Fire Detection, Protection and Suppression Systems

1. What is the primary objective of residential sprinkler systems? p. 1058

A.) Property protection
B.) Fire extinguishment
C.) Exposure protection
*D.) Life safety

2. What is the most common type of gas detector you will encounter in the residential setting? p. 1042

*A.) Carbon monoxide detector
B.) Carbon dioxide detector
C.) Hydrocarbon gas detector
D.) Natural gas detector

3. Which is **NOT** a common symptom of carbon monoxide poisoning that occupants should be asked about? p. 1042

A.) Disorientation
B.) Nausea
C.) Headache
*D.) Low blood pressure

4. What color will be seen on the lowest temperature rated sprinkler head? p. 1050

*A.) Black
B.) White
C.) Green
D.) Blue

5. Which is used in most new commercial kitchens? p. 1062

A.) Carbon dioxide extinguishing system
B.) Clean-agent extinguishing system
C.) Dry-chemical extinguishing system
*D.) Wet-chemical extinguishing system

6. What is the most commonly seen manual alarm initiation device? p. 1038

*A.) Manual fire alarm box
B.) Manual fire set box
C.) Manual fire call box
D.) Manual fire alert box

7. What initiates water flow in the dry sprinkler system? p. 1056

A.) FDC connection is made
B.) Backflow preventer closes
C.) Smoke alarm activates
*D.) Sprinkler head opens

8. Which type of system sends a signal directly to the fire department via a telephone line or radio signal? p. 1045

A.) Local alarm
*B.) Remote station
C.) Proprietary
D.) Central station

9. Which of the following are a popular target for malicious false alarms? p. 1043

A.) Beam detection alarms
B.) Smoke detectors
*C.) Manual fire alarm boxes
D.) Line-heat detectors

10. What is used to prevent from flowing out of the sprinkler system and back into the public water mains when pressure drops? p. 1052

*A.) Clapper mechanism
B.) Gong mechanism
C.) Tamper mechanism
D.) Deluge mechanism

11. Who should give the order to shut down the sprinkler system during a fire? p. 1058

A.) Interior company officer
B.) Safety officer
C.) Systems engineer
*D.) IC

12. Which class standpipe is designed for use by fire department personnel using fire department hoseline only? p. 1059

A.) Class II
B.) Class III
*C.) Class I
D.) Class IV

13. What is the minimum number of 2½-inch (64-mm) female couplings usually on the FDC? p. 1054

A.) Three
*B.) Two
C.) Four
D.) One

14. Which type of smoke alarm is more common and less expensive? p. 1037

A.) Photoelectric
B.) Reflective
*C.) Ionization
D.) Reactive

15. How many sprinkler heads are normally needed to control a fire? p. 1047

A.) Four or five
*B.) One or two
C.) Three or four
D.) Two or three

16. Where should you be able to find the temperature rating for the sprinkler head? p. 1050

A.) Sprinkler piping
B.) Riser control valve
C.) Side of the control panel
*D.) Body of the sprinkler head

17. Which is often installed in computer rooms or areas with valuable documents? p. 1063

A.) Wet-chemical extinguishing system
B.) Carbon dioxide extinguishing system
C.) Dry-chemical extinguishing system
*D.) Clean-agent extinguishing system

18. Where can the commercial alarm system be reset when the smoke condition clears? p. 1041

A.) Alarm company
B.) Main detector
C.) Each detector
*D.) Control panel

19. What is a beam detector designed to protect? p. 1040

A.) Sensitive equipment
*B.) Large open spaces
C.) Compartmentalized floors
D.) High-value property

20. Where is the water-powered gong located? p. 1055

A.) In the main lobby of the building
B.) At the system control panel
*C.) On the outside of the building
D.) In the building's security office

21. Which is the most common and least expensive type of sprinkler system? p. 1056

A.) Dry sprinkler system
B.) Preaction sprinkler system
*C.) Wet sprinkler system
D.) Deluge sprinkler system

22. What does the battery-powered smoke alarm do when the battery is low? p. 1039

A.) Nothing
B.) Set off the local alarm
C.) Alert the fire station
*D.) Chirp every few seconds

23. In which alarm system does the control panel give no information about where the activated fire alarm is located in the building? p. 1045

A.) Master-coded
*B.) Noncoded
C.) Zoned coded
D.) Zoned noncoded

24. What should be done after the main valve on the sprinkler system is closed when shutting down the system? p. 1058

*A.) Open the drain valve
B.) Remove the activated head
C.) Reset the system
D.) Shut down the water gong

25. What does the release mechanism hold in place on the automatic sprinkler head? p. 1047

A.) Orifice
B.) Body
C.) Housing
*D.) Cap

26. Which type of sprinkler system is well suited for computer rooms? p. 1057

*A.) Preaction
B.) Wet
C.) Deluge
D.) Dry

27. Where does the water go that is pumped into the FDC at large facilities where it will deliver water to all fire protection systems in the complex? p. 1055

*A.) Private underground water mains
B.) Into the municipal water system
C.) Public underground water mains
D.) Into each protection system

28. What is in place to prevent accidental activations of the flow and pressure switches? p. 1055

A.) Water gong
*B.) Time delay
C.) Control valve
D.) Backflow preventer

29. What is the minimum number of main control valves that every sprinkler system is required to have? p. 1051

A.) Two
B.) None
C.) Three
*D.) One

30. What is usually used to make sprinkler piping? p. 1050

A.) Iron
B.) Plastic
*C.) Steel
D.) Copper

31. What type of fire alarms do most building codes require in new construction? p. 1036

A.) Hard-wired smoke alarms
*B.) Hard-wired, AC-powered smoke alarms
C.) AC-battery-powered smoke alarms
D.) Battery-powered smoke alarms

32. In a high rise building when the fire is on one floor, how many floors are normally included in the alarm by the fire alarm system? p. 1036

A.) Two
B.) One
C.) Four
*D.) Three

33. Which type of sprinkler head is easily recognized by the lack of cap or release mechanism? p. 1049

A.) Chemical-pellet head
B.) Frangible-bulb head
C.) Fusible-link head
*D.) Deluge head

34. How many smoke detectors must be activated for the fire alarm to sound in a cross-zoned system? p. 1044

A.) Four
B.) One
C.) Three
*D.) Two

35. What is the preferred source of water for a sprinkler system? p. 1054

A.) Storage ponds
B.) Nearby rivers
*C.) Municipal water supply
D.) On-site storage tanks

36. What is in place within the standpipe system that delivers adequate usable pressures in the standpipe system at lower floors of the high-rise building? p. 1060

A.) Accelerator device
B.) Output adapter
*C.) Flow-restriction device
D.) Backflow regulator

37. What is the most common type of fire suppression system? p. 1047

A.) Standpipe system
B.) Fire extinguisher network
C.) Gaseous extinguisher system
*D.) Automatic sprinkler system

38. Which is an alarm system that uses a third-party, off-site monitoring facility that monitors multiple alarm systems? p. 1047

A.) Proprietary
B.) Auxiliary
C.) Local alarm
*D.) Central station

39. What marking will usually be seen on a pendant sprinkler head? p. 1050

A.) SSW
B.) SSL
C.) SSU
*D.) SSP

40. Which fire alarm annunciation system is most commonly encountered by the fire department? p. 1045

A.) Master-coded
*B.) Zoned noncoded
C.) Noncoded
D.) Zoned coded

41. What is the current standard audible alert with an alarm? p. 1044

A.) Temporal-5 pattern
*B.) Temporal-3 pattern
C.) Temporal-2 pattern
D.) Temporal-4 pattern

42. Which type of line heat detector is **NOT** self-restoring when it is activated? p. 1041

*A.) Wire-type model with two wires that are separated by insulation
B.) Tube-type model with a sealed metal tube filled with air
C.) Wire-type model that measures changes in the electrical resistance of a single wire
D.) Tube-type model with a sealed metal tube filled with nonflammable gas

43. Which type of smoke detector is better suited to detect smoldering fires? p. 1037

A.) Ionization
*B.) Photoelectric
C.) Reflective
D.) Reactive

44. Which is usually required on a residential sprinkler system? p. 1059

A.) FDC
B.) Separate fire alarm system
C.) Backup water supply
*D.) Water flow alarm

45. What amount of time is normally given to workers to evacuate the area before a clean-agent extinguishing system discharges? p. 1063

A.) 30 to 45 seconds
B.) 15 to 30 seconds
*C.) 30 to 60 seconds
D.) 60 to 90 seconds

46. Which is **NOT** a correct statement about responding to a fire alarm? p. 1035

A.) Faults within the system are indicated by a trouble alarm
B.) The fire panel should always be locked
C.) All alarms should be treated as a true emergency until proven otherwise
*D.) Immediately silence and reset the alarm

47. What can be used to indicate the source of the fire alarm? p. 1035

A.) Initiation device
*B.) Control panel
C.) Notification device
D.) Actuator

48. What are individual heat detector units that are usually installed in light commercial and residential settings? p. 1041

*A.) Spot detectors
B.) Rise detectors
C.) Wheel detectors
D.) Light detectors

49. What is the maximum acceptable delay between the activation of a sprinkler head and the actual flow of water out of the head in a dry sprinkler system? p. 1057

A.) 30 seconds
B.) 45 seconds
C.) 60 seconds
*D.) 90 seconds

50. What can be done to avoid many unwanted alarms? p. 1043

A.) Educating the occupants
B.) Issuing a citation
C.) Installing a security system
*D.) Relocate the detector

51. Where do many systems discharge the agent during a commercial kitchen fire? p. 1063

A.) Entire kitchen area
B.) Cooking surface only
*C.) Cooking surface and exhaust hood
D.) Exhaust hood only

52. Which type of smoke detector detects the invisible charged particles in the air? p. 1037

A.) Reflective
B.) Photoelectric
C.) Reactive
*D.) Ionization

53. Which type of heat detector will be more likely to respond rapidly to most fires? p. 1041

A.) Spot
*B.) Rate-of-rise
C.) Wheeled-beam
D.) Fixed temperature