Practice quiz: ICC B2 Commercial Building Inspector

10 questions. The answer key is on page 2.

Name _____ Date _____

1. **A fictional ramp rises 18 in. over a horizontal run of 16 ft. What is its slope?**
   A. About 1 in 12 (8.3%)
   B. About 1 in 10.7 (9.4%)
   C. About 1 in 8.9 (11.3%)
   D. About 9.4 in 1

2. **A 60 in. wide exit stair in a fictional office building has a handrail on the wall side only. The open side has a guard whose top rail is 42 in. above the tread nosings. What should the inspector require?**
   A. Nothing, since one handrail serves a stair of any width
   B. Nothing, since the guard's top rail counts as the second handrail
   C. Nothing, if the stair has fewer than 20 risers
   D. A handrail on the open side as well

3. **The plans for a fictional building show a janitor's storage closet with its door opening directly into a rated exit stair enclosure. What should the inspector do?**
   A. Require the closet door to open outside the enclosure
   B. Require a labeled, self-closing fire door on the closet
   C. Require a smoke detector inside the closet
   D. Require the closet to store no flammable liquids

4. **The egress doors from a fictional Group A banquet hall serve an occupant load of 300, well above the occupant load at which the code requires panic hardware for Group A. The doors have lever locksets. What should the inspector require?**
   A. Nothing, since lever handles open without special knowledge
   B. A sign stating the doors must stay unlocked
   C. Panic hardware or fire exit hardware on those doors
   D. Nothing, if the doors swing in the direction of egress

5. **A fire damper is installed where a duct passes through a rated shaft wall above a hard gypsum board ceiling. No access panel is shown or installed. What should the inspector require?**
   A. Nothing, since the damper is listed
   B. A smoke detector in the room below in place of access
   C. An access opening so the damper can be inspected and maintained
   D. Nothing, if the damper's fusible link is rated for the space

6. **A fictional floor has 6,000 sq ft of office space (gross) and a 900 sq ft conference room (net). For practice, assume a factor of 120 sq ft gross per occupant for the office and 15 sq ft net per occupant for the conference room. What is the floor's occupant load?**
   A. 110
   B. 58
   C. 460
   D. 57

7. **An inspector issues a stop work order on a fictional job. Besides being in writing, what should it state?**
   A. The fine the owner must pay before any further inspection
   B. Only the address, since the reason can be explained to the crew verbally
   C. The contractor's license number and nothing else
   D. The reason for the order and the conditions for resuming work

8. **The plans call for fire-retardant-treated wood in a roof assembly. The lumber delivered carries no treatment mark of any kind. What should the inspector do?**
   A. Accept it if it looks discolored, as treated lumber often does
   B. Require the identification the code calls for, or replace the lumber
   C. Accept it if the supplier's invoice says treated
   D. Accept it in concealed spaces only

9. **Driven piles under a fictional building are found out of location by more than the tolerance in the plans. What should happen before the pile cap is formed?**
   A. The design professional evaluates them and gives a fix, in writing
   B. The pile driver adds a second pile wherever it chooses
   C. Nothing, since the pile cap will spread the load
   D. The inspector picks a larger pile cap size in the field to make up for it

10. **The plans for a fictional building in a higher seismic design category show seismic bracing for a suspended unit heater. In the field, the heater hangs on threaded rods with no bracing. What should the inspector require?**
    A. Nothing, since the rods carry the heater's weight
    B. A safety chain from the heater to the roof deck
    C. The bracing shown on the plans
    D. Nothing, if the heater is under a set weight

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Answer key

ICC B2 Commercial Building Inspector. One line of why for each answer.

1. **B** The run is 16 x 12 = 192 in., and 18 ÷ 192 = 0.094, which is 9.4%, or about 1 in 10.7.
2. **D** Stairs in a building like this need handrails on both sides; the exceptions cover cases such as stairs within dwelling units, not office exit stairs.
3. **A** An exit enclosure is kept for egress, and openings into it are limited to those needed for egress from normally occupied spaces.
4. **C** With an occupant load above the threshold, egress doors in a Group A space need panic or fire exit hardware, which opens when a crowd pushes against it.
5. **C** Dampers need access for inspection and servicing, so a hard ceiling below calls for an access opening.
6. **A** Office: 6,000 ÷ 120 = 50.
7. **D** A stop work order is written and states the reason and the conditions under which work may resume, so the owner knows what to fix.
8. **B** Fire-retardant-treated wood must carry identification showing it was treated and tested as required.
9. **A** An out-of-tolerance pile changes the loads on the cap and the piles, so the design professional evaluates it and gives a written fix, recorded with the special inspection reports.
10. **C** Seismic bracing keeps suspended equipment from swinging and falling in an earthquake, which hanger rods alone do not do.

Full explanations

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