



# Coffee Break Training

## 4th Quarter Self-Evaluation

December 30, 2009    CBTs 2009-40 to 2009-52



1. When building codes require fire-resistant construction which of the following elements must be protected to defend against a fire's damaging thermal effects? (*Coffee Break Training FP-2009-46*)
  - a. **Structural framing, including columns, beams, girders, trusses and arches.**
  - b. **Exterior and interior bearing walls; interior nonbearing walls and partitions.**
  - c. **Floors and ceilings, including their supporting beams and joists.**
  - d. **Roofs, including their supporting beams and joists.**
  - e. **All of the above.**
  
2. In the model building codes, door closers and stops are permitted to reduce the ceiling headroom to \_\_\_\_\_ inches (mm). (*Coffee Break Training FP-2009-40*)
  - a. **72 (1828)**
  - b. **76 (1930)**
  - c. **78 (1981)**
  - d. **90 (2286)**
  
3. An \_\_\_\_\_ is a combination of materials put together in a specific way that achieves the fire- resistance rating required in the building code. (*Coffee Break Training FP-2009-47*)
  - a. **assembly**
  - b. **adjunct**
  - c. **amalgamation**
  - d. **assemblage**
  
4. In the *International Building Code*<sup>®</sup>, horizontal separation is the “width of the permanent open space as measured horizontally between a building exterior wall and the adjacent property line or the centerline of a facing street, alley, or public way.” **True or False** (*Coffee Break Training FP-2009-51*)
  
5. Type II construction consists of noncombustible structural framing, bearing walls, and floor/ceiling assemblies. **True or False** (*Coffee Break Training FP-2009-45*)
  
6. Which of the following building components is not considered a fire-resistive assembly? (*Coffee Break Training FP-2009-47*)
  - a. **Firewall and penetration assemblies.**
  - b. **Floor/Ceiling assemblies.**
  - c. **Fire-resistant joint systems.**
  - d. **Exposed noncombustible framing assemblies.**
  
7. Underground fire service pipe should be buried below the frostline where entering streams and other bodies of water. **True or False** (*Coffee Break Training FP-2009-52*)
  
8. The locally adopted fire code establishes fire-resistance ratings for various building elements based on the size, height, and intended use of a building. **True or False** (*Coffee Break Training FP-2009-50*)
  
9. In the model building codes, protruding objects, such as luminaires, are permitted to extend below the minimum ceiling height as long as there is a minimum headroom of 80 inches (2,032 mm) for any walking surface including aisles, corridors, walks, and passageways. **True or False** (*Coffee Break Training FP-2009-40*)

10. Fire-resistance ratings apply only to assemblies in their entirety. **True or False** (Coffee Break Training FP-2009-47)
11. According to the National Fire Protection Association (NFPA) 13D, *Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes*, the sprinkler system installer must provide the owner/occupant instructions on inspecting, testing, and maintaining the system. **True or False** (Coffee Break Training FP-2009-44)
12. A minimum monthly maintenance program on residential sprinkler systems should include at least (Coffee Break Training FP-2009-44)
- visual inspection of all sprinklers to ensure against obstruction of spray.**
  - inspection of all valves to ensure that they are open.**
  - testing of all waterflow devices and the alarm system, where installed.**
  - operation of pumps where employed.**
  - all of the above.**
13. The depth of cover over water pipes should be determined by the maximum depth of frost penetration in the locality where the pipe is laid. The top of the pipe should be buried not less than \_\_\_\_\_ ft (m) below the frost line. In those locations where frost is not a factor, the depth of cover should be not less than \_\_\_\_\_ ft (m) to prevent mechanical damage. (Coffee Break Training FP-2009-52)
- 1 (0.3), 2½ (0.8)**
  - 2 (0.6), 2½ (0.8)**
  - 3 (1.0), 2½ (0.8)**
  - 3 (1.0), 3 (1.0)**
14. In NFPA 5000, *Building Construction and Safety Code*<sup>®</sup>, horizontal separation is the “width of the permanent open space as measured horizontally between a building exterior wall and the adjacent property line or the centerline of a facing street, alley, or public way.” **True or False** (Coffee Break Training FP-2009-51)
15. To aid in the number of options and placement for hose station outlets, the model building and fire codes now require Class \_\_\_\_\_ and \_\_\_\_\_ standpipe hose station outlets at the highest intermediate landing between floor levels in every required exit stairway. (Coffee Break Training FP-2009-41)
- I, II**
  - I, III**
  - II, III**
  - none of the above. Standpipe outlets must be at the floor-level landing.**
16. When applying the building code requirements for fire resistance there are some conditions where automatic fire sprinkler systems may be installed to substitute for fire-resistant construction. **True or False** (Coffee Break Training FP-2009-47)
17. The *International Building Code*<sup>®</sup> measures horizontal separations are at a \_\_\_\_\_° (rad) angle to the face of a building. (Coffee Break Training FP-2009-51)
- 30 (0.52)**
  - 45 (0.79)**
  - 90 (1.57)**
  - 180 (3.14)**
18. With few exceptions, the model building codes prescribe a minimum ceiling height of \_\_\_\_\_ inches (mm) throughout habitable spaces including the means of egress system. (Coffee Break Training FP-2009-40)
- 72 (1828)**
  - 76 (1930)**
  - 80 (2032)**
  - 90 (2286)**
19. To establish their hourly ratings, fire assemblies are installed in a temperature-controlled propane gas-fired furnace, and the temperature is increased over a prescribed period of time in accordance with the criteria established in the American Society for Testing and Materials (ASTM) Standard E84, *Surface Burning Characteristics of Various Fire Tests of Building Construction and Materials*. **True or False** (Coffee Break Training FP-2009-47)

20. When measuring for underground fire service pipe, the depth of cover should be measured from the top of the pipe to finished grade, and due consideration should always be given to future or final grade and nature of soil. **True or False** (Coffee Break Training FP-2009-52)
21. To meet the fire-resistance requirements of Type IB construction, a buildings' structural frame, bearing walls, and floor assemblies must be a minimum 2-hour rating, and the roof construction must be 1-hour rated. **True or False** (Coffee Break Training FP-2009-50)
22. According to the ASTM Standard E119, Test Methods for Fire Tests of Building Construction and Materials, all fire-resistance ratings are based on the assumption that the stability of structural members supporting the assembly are not impaired by the effects of fire. **True or False** (Coffee Break Training FP-2009-49)
23. In the 2010 edition of NFPA 13, Standard for the Installation of Automatic Sprinkler Systems, the technical committees that develop the design and installation standard have included very clear language: "Heat collectors shall not be used as a means to assist the activation of a sprinkler." **True or False** (Coffee Break Training FP-2009-43)
24. Type V construction generally consists of combustible structural framing, bearing walls, and floor/ceiling assemblies. **True or False** (Coffee Break Training FP-2009-45)
25. According to ASTM test criteria, a 3-hour fire resistive assembly will survive a fire 180 minutes under all real-world conditions. **True or False** (Coffee Break Training FP-2009-47)
26. According to the ASTM Standard E119, for wall, partition, floor, and roof assemblies, parts of the test include (Coffee Break Training FP-2009-49)
- the measurement of the heat transmission through the assembly.
  - the ability of hot fire gases to ignite cotton waste on the side of the assembly opposite the gas-fired flame.
  - the ability of the assembly to resist hose stream pressure.
  - a and b above.
  - none of the above.