li>• Cutting and Welding Processes and Equipment</li> <li>• Set-up Welding Equipment</li> <li>• Prep Metal and Work Area</li> <li>• Test Welds</li> <li>• Welding Problems</li> </ul>

<b>26%</b>	<b>Repair Plan</b> <ul style="list-style-type: none"> <li>Wash Vehicle</li> <li>Develop Repair Plan</li> </ul>	<ul style="list-style-type: none"> <li>Exterior Panel Cosmetic Repair</li> </ul>
<b>5%</b>	<b>Mechanical and Electrical Components</b> <ul style="list-style-type: none"> <li>Suspension and Braking Components</li> </ul>	<ul style="list-style-type: none"> <li>Electrical Systems Components</li> </ul>
<b>6%</b>	<b>Plastics and Adhesives</b> <ul style="list-style-type: none"> <li>Types of Plastics used in Vehicles</li> </ul>	
<b>9%</b>	<b>Automotive Refinishing</b> <ul style="list-style-type: none"> <li>Mix and Apply Undercoats</li> <li>Dry or Wet Sand and Clean Area</li> </ul>	<ul style="list-style-type: none"> <li>Blend a Panel</li> <li>Panel Refinishing</li> <li>Repair Paint Problems</li> </ul>
<b>2%</b>	<b>Final Detail</b>	

### Written Exam Reference Materials (Reference Current Edition)

- **Auto Body Repair for MOTORS** by Robert Scharff (Delmar)
- **Motors Estimating Crash Guides**
- **Chief E-Z Liner Curriculum Guide**
- **Estimating For Collision Repair** by Michael Crandell (Delmar)

**Note:** You may want to check with your local library for obtaining these resources through the interlibrary loan program.

### 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 (\*).

When installing a deck/trunk lid technician A aligns the sides first and technician B aligns the front edge first. Which technician is correct?

- Technician A (\*)
- Technician B
- Both Technician A and B
- Neither Technician A or B

Technician A uses a supplied air respirator when spraying activated products. Technician B used an organic vapor respirator to spray non activated products. Which technician is correct?

- a. Technician A (\*)
- b. Technician B
- c. Both Technician A and B
- d. Neither Technician A nor B

### NOCTI Performance Exam

- Administration Time: 2 hours and 30 minutes
- NOCTI Criterion-Referenced Cut Score/Passing Score: 88.8%
- 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

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**40% Welding**

*Participant will use 18-gauge coupons to practice and tune equipment. Participant will perform a horizontal lap weld, horizontal butt weld, and horizontal plug weld; presenting the best one for scoring to the evaluator, and clean work area and shut down equipment.*

**34% Sheet Metal Repair**

*Participant will obtain required tools, equipment, and materials, repair dent in the panel, and clean work area.*

**26% Refinishing**

*Participant will safely clean, tack and refinish panel, apply basecoat and clearcoat, and clean work area.*

### Performance Exam Requirements

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#### 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

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