

# Chapter 4 Test

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Directions:** Write the correct letter on the blank before each question.

## Objective 1:

### Identify construction types.

- \_\_\_\_\_ 1. The majority of local building codes are based on \_\_\_\_\_ developed by third-party organizations. (116)
- A. model codes
  - B. review plans
  - C. local standards
  - D. federal requirements
- \_\_\_\_\_ 2. The \_\_\_\_\_ of record typically determines the type of construction used. (116)
- A. legal counsel
  - B. fire inspector
  - C. design professional
  - D. construction manager
- \_\_\_\_\_ 3. There are several basic building elements that are found in every structure including a structural frame and: (117)
- A. wall coverings.
  - B. load-bearing walls.
  - C. heavy-timber walls.
  - D. precast concrete floors.
- \_\_\_\_\_ 4. What determines the construction type of a structure in the United States? (118)
- A. Occupancy level of the structure
  - B. Architectural diagrams and drawings
  - C. Intended use of all or a portion of the structure
  - D. Construction material performance under fire conditions

- \_\_\_\_\_ 5. Type I structures are composed of only \_\_\_\_ materials. (118)
- A. wood
  - B. natural
  - C. combustible
  - D. noncombustible
- \_\_\_\_\_ 6. Why is it important for an inspector to monitor the amount of wood trim or wall coverings in a Type I structure? (120)
- A. Owners/occupants perceive these items as fireproof.
  - B. These items do not impact the fire-resistance rating.
  - C. Type I structures are not allowed to have these types of materials present.
  - D. Owners may install greater amounts of these materials than is allowed by local code exceptions.
- \_\_\_\_\_ 7. Which construction type is the strictest in terms of the amount of combustible materials allowed? (120)
- A. Type I
  - B. Type II
  - C. Type IV
  - D. Type V
- \_\_\_\_\_ 8. Buildings classified as Type II construction are comprised of materials that: (120)
- A. create large voids above the ceiling.
  - B. have been specially treated to prevent fire.
  - C. will not contribute to fire development or spread.
  - D. are constructed of small-dimension wood stud systems.
- \_\_\_\_\_ 9. A \_\_\_\_ is an example of a common Type III structure. (120)
- A. barn
  - B. mercantile structure
  - C. government building
  - D. single-family residence

- \_\_\_\_\_ 10. Which of the following is the BEST description of a factor inspectors need to be aware of with Type III construction? (122)
- A. All Type III structures have proper fire-stopping applied.
  - B. No new factors arise when the use of a Type III building changes.
  - C. Floors and roofs are constructed of wood and generally have no void or concealed spaces.
  - D. Renovations may have resulted in greater fire risk due to the creation of large voids above ceilings and below floors.
- \_\_\_\_\_ 11. Interior building elements in Type IV construction: (122)
- A. include noncombustible materials exclusively.
  - B. include brick, concrete, and reinforced concrete.
  - C. are solid or laminated wood with no concealed spaces.
  - D. are constructed of small-dimension wood or metal studs.
- \_\_\_\_\_ 12. Why are Type IV structures more resistant to collapse than other construction types? (122)
- A. There are no voids under the floors.
  - B. Interior building elements are noncombustible.
  - C. The structural elements used in construction are stronger than in the other construction types.
  - D. The structural elements form an insulating effect that reduce heat penetration to the inside of the beam.
- \_\_\_\_\_ 13. What is a typical Type V structure? (122)
- A. Schools
  - B. Churches
  - C. Single-family dwelling
  - D. Apartment complexes
- \_\_\_\_\_ 14. What makes wood trusses appealing in Type V structures? (124)
- A. They are noncombustible.
  - B. They reduce structural redundancy.
  - C. They are extremely heavy and provide more stability.
  - D. They can support large loads over relatively large spans.

- \_\_\_\_\_ 15. Wood I-joists are efficient and light, but, they are: (125)
- A. difficult to find.
  - B. very expensive.
  - C. susceptible to fire damage.
  - D. very complicated to install.
- \_\_\_\_\_ 16. The *National Building Code of Canada (NBC)* defines three types of building construction: (125)
- A. Type A, Type B, and Type C.
  - B. Type I, Type II, and Type III.
  - C. Combustible, noncombustible, and heavy-timber.
  - D. Combustible, noncombustible, and prefabricated.

**Objective 2:**  
**Identify single-use occupancy classifications.**

- \_\_\_\_\_ 17. Why were occupancy loads established? (125)
- A. To determine the cost of new construction
  - B. To determine the amount of materials needed in construction
  - C. To provide an accurate limit to the number of people who can legally occupy a structure
  - D. To provide building officials with a reasonable expectation of the hazard level of a structure
- \_\_\_\_\_ 18. Model code organizations have developed classifications that separate each occupancy into risk categories based upon: (125)
- A. the fuel load.
  - B. the cost to rebuild after a fire.
  - C. the use of the structure or space.
  - D. response time of the closest fire department.
- \_\_\_\_\_ 19. What is a "mixed occupancy"? (131)
- A. Describes situations in which a variety of occupancies may be included in the same structure
  - B. Describes situations in which a variety of occupancies may be included in the same local code
  - C. Describes situations in which a structure does not fit into any of the general occupancy descriptions
  - D. Describes situations in which a structure was built for one purpose, but changes upon remodel

- \_\_\_\_\_ 20. What are some of the elements an inspector should look out for in a structure that has been converted from a warehouse to apartments? (131)
- A. New owners and occupants
  - B. Amended insurance ratings
  - C. The storage capacity of the new building
  - D. Fire protection systems, exit signage, emergency lighting
- \_\_\_\_\_ 21. Which occupancy description does NFPA® subclassify based on the number of occupants? (132)
- A. Business occupancy
  - B. Assembly occupancy
  - C. Educational occupancy
  - D. Institutional occupancy
- \_\_\_\_\_ 22. Dry cleaning and laundry facilities are considered \_\_\_\_\_ occupancies. (133)
- A. business
  - B. industrial
  - C. assembly
  - D. educational
- \_\_\_\_\_ 23. Why do educational occupancies present significant challenges for inspectors? (133)
- A. Risk of fire is very high
  - B. Architectural design of the building
  - C. Facilities are used for a wide variety of activities
  - D. Cannot perform inspections during school hours
- \_\_\_\_\_ 24. An inspector should evaluate factory/industrial structures based upon those requirements that pertain to the structure's: (134)
- A. primary use.
  - B. construction.
  - C. occupant limit.
  - D. fire protection systems.
- \_\_\_\_\_ 25. In institutional/health care facilities, an inspector may find that: (136)
- A. they are often poorly constructed.
  - B. they are well constructed with low fire loads.
  - C. they often violate limits of occupant numbers.
  - D. more than one fire and life safety code applies.

- \_\_\_\_\_ 26. In residential board and care occupancies, the evacuation capabilities must be properly classified based on: (137)
- A. the fire protection system in place.
  - B. the number of points of egress available.
  - C. the resident posing the most significant risk.
  - D. the resident posing the least significant risk.
- \_\_\_\_\_ 27. What conditions contribute to the high fire load of mercantile occupancies? (139)
- A. The number of available points of egress
  - B. No specific conditions contribute to the fire load
  - C. The arrangement of merchandise on display and in storage
  - D. The fire protection and suppression system installed in the building
- \_\_\_\_\_ 28. What determines the occupancy classification of a one- or two-family dwelling? (139)
- A. Degree of fire safety in place
  - B. Number of people in residence
  - C. Degree of fire separation of units
  - D. Number of available points of egress
- \_\_\_\_\_ 29. What can an inspector advise property owners to do to increase safety in temporary occupancies? (141)
- A. Add additional signage and fire protection
  - B. Inspectors do not inspect temporary spaces
  - C. Add a greater degree of separation of units
  - D. Limit the number of people allowed to use the temporary space
- \_\_\_\_\_ 30. Why is it important for inspectors to keep specific, official records about apartment buildings? (143)
- A. Because the occupants change so often
  - B. Inspectors do not inspect apartment buildings
  - C. To ensure consistency between building owners
  - D. Each apartment building presents a unique set of problems