

## 11 FIRE PROTECTION

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### QUIZ 1 (20 POINTS TOTAL)

#### *True/False (6 points)*

1. It is possible to build a facility that is completely fire-resistive.
  - a. true
  - b. false
2. Fires first spread horizontally through a building, then vertically.
  - a. true
  - b. false
3. A building's occupancy will influence the degree of fire hazard.
  - a. true
  - b. false
4. The physical structure of a building is usually a more important factor in the start of a fire than the contents of a building.
  - a. true
  - b. false
5. It is estimated that more than half of all fire losses result from human mistakes.
  - a. true
  - b. false
6. Fabrics can be made noncombustible.
  - a. true
  - b. false

#### *Multiple Choice (6 points)*

7. Smoke and toxic gases are responsible for approximately \_\_\_\_\_ of deaths from fire in buildings.
  - a. 25%
  - b. 52%
  - c. 66%
  - d. 78%
8. If a plant does not have its own fire protection expert, who should conduct the fire equipment inspection?
  - a. management
  - b. each department supervisor
  - c. local fire chief
  - d. safety and health professional

9. A portable fire extinguisher is not intended for \_\_\_\_\_.
- a. fast moving fires
  - b. low level fires
  - c. large fires
  - d. all of the above
  - e. a and c only
10. \_\_\_\_\_ are often called “glow or “deep-embered seated” fires.
- a. flame fires
  - b. premixed fires
  - c. diffusion fires
  - d. surface fires
11. What is the concentration level of oxygen necessary to support combustion?
- a. 10-12%
  - b. 15-16%
  - c. 17-18%
  - d. 19-20%
12. Which type of extinguisher removes free radicals in a branched chain reaction from their normal function as a chain carrier?
- a. dry chemical
  - b. water
  - c. CO<sub>2</sub>
  - d. wet blanket

**Short Answer (7 points)**

13. Name four ways that heat energy is transmitted.
14. Why is an automatic sprinkler system the best tool to reduce loss of life from fire?



**Short Essay (1 point)**

20. During a recent fire drill at your company, 75% of the employees ignored the initial alarm because they knew it was not the “real thing.” As a safety professional, this has you deeply concerned, and the time has come to develop a comprehensive fire drill program. Explain the procedures you’d like to develop for a fire drill.

**QUIZ 2 (20 POINTS TOTAL)**

**True/False (6 points)**

1. Water is the most common and practical extinguishing agent.
  - a. true
  - b. false
  
2. Nationwide, sprinkler systems have an efficiency rating of over 95%.
  - a. true
  - b. false
  
3. More than one-third of sprinkler system failures can be attributed to closed water supply valves.
  - a. true
  - b. false
  
4. A CO<sub>2</sub> extinguisher puts out fires by displacing the available oxygen.
  - a. true
  - b. false
  
5. A Class C extinguisher is suitable for use in office buildings and schools.
  - a. true
  - b. false
  
6. Thousands of square feet of building space can be protected by placing smoke detectors in the air-handling system.
  - a. true
  - b. false

**Multiple Choice (6 points)**

7. What do fire-fighters use to extinguish fires from aircraft crashes?
  - a. water
  - b. light water
  - c. potassium bicarbonate dry chemicals
  - d. light water and potassium bicarbonate dry chemicals

8. \_\_\_\_ fires occur in wood, paper, excelsior rags, and rubbish.
- a. Class A
  - b. Class B
  - c. Class C
  - d. Class D
9. \_\_\_\_ fires occur in or near energized electrical equipment where non-conducting extinguishing agents must be used.
- a. Class A
  - b. Class B
  - c. Class C
  - d. Class D
10. \_\_\_\_ are those that, in the pure state or as commercially produced, will vigorously polymerize, decompose, or condense, or become self-reactive.
- a. reactive materials
  - b. unstable materials
  - c. stable materials
  - d. susceptible materials
11. In the National Fire Protection Association hazard identification system, the color \_\_\_\_ is used to identify health hazards.
- a. blue
  - b. red
  - c. yellow
  - d. green
12. A/an \_\_\_\_ has a fixed spray pattern and is usually attached to a shut off valve.
- a. open nozzle
  - b. adjustable nozzle
  - c. combination nozzle
  - d. monitor nozzle

**Short Answer (7 points)**

13. Briefly describe the process of combustion.

14. Name four ways fires can be controlled.

