Fire Fighter Safety

1. What type of roofs are usually supported by steel or wood bowstring trusses or arches? p. 183

A.) Pitched
*B.) Curved
C.) Flat
D.) Paneled

2. What is used for almost all modern wood-frame construction? p. 180

A.) Flooring-frame construction
*B.) Platform-frame construction
C.) Balloon-frame construction
D.) Solid-frame construction

3. What material is used to construct the interior structural and nonstructural members in a Type III building? p. 176

*A.) Wood
B.) Cast iron
C.) Metal
D.) Steel

4. Which is **NOT** a correct statement about gypsum board? p. 171

A.) Water permanently damages gypsum board
B.) The board will deteriorate when heated
C.) It does not conduct enough heat to contribute to fire spread
*D.) Gypsum board is noncombustible

5. How many stories is construction usually limited to in ordinary construction buildings? p. 176

A.) Seven
B.) Five
C.) Six
*D.) Four

6. Approximately how long does it take for conventional wood flooring to burn through? p. 181

A.) 15 minutes
B.) 30 minutes
C.) 25 minutes
*D.) 20 minutes

7. What is the rate of combustion of wood directly related to? p. 172

A.) Use of an accelerant on the wood
B.) Weight of the wood
*C.) Surface area of the wood
D.) Moisture content of the wood

8. What material is usually used to construct modern foundations? p. 180

A.) Concrete or wood pilings
B.) Concrete, masonry, or wood pilings
C.) Masonry or wood pilings
*D.) Concrete or masonry

9. What material is used primarily as a coating to protect metal parts from rust and corrosion? p. 171

A.) Copper
*B.) Zinc
C.) Platinum
D.) Titanium

10. Which type of roof is the pitched chord truss typically used to support? p. 184

*A.) Sloping
B.) Curved
C.) Inverted
D.) Flat

11. What are felt or mineral shingles impregnated with? p. 182

A.) Concrete
B.) Polymers
*C.) Asphalt
D.) Tar

12. Which is **NOT** a correct statement about fire doors and fire windows? p. 189

A.) A rating system is similar to the fire-resistance rating system used for building construction
B.) A door rated at 1 hour will probably last twice as long as one rated 30 minutes
C.) They are rated for fire resistance for a particular duration during a standard test fire
*D.) A 1-hour rating, guarantees it will resist any fire for 60 minutes

13. Which of the following is made from solid lumber? p. 172

*A.) Wood roof shingles
B.) Plywood
C.) Walls
D.) Countertops

14. Which of the following is **NOT** a material that the ceiling below a fire-resistant floor may be constructed from? p. 181

A.) Gypsum board
*B.) Concrete
C.) Suspended tiles
D.) Plaster board

15. How much of the truss must fail before the entire truss will fail? p. 185

A.) Both ends
*B.) One part
C.) All connectors
D.) All webbing

16. What are the steel structural members generally encase in with a Type I building? p. 175

*A.) Concrete
B.) Plastic
C.) Plaster
D.) Foam

17. Which type of building construction is commonly found in schools and high-rise buildings? p. 174

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

18. How many wooden components are in the truss joist I-beam? p. 186

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

19. What is the ceiling considered to be a part of from a structural standpoint? p. 181

*A.) Floor assembly
B.) Interior wall assembly
C.) Roof assembly
D.) Exterior wall assembly

20. What is the most common type of construction used today? p. 177

A.) Noncombustible
B.) Ordinary
C.) Fire-resistive
*D.) Wood-frame

21. How much per 10 feet (3 meters) of length will a steel beam elongate at a temperature of 1000 degrees Fahrenheit (540 degrees Celsius)? p. 169

A.) 2 inches (5.0 centimeters)
B.) 1 1/2 inches (3.8 centimeters)
C.) 2 1/2 inches (6.4 centimeters)
*D.) 1 inch (2.5 centimeters)

22. Which is **NOT** a correct statement about an ordinary construction building? p. 176

A.) Floors and roofs in these buildings collapse suddenly without warning
B.) Always assume lightweight components may be present
*C.) Age plays no role in the level of fire resistance encountered
D.) Renovated buildings might contain lightweight assemblies

23. How long did it take during the Department of Health and Human Services National Institute for Occupational Safety Health's testing did an unprotected lightweight engineered I-joist fail? p. 181

A.) 8 minutes
B.) 5 minutes
C.) 7 minutes
*D.) 6 minutes

24. What material is often used to insulate other building materials from fire? p. 169

*A.) Concrete
B.) Mortar
C.) Rebar
D.) Plastic

25. Which of the following is **NOT** an advantage of engineered wood? p. 172

*A.) Resistance to warping
B.) Made into curved shapes
C.) Use of ordinary tools
D.) Lower expense

26. What tends to happen to steel columns as the lose strength? p. 170

A.) Sag
B.) Twist
C.) Elongate
*D.) Buckle

27. What is the most effective way of protecting lives and property in Type V buildings? p. 171

*A.) Fire detection devices and automatic sprinklers
B.) Compartmentalization and automatic sprinklers
C.) Gypsum board barriers and automatic sprinklers
D.) Noncombustible structural elements and automatic sprinklers

28. What are building contents usually closely related to? p. 168

A.) Building construction
B.) Building codes
*C.) Building occupancy
D.) Building layout

29. With which of the following is a thin sheet of plastic placed between two sheets of glass? p. 171

A.) Tempered
B.) Wired
C.) Blocked
*D.) Laminated

30. What can cause spalling in the concrete? p. 170

A.) Ambient temperature increase outside the building
*B.) Moisture converting to steam in the concrete
C.) Impact loading on the concrete
D.) Expansion of steel reinforcing rods in the concrete

31. What is the roof covering placed on top of on a flat roof? p. 184

A.) Ceiling assembly
*B.) Deck
C.) Joists
D.) Truss

32. Which type of wall is constructed on the line between two properties and is shared by a building on each side of the line? p. 187

A.) Enclosure wall
B.) Partition wall
C.) Curtain wall
*D.) Party wall

33. Which of the following are plastics **NOT** used for often? p. 173

*A.) Ceiling joists
B.) Pipes and fittings
C.) Interior insulation
D.) Window frames

34. Which type of nonbearing exterior wall often serves as the exterior skin on a steel-frame high-rise building? p. 187

A.) Party wall
B.) Fire wall
C.) Enclosure wall
*D.) Curtain wall

35. What is the minimum fire resistance rating of the Type I building? p. 174

*A.) 2 hours
B.) 3 hours
C.) 1 hour
D.) 4 hours

36. Which types of roofs have a slight slope to allow water to drain? p. 183

A.) Curved
B.) Paneled
C.) Pitched
*D.) Flat

37. At what frequency will the course of bricks be turned sideways when the brick wall may be solid masonry? p. 187

A.) Every 8th course
B.) Every 9th course
C.) Every 6th course
*D.) Every 7th course

38. What creates channels that allow a fire to spread from the basement to the attic in a balloon-frame building? p. 178

A.) Stairways
*B.) Exterior walls
C.) Elevator shafts
D.) Interior walls

39. What size finished wood flooring is placed over the floor decking in heavy timer construction? p. 181

*A.) 1-inch
B.) 1.5-inch
C.) 2-inch
D.) 2.5-inch

40. What type of glass is often used in fire doors and windows designed to prevent fire spread? p. 171

A.) Laminated
B.) Tempered
*C.) Wired
D.) Ordinary

41. What can be used to predict the number of occupants who are likely to be at risk in a fire? p. 168

A.) Building construction
B.) Layout
*C.) Occupancy type
D.) Building codes

42. What is the cause of many fires at construction and demolition sites? p. 190

*A.) Torches
B.) Concrete setting
C.) Electrical shorts
D.) Watch fires

43. Which material is a poor conductor of heat? p. 169

*A.) Concrete
B.) Steel
C.) Cast iron
D.) Aluminum

44. What do safe interior firefighting operations depend on? p. 181

*A.) Stable roof
B.) Strong walls
C.) Blocked void spaces
D.) Air-tight design

45. Where does the foundation transfer the weight of the building and its contents? p. 180

A.) To the structural members
B.) To the walls
C.) To the roof
*D.) To the ground

46. What is the most frequent cause of fire fighter death in residential fires? p. 190

A.) Collapse of walls
B.) Collapse of ceilings
*C.) Collapse of floors
D.) Collapse of roofs

47. For which type of building were automatic sprinkler systems developed to protect? p. 177

A.) Wood-frame
*B.) Mill
C.) Fire-resistive
D.) Ordinary

48. What is the most common structural material in Type II buildings? p. 175

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

49. What do fire fighters feel or see when a roof with solid decking supported by rafters will fail? p. 182

A.) Bubbling tar
*B.) Spongy feel
C.) Stiff feel
D.) Bowed surface

50. Under which conditions is concrete strongest? p. 170

A.) Tension
B.) Shear
C.) Torsion
*D.) Compression

51. What type of glass is used to provide vision panel in or next to fire doors? p. 189

A.) Laminated
*B.) Wired
C.) Tempered
D.) Ordinary

52. What refers to the length of time that a building can withstand a fire before igniting? p. 173

*A.) Fire resistance
B.) Fire prevention
C.) Fire combustion
D.) Fire proofing

53. What can be used to determine if a wood-frame building contains balloon-frame construction? p. 178

*A.) Age
B.) Occupancy
C.) Exterior finish
D.) Size

54. What structural shape is used in a truss? p. 184

*A.) Triangle
B.) Square
C.) Rectangle
D.) Oval

55. Up to what height can solid load-bearing walls be constructed? p. 187

A.) Eight stories
B.) Seven stories
C.) Five stories
*D.) Six stories

56. Which truss has the same shape as an archery bow? p. 185

A.) Pitched chord
B.) Parallel chord
C.) Flatstring
*D.) Bowstring

57. How many times higher is the death rate from fire in mobile homes than in other types of single-family homes? p. 190

A.) Two times
B.) Five times
*C.) Three times
D.) Four times

58. Which type of roof covering is made from thin sheets of rock? p. 183

A.) Shake tiles
B.) Shingles
*C.) Slate tiles
D.) Clay tiles

59. What determines the severity of a Type I building fire? p. 175

A.) Insulation
B.) Wall materials
*C.) Contents
D.) Structural members

60. What may happen to the steel truss before it fails that would serve as a warning sign? p. 186

*A.) It sags
B.) It buckles upward
C.) It bounces
D.) It melts

61. What is usually used to bond together the bricks in a masonry wall? p. 169

A.) Glue
*B.) Mortar
C.) Concrete
D.) Plastic

62. Which type of door will be found where a substantial door is required and can contain a fire to a room for 20 minutes or more? p. 188

A.) Hollow-core wooden
B.) Metal, hollow-core
C.) Metal, solid-core
*D.) Solid-core wooden