# General Construction and Carpentry Quiz Answer Key

# Weatherization Energy Auditor – Single Family

**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**

By attending this session, participants will be able to:

* Define residential house construction terminology.
* Recognize characteristics of various types of structural framing.
* Identify different types of foundation, wall, roof, window, and door systems.
* Recognize characteristics of balloon and platform framing.
* Explain the impact that different framing types have on air leakage.
* Review window and door installation processes.

**Questions and Rationale**

 **Objectives:**

* Identify different types of foundation, wall, roof, window, and door systems.
* Define residential house construction terminology.

**Question:**

1. The types of foundation systems that commonly experience outside temperatures throughout the year are: *(Circle all that apply.)*

1. Below grade basement
2. Pier and beam foundation
3. Vented crawl space
4. Slab on grade

**Rationale:**

**A & D** are incorrect because these areas do not normally experience outside temperatures throughout the year. A below grade basement is enclosed and coupled to the home. A slab on grade is also coupled to the home and not exposed to the outside temperatures except at the edges.

**B** **& C** are correct because they are generally outside the thermal boundary and experience outside temperatures throughout the year.

**Objectives:**

* Recognize characteristics of balloon and platform framing.
* Recognize characteristics of various types of structural framing.

**Question:**

2. Balloon framing can be detected by the presence of:

1. Open topped wall stud bays in an attic.
2. Double top plated partition walls.
3. Sill plates.

**Rationale:**

**A** is correct because with balloon framing the wall studs run continuously from the basement to the attic with no top plate.

**B & C** are incorrect because those features are associated with platform framing.

**Objectives**:

* Recognize characteristics of balloon and platform framing.
* Recognize characteristics of various types of structural framing.

**Question**:

3. The characteristics of platform framing include:

1. Long, vertical framing for exterior walls.
2. Floor joists fastened to ledger boards.
3. Wall framing capped with top plates.

**Rationale**:

**A** is incorrect because this is a characteristic of balloon framing, not platform framing.

**B** is incorrect because this is a characteristic of balloon framing, not platform framing.

**C** is correct. This is a characteristic of platform framing.

**Objective:**

* Explain the impact that different framing types have on air leakage.

**Question:**

4. An example of a *major* air leak associated with platform-framed construction is:

1. Dropped ceiling over a closet with open topped wall studs.
2. Leaks around windows and doors.
3. Kitchen cabinet bulkhead open to the attic.

**Rationale:**

**A** is incorrect because open topped stud walls are associated with balloon framing.

**B** is incorrect because leaks associated with windows and doors are generally minor and unrelated to framing type.

**C** is correct because this is a feature often found in older platform-framed homes.

**Objective:**

* Explain the impact that different framing types have on air leakage.

**Question:**

5. Why are platform framed houses less likely than balloon framed houses to have vertical air leakage?

1. Fewer vertical pathways
2. No plumbing chaseways
3. Less knob and tube wiring

**Rationale:**

**A** is correct because top plates used in construction block vertical pathways.

**B** is incorrect because plumbing chaseways are common in both types of construction.

**C** is incorrect because that does not explain the reduction of vertical air leakage.

**Objectives:**

* Review window and door installation processes.

**Question:**

6. Which of the following is not a step for the installation of an in-jamb replacement window?

1. Score all painted joints with a sharp utility knife.
2. Remove all interior and exterior window trim.
3. Seal the perimeter with low expanding foam.

**Rationale:**

**A** is incorrect because scoring the paint is an appropriate step to prevent the trim from splitting when removing with a pry bar.

**B** is correct because only the window sash and interior window stops need to be removed.

**C** is incorrect because applying sealant will prevent air infiltration and should be considered part of window replacement.