

Practice Test

Technology/Engineering

HIGH SCHOOL

Student Name

School Name

District Name



This is a practice test. Your responses to practice test questions must be recorded on your Practice Test Answer Document.

Mark only one answer for each multiple-choice question. If you are not sure of the answer, choose the answer you think is best.

HOW TO ANSWER OPEN-RESPONSE QUESTIONS

- Read all parts of each question carefully.
- Make each response as clear, complete, and accurate as you can.
- Support your responses.
- Check your answers.

Technology/Engineering

DIRECTIONS

This practice test contains two multiple-choice questions and one open-response question. Mark your answers to these questions in the spaces provided on page 4 of your Practice Test Answer Document.

- 1 Two workers are using a scaffold. One worker weighs 180 lb. and the other weighs 200 lb.

Impact effects are assumed to increase the live load of the workers' weight by 25 percent. What is the resultant maximum live load, in pounds, that can be expected from the two workers supported by the scaffold?

- A. 380 lb.
- B. 475 lb.
- C. 625 lb.
- D. 950 lb.

- 2 Foam weather stripping is often placed in the frames of doors and windows in a home. What effect does this weather stripping have?

- A. The weather stripping increases heat transfer by radiation.
- B. Heat is conducted quickly through the weather stripping.
- C. The weather stripping reduces heat loss due to convection.
- D. Heat can transfer through the weather stripping due to reflection.

Question 3 is an open-response question.

- **BE SURE TO ANSWER AND LABEL ALL PARTS OF THE QUESTION.**
- **Show all your work (diagrams, tables, or computations) in your Practice Test Answer Document.**
- **If you do the work in your head, explain in writing how you did the work.**

Write your answer to question 3 in the space provided on page 4 of your Practice Test Answer Document.

- 3 A group of students is doing a semester project to determine the best material for textbook covers. During the project, they will conduct a one-month pilot study in which a class of students will try out different types of textbook covers.
- Identify **one** step in the engineering design process that the students should do before starting the pilot study.
 - Explain in detail **one** step that the students should do after the pilot study.
 - Explain in detail why **both** of these steps are important.

MASSACHUSETTS COMPREHENSIVE ASSESSMENT SYSTEM
High School Technology/Engineering
Practice Test Answer Document

<p>School Name: _____</p> <p>District Name: _____</p> <p>Last Name of Student: _____</p> <p>First Name of Student: _____</p>	<p style="text-align: center;">Marking Instructions</p> <ul style="list-style-type: none">• Use a No. 2 pencil only.• Do not use ink, ballpoint, or felt tip pens.• Make solid marks that fill the circles completely.• Erase cleanly any marks you wish to change.• Make no stray marks on this form.• Do not fold, tear, or mutilate this form.
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**NO TEST MATERIAL
ON THIS PAGE**

