



# Coffee Break Training

## 3rd Quarter Self-Evaluation

December 16, 2009      CBTs 2009-27 to 2009-39



1. Stair enclosures that have barriers installed must have signs directing occupants to the level of exit discharge. **True or False** (Coffee Break Training FP-2009-31)
2. Two types of solar energy systems are most common in today's market: water heating systems and photovoltaic (PV) systems. **True or False** (Coffee Break Training FP-2009-39)
3. Hangers support sprinkler pipe to keep it off of other building components and can act as a restraint to prevent pipe movement when a sprinkler operates. **True or False** (Coffee Break Training FP-2009-37)
4. Battery storage rooms (except for lithium ion systems) must be ventilated
  - to limit the maximum concentration of hydrogen to 1 percent of the total room volume, or,
  - by continuously operating mechanical ventilation at a rate of at least 1 cfm/ft<sup>2</sup> (0.0051 L/sec/m<sup>2</sup>). **True or False** (Coffee Break Training FP-2009-28)
5. When a sprinkler activates, a significant reactive force can be exerted on the pipe. With a pendent sprinkler, this reactive force can cause the pipe to lift vertically if it is not properly secured, especially if the sprinkler drop is from a small diameter pipe. **True or False** (Coffee Break Training FP-2009-37)
6. In commercial cooking systems, the hood is intended to capture the flammable grease-laden vapors, and discharge them through a duct system to a safe location, usually outside the building. The hood must be outfitted with filters to capture as much grease as feasible before it enters the duct system. **True or False** (Coffee Break Training FP-2009-26)
7. Depending upon the amount of \_\_\_\_\_, the room in which the batteries are stored may have to be separated from the remainder of the building by fire-resistant construction and be sprinklered. (Coffee Break Training FP-2009-28)
  - a. employees
  - b. service technicians
  - c. batteries
  - d. electrolytes
8. By definition, a "commodity" in storage occupancies is the combination of products, packing material, and container that determines commodity classification. **True or False** (Coffee Break Training FP-2009-35)
9. The International Building Code<sup>®</sup> prohibits delayed egress locks in Group A, E, and H occupancies, while the National Fire Protection Association (NFPA)<sup>®</sup> 5000, Building Construction and Safety Code<sup>®</sup> allows them in all occupancies except detention and correctional facilities. **True or False** (Coffee Break Training FP-2009-27)
10. Level 3 aerosols, lubricating or hydraulic fluid in combustible containers, foam rubber or plastic mattresses and rubber tires are examples of Class \_\_\_\_\_ commodities under the International Fire Code<sup>®</sup>. (Coffee Break Training FP-2009-34)
  - a. I
  - b. II
  - c. III
  - d. IV
  - e. High hazard



11. Older editions of the NFPA®13, *Standard for the Installation of Sprinkler Systems* allowed sprinklers to be installed in a linen or rubbish chute if they were shrouded or otherwise protected from falling materials; now they must be recessed. **True or False** (*Coffee Break Training FP-2009-33*)
12. Where delayed egress locks are installed, which of the following safety features must be included (*Coffee Break Training FP-2009-27*)
- the building must be equipped with an supervised automatic detection or sprinkler system.
  - delayed egress locks must release automatically upon operation of the sprinkler system or the fire detection system and must unlock when power to the door locking equipment is lost.
  - the panic hardware must unlock within a specific time after minimum pressure is applied continuously.
  - there must be a readily visible sign on the door leaf adjacent to the hardware reading “PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS,” and, emergency lighting must be installed in the vicinity of the door.
  - all of the above.
13. The model fire and building codes require that automatic sprinklers be installed in the top of the chutes as well as the “terminal room,” the space at the bottom of the chute where the rubbish and linen accumulate. **True or False** (*Coffee Break Training FP-2009-33*)
14. Over time, if sprinkler pipe expands and contracts due to thermal changes, moves due to water hammer, or simply moves with the building, friction between the pipe and all-thread rod that is in contact with nonmetallic pipe could wear a hole in it. **True or False** (*Coffee Break Training FP-2009-30*)
15. When a linen or rubbish chute extends through three or more floors, additional sprinklers must be installed at every floor level. **True or False** (*Coffee Break Training FP-2009-33*)
16. Alcoholic beverages not exceeding 20 percent alcohol in combustible containers, or incandescent or fluorescent light bulbs in cartons are examples of Class \_\_\_\_\_ commodities. (*Coffee Break Training FP-2009-34*)
- I
  - II
  - III
  - IV
  - High hazard
17. Stairs that continue below the level of exit access must have a barrier at the exit discharge level. **True or False** (*Coffee Break Training FP-2009-31*)
18. In multistory buildings, sprinkler riser supports should be provided at the lowest level, at each alternate level above, above and below offsets, and at the top of the riser. **True or False** (*Coffee Break Training FP-2009-38*)
19. Chlorinated Polyvinyl Chloride (CPVC) pipe may be more susceptible to damage if it is not installed correctly or exposed to physical threats such as powder- or gun-driven anchoring devices, errant drill bits, and improperly installed hangers. **True or False** (*Coffee Break Training FP-2009-30*)
20. To avoid damage caused by hangers that may be in contact with nonmetallic pipe, a minimum \_\_\_\_\_-inch (mm) clearance between the hanger tip and pipe is required. (*Coffee Break Training FP-2009-30*)
- $\frac{1}{16}$  (1.6)
  - $\frac{1}{8}$  (3.2)
  - $\frac{1}{4}$  (6.4)
  - 1 (25.4)
21. Where sprinkler risers are supported from the ground, the ground support should constitute the second level of riser support. **True or False** (*Coffee Break Training FP-2009-38*)

22. “Automatic” closing opening protectives are those that normally remain in the “open” position, and close automatically upon operation of a fire detection system, smoke detector, fusible link, sprinkler water flow, or some other fire protection system that releases the device. **True or False** (Coffee Break Training FP-2009-29)
23. Fire sprinkler risers should be supported by riser clamps or by hangers located on the horizontal connections within \_\_\_\_\_ inches (mm) of the centerline of the riser. (Coffee Break Training FP-2009-38)
- 18 (457)
  - 24 (610)
  - 28 (711)
  - 36 (914)
24. According to NFPA® 80, Standard for Fire Doors and Other Opening Protectives where fusible links are used to release opening protectives, one fusible link should be located near the top of the opening, and additional links should be located at or near the \_\_\_\_\_ on each side of the wall. (Coffee Break Training FP-2009-29)
- door
  - sprinkler
  - door handle
  - ceiling
  - none of the above
25. Heat detectors or fusible links should be installed on both sides of the wall and interconnected so that the operation of any single detector or fusible link causes the door to close, according to NFPA® 80. **True or False** (Coffee Break Training FP-2009-29)
26. A commodity that consists of banded and baled flattened cardboard packaging on conventional wooden pallets is an example of a Class III commodity. **True or False** (Coffee Break Training FP-2009-34)
27. During lead-acid battery electrolysis, \_\_\_\_\_ gases can be released into the atmosphere forming flammable mixtures. Nickel cadmium and lithium ion batteries can have a thermal runaway resulting in high temperature fires. (Coffee Break Training FP-2009-28)
- oxygen and hydrogen
  - lead and acid
  - sulfuric and hydrocortisone
  - lead and hydrogen
  - oxygen and sulfuric
28. Which of the following are potential hazards related to PV solar energy systems? (Coffee Break Training FP-2009-39)
- Tripping hazards and/or falls for firefighters operating on the roof.
  - Electric shock and battery hazards.
  - Inhalation exposure.
  - Earlier roof collapse during a fire due to extra weight.
  - All of the above.
29. The “level of exit discharge” in the model building codes is the horizontal plane or lowest story located at the point on or near ground level on the exterior wall line where an exit terminates and an exit discharge begins. **True or False** (Coffee Break Training FP-2009-31)
30. If the items stored in a warehouse meet all the requirements for Class III commodities, the fire protection features that the owner must install must be appropriate for Class \_\_\_\_\_ commodities. (Coffee Break Training FP-2009-35)
- I
  - II
  - III
  - IV
  - II and III

31. In commercial range hood systems, grease drip trays or gutters should be pitched to drain into an approved container that is accessible or removable for cleaning. NFPA® 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations requires that this be an enclosed metal container with a capacity not exceeding \_\_\_ gallons (L). (Coffee Break Training FP-2009-26)
- a. 0.5 (1.9)
  - b. 0.75 (2.8)
  - c. 1.0 (3.8)
  - d. 1.5 (5.7)
32. “Self-closing” opening protectives are those that normally remain in the “open” position, and close automatically upon operation of a fire detection system, smoke detector, fusible link, sprinkler water flow, or some other fire protection system that releases the device. **True or False** (Coffee Break Training FP-2009-29)
33. Sprinklers in a linen or rubbish chute should be of the ordinary temperature classification 135 to 170 °F (57 to 77 °C). **True or False** (Coffee Break Training FP-2009-33)
34. Commodities are assigned a Roman numeral character “Class” based on the relative fire hazard. Class I is the lowest category and Class III is the highest. **True or False** (Coffee Break Training FP-2009-34)