# Building Assessment Quiz Answer Key

# Quality Control Inspector

DISCLAIMER: This quiz is intended for use as an interim review. Distribute to students after training the associated curriculum chapter, or the next day, to refresh the lesson. Being publicly available renders this specific quiz invalid for use as a formal assessment tool for accreditation.  See Tier 2.14(b) IREC 01022 ISPQ accreditation standard.

Learning Objectives

* Explain the concepts of the air barrier and thermal boundary.
* Recognize whether appropriate energy-saving measures were installed.
* Determine whether there were missed opportunities for energy saving measures.
* Evaluate whether energy-related repairs and health and safety measures were justified.
* Judge whether installed measures meet weatherization program specifications and standards for quality workmanship.

Questions and Rationale

**Objectives:**

* Evaluate whether energy-related repairs and health and safety measures were justified.

**Question:**

**1**. Which of the following is *not* characterized as an incidental *or* health and safety repair?

1. Mold remediation
2. Ensuring vented appliances vent to the outside
3. Covering electrical junctions

**Rationale:**

**A** is correct. Weatherization services must be deferred until mold is removed. Then measures to prevent moisture can be installed by weatherization crews.

**B** and **C** are incorrect. All electrical junctions should be covered and vented appliances should be vented to the outside. These are allowed activities, either as incidental repair or H&S measures depending on the state plan definitions.

**Objective:**

* Explain the concepts of the air barrier and thermal boundary.

**Question:**

**2**. The air barrier in most homes is made up of the:

A. Roof deck.

B. Insulation blanket.

C. Drywall.

**Rationale:**

**A** is incorrect because the roof deck is typically adjacent to a cold attic and is not commonly the air barrier. Though it does happen, it is not the case in *most* homes.

**B** is incorrect because the insulation blanket does not typically stop air.

**C** is correct because the drywall is usually the primary surface that separates conditioned from unconditioned spaces.

**Objective:**

* Explain the concepts of the air barrier and thermal boundary.

**Question:**

**3**. A well-sealed air barrierplays a major role in:

1. Insulating the thermal envelope.
2. Retarding the movement of heat and moisture through the building.
3. Providing a vapor retarder.

**Rationale:**

**A** is incorrect because it is insulation’s main function to slow down heat transfer by conduction.

**B** is correct because moisture vapor is carried by convective air currents, which accounts for the majority of heat loss in homes.

**C** is incorrect because the function of a vapor retarder is to retard the flow of moisture by diffusion.

Objective:

* Determine whether there were missed opportunities for energy saving measures.
* Judge whether installed measures meet weatherization program specifications and standards for quality workmanship.

Question:

**4**. Post-weatherization blower door numbers indicate only 50 CFM reduction. Which of these might indicate missed air-sealing opportunities?

 A. Bath fan is vented into the attic.

 B. Basement access door is not insulated.

 C. Chimney is dammed with fiberglass batt in attic

**Rationale:**

**A** is incorrect because though the fan should be vented outside, it would not be a significant source of air leakage venting into the attic vs. outside the home.

**B** is incorrect because insulating the door would not have a significant impact on air leakage.

**C** is correct because the chimney chase may not be air sealed, and since air will flow through fiberglass, air could be leaking from the basement all the way up through to the attic. It may also indicate other missed air sealing opportunities in the attic.

**Objective:**

* Recognize whether appropriate energy-saving measures were installed.

**Question:**

**5**. Which of the following scenarios would raise concerns that appropriate energy-saving measures were overlooked?

1. 15 windows were replaced and the wood-frames walls are all empty of insulation.
2. A moisture barrier was installed on the dirt crawl space and plumbing pipes weren’t insulated.
3. The attic was air sealed and insulated and low flow showerheads installed.

**Rationale:**

**A** is correct because windows are typically not cost-effective, so replacing 15 is a concern, and insulating empty walls typically is cost-effective.

**B** is incorrect because moisture barriers are required for H&S.

**C** is incorrect because those are typical, cost-effective weatherization measures.