

Program title: "Metal Offers Durable, Energy-efficient Roofing Solutions," (05/07). AIA/CES Credit: This article will earn you one AIA/CES LU hour of health, safety, and welfare credit. (Valid for credit through May 2009). **Directions:** Refer to the Learning Objectives for this program. Select one answer for each question in the exam and fill in the box by the appropriate letter. A minimum score of 80% is required to earn credit. **To take this test online, go to <http://archrecord.construction.com/continuing/default.asp>**

LEARNING OBJECTIVES

After reading this article, you should be able to:

- Describe the two major metal roofing types
- Explain the importance of underlayments
- Compare the advantages of metal substrates
- Discuss recent trends in high-performance, energy-efficient finishes

QUESTIONS

1. Architectural roofs are differentiated from structural roofs as measured by which of the following?:

- a. aesthetics.
- b. finish.
- c. slope.
- d. age.

2. Architectural roofs are used on:

- a. steep slopes.
- b. low slopes.
- c. slopes of 1/4: 12.
- d. hydrostatic roofs.

3. Structural metal panel systems:

- a. are designed for a 3:12 slope.
- b. fit over structural metal framing and purlins.
- c. are hydrokinetic.
- d. never require underlayment.

4. Peel and stick membranes:

- a. are not as effective as roofing felt.
- b. are an upgrade to roofing felt.
- c. are not recommended at valleys and eaves.
- d. are more labor-intensive than roofing felt.

5. Oil canning:

- a. is a finish problem.
- b. refers to waviness in the panel.
- c. can not be remedied on the job site.
- d. results from improper clip spacing.

6. Galvanized steel is rendered corrosion resistant by:

- a. reflective pigments.
- b. a strong underlayment.
- c. zinc coating.
- d. anodizing.

7. Life-cycle costs of a metal roof:

- a. are higher than single-ply roofs.
- b. are higher than asphalt roofs.
- c. are 57 cents a square foot.
- d. are lower than both asphalt and single-ply roofs.

8. The premium paint finish for durability and fade resistance is:

- a. polyester.
- b. two-step anodizing.
- c. PVDF.
- d. hardcoat anodizing.

9. The most important finish characteristic is:

- a. chalking resistance.
- b. chemical resistance.
- c. paint adhesion.
- d. fade resistance.

10. A cool metal roof:

- a. reduces a building's cooling needs.
- b. improves aesthetics.
- c. absorbs infrared waves.
- d. refers to the roofing surface area.

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Material resources used: Article: This article addresses issues concerning health and safety.

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