PRACTICE EXAM 12: FIREFIGHTER I & II SIMULATION (150 QUESTIONS)

1. The acronym IDLH stands for?

A. Industrial Dangerous Living Hazard

B. Imminent Danger to Life and Health

C. Immediately Dangerous to Life or Health

D. Internal Detection of Lethal Hazards

2. The acronym SCBA stands for?

A. Self-Contained Breathing Apparatus

B. Sealed Cylinder Breathing Air

C. Supplemental Combustion Breathing Aid

D. Standard Compressed Breathing Assembly

3. The acronym NFPA stands for?

A. National Firefighter Personnel Authority

B. National Fire Protection Association

C. National Firefighter Protection Agency

D. National Federal Protection Association

4. The acronym OSHA stands for?

A. Occupational Safety and Health Administration

B. Occupational Standards and Hazards Administration

C. Official Safety and Hazards Authority

D. Operational Safety Hazards Agency

5. The acronym ICS stands for?

A. Internal Command Structure

B. Incident Coordination System

C. Integrated Command Service

D. Incident Command System

6. The acronym NIMS stands for?

A. Network Incident Management System

B. National Incident Management System

C. Nationwide Industrial Management System

D. New Incident Management Strategy

7. A PASS device is best defined as a personal alert safety system that?

A. Activates only at the firefighter's manual command

B. Provides visual signal only without audible alert

C. Activates automatically when the firefighter remains motionless for a set period and can also be manually activated

D. Activates when the SCBA cylinder reaches one-third pressure

8. The acronym RIC stands for?

A. Rescue Incident Coordinator

B. Rapid Intervention Coordinator

C. Rapid Intervention Crew

D. Reserve Incident Crew

9. The acronym PPE stands for?

A. Personnel Protection Equipment

B. Performance Protective Ensemble

C. Personal Performance Equipment

D. Personal Protective Equipment

10. The acronym EMS stands for?

A. Emergency Management Services

B. Emergency Medical Specialists

C. Emergency Medical Services

D. Equipment Maintenance Services

11. The MAYDAY signal in fire service communications originates from?

A. The English phrase "May Day" referring to a date

B. The French phrase "m'aider" meaning "help me"

C. The German phrase for emergency signaling

D. The Latin phrase for distress

12. The acronym LUNAR in MAYDAY transmissions expands to?

A. Location, Unit, Name, Activity, Resources

B. Location, Unit, Notification, Address, Resources

C. Location, Unit, Name, Assignment, Resources needed

D. Location, Urgency, Name, Action, Rescue

13. The acronym FDC stands for?

A. Fire Department Connection

B. Fire Department Coupling

C. Fire Department Control

D. Fire Distribution Coupling

14. The acronym AHJ stands for?

A. Authority Holding Jurisdiction

B. Administrative Health Justification

C. Approved Hazard Jurisdiction

D. Authority Having Jurisdiction

15. The acronym ERG stands for?

A. Emergency Response Guide

B. Emergency Reference Guide

C. Emergency Resource Guidance

D. Emergency Response Guidebook

16. The acronym SDS stands for?

A. Standard Data Sheet

B. Safety Data Specification

C. Safety Data Sheet

D. System Data Specification

17. The acronym DOT stands for?

A. Department of Trade

B. Division of Transportation

C. Department of Transportation

D. Diversified Operations Transportation

18. The acronym CFR stands for?

A. Code of Federal Regulations

B. Code for Federal Response

C. Codified Federal Records

D. Comprehensive Federal Regulations

19. The federal agency with primary jurisdiction over arson and explosives investigations is the?

A. Authority for Trade and Firearms

B. Agency for Tobacco and Firearms

C. Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF)

D. Administration of Tobacco and Firearms

20. The acronym IFSTA stands for?

A. International Fire Service Trade Association

B. International Fire Standards Training Authority

C. International Fire Service Training Association

D. Industrial Fire Service Training Authority

21. NFPA 1001 is the standard that governs?

A. Fire Department Emergency Operations

B. Fire Department Occupational Safety

C. Fire Investigator Professional Qualifications

D. Fire Fighter Professional Qualifications

22. NFPA 1500 is the standard that governs?

A. Fire Fighter Professional Qualifications

B. Pre-Incident Planning

C. Fire Department Occupational Safety, Health, and Wellness Program

D. Hazardous Materials Response

23. NFPA 1971 is the standard that governs?

A. Self-Contained Breathing Apparatus

B. Fire Department Occupational Safety

C. Protective Ensembles for Structural Fire Fighting

D. Selection, Care, and Maintenance of Protective Ensembles

24. NFPA 1851 is the standard that governs?

A. Protective Ensembles for Structural Fire Fighting

B. Fire Fighter Professional Qualifications

C. Fire Department Occupational Safety

D. Selection, Care, and Maintenance of Protective Ensembles

25. NFPA 1981 is the standard that governs?

A. Protective Ensembles for Structural Fire Fighting

B. Open-Circuit Self-Contained Breathing Apparatus

C. Selection, Care, and Maintenance of Protective Ensembles

D. Fire Fighter Professional Qualifications

26. NFPA 1983 is the standard that governs?

A. Protective Ensembles for Structural Fire Fighting

B. Life Safety Rope and Equipment for Emergency Services

C. Self-Contained Breathing Apparatus

D. Fire Department Communications

27. NFPA 1931 and 1932 are the standards that govern?

A. Self-Contained Breathing Apparatus

B. Fire Fighter Professional Qualifications

C. Fire Department Occupational Safety

D. Manufacturer's Design of Fire Department Ground Ladders and their Use, Maintenance, and Service Testing

28. NFPA 1962 is the standard that governs?

A. Manufacturer's Design of Fire Department Ground Ladders

B. Self-Contained Breathing Apparatus

C. Care, Use, Inspection, Service Testing, and Replacement of Fire Hose

D. Fire Department Occupational Safety

29. NFPA 921 is the standard that governs?

A. Fire Fighter Professional Qualifications

B. Fire Department Occupational Safety

C. Guide for Fire and Explosion Investigations

D. Pre-Incident Planning

30. NFPA 1033 is the standard that governs?

A. Fire Fighter Professional Qualifications

B. Fire Department Occupational Safety

C. Pre-Incident Planning

D. Standard for Professional Qualifications for Fire Investigator

31. NFPA 1620 is the standard that governs?

A. Fire Fighter Professional Qualifications

B. Fire Department Occupational Safety

C. Fire and Explosion Investigations

D. Pre-Incident Planning

32. NFPA 1584 is the standard that governs?

A. Rehabilitation Process for Members During Emergency Operations and Training Exercises

B. Fire Fighter Professional Qualifications

C. Pre-Incident Planning

D. Fire Investigations

33. NFPA 1582 is the standard that governs?

A. Comprehensive Occupational Medical Program for Fire Departments

B. Fire Fighter Professional Qualifications

C. Pre-Incident Planning

D. Hazardous Materials Response

34. NFPA 1583 is the standard that governs?

A. Fire Fighter Professional Qualifications

B. Comprehensive Occupational Medical Program

C. Pre-Incident Planning

D. Health-Related Fitness Programs for Fire Department Members

35. OSHA 29 CFR 1910.134 covers?

A. Permit-Required Confined Spaces

B. Respiratory Protection

C. Hazardous Waste Operations and Emergency Response

D. Fire Brigade Operations

36. OSHA 29 CFR 1910.146 covers?

A. Respiratory Protection

B. Fire Brigade Operations

C. Permit-Required Confined Spaces

D. Hazardous Waste Operations and Emergency Response

37. OSHA 29 CFR 1910.156 covers?

A. Respiratory Protection

B. Fire Brigades

C. Permit-Required Confined Spaces

D. Hazardous Waste Operations

38. OSHA 29 CFR 1910.120 covers?

A. Respiratory Protection

B. Hazardous Waste Operations and Emergency Response (HAZWOPER)

C. Permit-Required Confined Spaces

D. Fire Brigades

39. The acronym HAZWOPER stands for?

A. Hazardous Waste Operations and Emergency Response

B. Hazardous Wastes Operational Protocol for Emergency Response

C. Hazardous Waste Officer Procedures

D. Hazardous Waste Operating Personnel Emergency Requirements

40. A class A fire is best defined as a fire involving?

A. Flammable liquids and gases

B. Energized electrical equipment

C. Ordinary combustibles such as wood, paper, cloth, and rubber

D. Combustible metals such as magnesium and titanium

41. A class B fire is best defined as a fire involving?

A. Ordinary combustibles

B. Energized electrical equipment

C. Combustible metals

D. Flammable liquids and gases

42. A class C fire is best defined as a fire involving?

A. Energized electrical equipment

B. Ordinary combustibles

C. Combustible metals

D. Flammable liquids and gases

43. A class D fire is best defined as a fire involving?

A. Combustible metals such as magnesium, titanium, sodium, and potassium

B. Ordinary combustibles

C. Flammable liquids and gases

D. Energized electrical equipment

44. A class K fire is best defined as a fire involving?

A. Combustible metals

B. Ordinary combustibles

C. Cooking oils and fats in commercial cooking equipment

D. Flammable liquids and gases

45. The standard fire tetrahedron consists of?

A. Heat, fuel, oxygen, ignition

B. Heat, fuel, oxygen, and the uninhibited chemical chain reaction

C. Heat, fuel, oxygen, smoke

D. Heat, fuel, smoke, ignition

46. A backdraft is best defined as?

A. The rapid combustion of unburned gases in the upper smoke layer

B. The deflagration of vapor-air mixtures within a pressurized container

C. The progression of fire from incipient to fully developed stages

D. An explosive deflagration when a fuel-rich, oxygen-starved compartment is suddenly ventilated

47. A flashover is best defined as?

A. A backdraft event in a confined compartment

B. The deflagration of unburned vapors before the main fire arrives

C. The transition from growth to fully developed stage, when all exposed combustibles in a compartment reach ignition temperature simultaneously

D. The collapse of structural members under fire conditions

48. A rollover is best defined as?

A. Ignition of unburned hot gases in the upper smoke layer, with flame rolling along the ceiling

B. A backdraft event in a confined compartment

C. The transition from growth to fully developed stage

D. The collapse of structural members under fire conditions

49. A BLEVE is best defined as?

A. A Boiling Liquid Expanding Vapor Explosion involving a pressurized container

B. A Backdraft of Light, Volatile Explosives

C. A Build-up of Lightweight Vapor Emissions

D. A Burning of Liquid Volatile Emissions

50. A Type I construction is best defined as?

A. Wood-frame construction with combustible structural elements

B. Heavy timber construction with masonry exterior walls

C. Construction with non-combustible structural elements without fire-resistance rating

D. Fire-resistive construction with protected non-combustible structural elements

51. A Type II construction is best defined as?

A. Fire-resistive construction with protected non-combustible structural elements

B. Heavy timber construction with masonry exterior walls

C. Wood-frame construction with combustible structural elements

D. Non-combustible construction with non-combustible structural elements typically without protection

52. A Type III construction is best defined as?

A. Ordinary construction with non-combustible exterior walls and combustible interior structural elements

B. Heavy timber construction with masonry exterior walls

C. Fire-resistive construction

D. Wood-frame construction with combustible structural elements

53. A Type IV construction is best defined as?

A. Heavy timber construction with masonry exterior walls and large-dimension wood interior structural elements

B. Wood-frame construction with lightweight engineered components

C. Non-combustible construction

D. Fire-resistive construction with protected non-combustible structural elements

54. A Type V construction is best defined as?

A. Fire-resistive construction

B. Non-combustible construction

C. Heavy timber construction

D. Wood-frame construction with combustible structural elements throughout

55. The term "vapor density" of a gas describes?

A. The toxicity of the gas relative to oxygen

B. The flammable range of the gas in air

C. The temperature at which the gas ignites

D. The weight of the gas relative to air (with air = 1.0)

56. The term "flash point" of a flammable liquid describes?

A. The minimum temperature at which the liquid produces sufficient vapor to ignite when exposed to an ignition source

B. The minimum temperature at which the liquid will sustain combustion

C. The temperature at which the liquid boils

D. The temperature at which the liquid auto-ignites without an ignition source

57. The term "fire point" of a flammable liquid describes?

A. The minimum temperature at which the liquid will sustain combustion

B. The temperature at which the liquid produces sufficient vapor to ignite briefly

C. The temperature at which the liquid boils

D. The temperature at which the liquid auto-ignites

58. The term "auto-ignition temperature" describes?

A. The minimum temperature at which a substance produces sufficient vapor to ignite when exposed to a flame

B. The minimum temperature at which a substance ignites without an external ignition source

C. The temperature at which the substance produces visible flame

D. The temperature at which the substance becomes a gas

59. The term "lower explosive limit" (LEL) describes?

A. The maximum concentration of the gas in air at which combustion will occur

B. The minimum concentration of the gas in air at which combustion will occur

C. The average concentration at which an explosion is most likely

D. The detection threshold for the gas in atmospheric monitoring

60. The term "upper explosive limit" (UEL) describes?

A. The minimum concentration of the gas in air at which combustion will occur

B. The average concentration at which an explosion is most likely

C. The detection threshold for the gas in atmospheric monitoring

D. The maximum concentration of the gas in air at which combustion will occur

61. A standard fire hose section in the United States is what length?

A. 35 feet

B. 50 feet

C. 75 feet

D. 100 feet

62. A standard 1¾-inch attack line at 100 psi nozzle pressure with a combination nozzle typically flows?

A. 150 gallons per minute

B. 95 gallons per minute

C. 200 gallons per minute

D. 250 gallons per minute

63. A 1⅛-inch smooth-bore handline tip at 50 psi typically flows approximately?

A. 100 gallons per minute

B. 150 gallons per minute

C. 200 gallons per minute

D. 265 gallons per minute

64. The standard nozzle pressure for a smooth-bore handline tip is?

A. 100 psi

B. 75 psi

C. 25 psi

D. 50 psi

65. The standard nozzle pressure for a combination (fog) nozzle handline tip is?

A. 50 psi

B. 75 psi

C. 100 psi

D. 150 psi

66. The standard nozzle pressure for a smooth-bore master stream tip is?

A. 50 psi

B. 75 psi

C. 80 psi

D. 100 psi

67. Under NFPA 291 hydrant color coding, a Class C hydrant flowing 500 to 999 gpm at 20 psi residual is marked with what color bonnet?

A. Light blue

B. Orange

C. Green

D. Red

68. A standard 24-foot extension ladder placed at proper climbing angle has the butt approximately how far from the building?

A. 3 feet

B. 4 feet

C. 6 feet

D. 8 feet

69. The standard climbing angle for a fire service ground ladder is?

A. 45 degrees from horizontal

B. 60 degrees from horizontal

C. 70 degrees from horizontal

D. 75 degrees from horizontal

70. The traditional placement ratio for a fire service ground ladder is?

A. One foot of base offset for every three feet of working height

B. One foot of base offset for every four feet of working height

C. One foot of base offset for every five feet of working height

D. Two feet of base offset for every five feet of working height

71. A ladder set for window rescue has the tip placed at approximately what position relative to the windowsill?

A. Five feet above the sill

B. At or just below the sill

C. Three feet to the side of the window

D. Two feet above the eave

72. A ladder set for roof access has the tip placed at approximately what position relative to the eave?

A. Five feet above the eave

B. At the eave level

C. Three feet to the side

D. At the ridge level

73. A 7/8-inch smooth-bore handline tip at 50 psi delivers approximately?

A. 160 gpm

B. 210 gpm

C. 265 gpm

D. 325 gpm

74. A 1-inch smooth-bore handline tip at 50 psi delivers approximately?

A. 210 gpm

B. 160 gpm

C. 265 gpm

D. 325 gpm

75. A 1¼-inch smooth-bore handline tip at 50 psi delivers approximately?

A. 210 gpm

B. 325 gpm

C. 265 gpm

D. 160 gpm

76. A 1⅜-inch smooth-bore master stream tip at 80 psi delivers approximately?

A. 500 gpm

B. 325 gpm

C. 200 gpm

D. 750 gpm

77. A 1½-inch smooth-bore master stream tip at 80 psi delivers approximately?

A. 600 gpm

B. 425 gpm

C. 800 gpm

D. 250 gpm

78. A 1¾-inch smooth-bore master stream tip at 80 psi delivers approximately?

A. 500 gpm

B. 800 gpm

C. 1,000 gpm

D. 1,250 gpm

79. A 2-inch smooth-bore master stream tip at 80 psi delivers approximately?

A. 600 gpm

B. 800 gpm

C. 1,065 gpm

D. 500 gpm

80. A 4,500 psi, 30-cubic-foot SCBA cylinder is rated for what duration under laboratory conditions?

A. 60 minutes

B. 45 minutes

C. 15 minutes

D. 30 minutes

81. A 4,500 psi, 45-cubic-foot SCBA cylinder is rated for what duration under laboratory conditions?

A. 30 minutes

B. 60 minutes

C. 45 minutes

D. 75 minutes

82. A 4,500 psi, 60-cubic-foot SCBA cylinder is rated for what duration under laboratory conditions?

A. 30 minutes

B. 45 minutes

C. 90 minutes

D. 60 minutes

83. The SCBA low-air alarm activates at approximately what cylinder pressure?

A. One-quarter of full

B. One-half of full

C. One-third of full

D. Two-thirds of full

84. The minimum breaking strength required for one-person (technical-use) life safety rope under NFPA 1983 is?

A. 1,500 pounds

B. 6,000 pounds

C. 4,500 pounds

D. 9,000 pounds

85. The minimum breaking strength required for two-person (general-use) life safety rope under NFPA 1983 is?

A. 9,000 pounds

B. 4,500 pounds

C. 6,000 pounds

D. 13,500 pounds

86. The standard pump discharge pressure for supplying a sprinkler system through the FDC is approximately?

A. 100 psi

B. 150 psi

C. 75 psi

D. 200 psi

87. The standard residential sprinkler head response classification is?

A. Standard response

B. Slow response

C. Extra slow response

D. Quick response (QR)

88. The standard activation temperature of a 135°F sprinkler head is identified by what color glass bulb?

A. Red

B. Orange

C. Yellow

D. Green

89. The standard activation temperature of a 155°F sprinkler head is identified by what color glass bulb?

A. Green

B. Red

C. Yellow

D. Blue

90. The standard activation temperature of a 175°F sprinkler head is identified by what color glass bulb?

A. Red

B. Orange

C. Yellow

D. Green

91. The standard activation temperature of a 200°F sprinkler head is identified by what color glass bulb?

A. Green

B. Red

C. Orange

D. Yellow

92. The standard activation temperature of a 286°F sprinkler head is identified by what color glass bulb?

A. Red

B. Yellow

C. Blue

D. Orange

93. A Class I standpipe outlet is characterized by?

A. 1½-inch outlets for occupant use only

B. 2½-inch outlets for fire department use only

C. Combined 1½-inch and 2½-inch outlets

D. 1-inch outlets for emergency use

94. A Class II standpipe outlet is characterized by?

A. 1½-inch outlets for occupant use only

B. 2½-inch outlets for fire department use only

C. Combined 1½-inch and 2½-inch outlets

D. 1-inch outlets for emergency use

95. A Class III standpipe outlet is characterized by?

A. 1½-inch outlets for occupant use only

B. Combined 1½-inch outlets for occupant use and 2½-inch outlets for fire department use

C. 2½-inch outlets for fire department use only

D. 1-inch outlets for emergency use

96. A wet-pipe sprinkler system is best defined as a system that?

A. Contains compressed air with water admitted upon head activation

B. Contains water under pressure at all times, allowing immediate flow upon head activation

C. Contains foam concentrate that mixes with water at each head

D. Operates only upon manual activation by the fire department

97. A dry-pipe sprinkler system is best defined as a system that?

A. Contains compressed air with water admitted upon head activation, used where freezing is possible

B. Contains water under pressure at all times

C. Contains foam concentrate

D. Operates only upon manual activation

98. A pre-action sprinkler system is best defined as a system that?

A. Contains water under pressure at all times

B. Contains compressed air with water admitted upon head activation

C. Requires both a detection device activation and head activation before water flow, used where accidental discharge would damage contents

D. Operates only upon manual activation

99. A deluge sprinkler system is best defined as a system that?

A. Has open heads that all discharge simultaneously when the system is activated, used for high-hazard applications

B. Has compressed air with water admitted upon head activation

C. Contains water under pressure at all times

D. Requires both detection and head activation before flow

100. The standard for installation of wet-chemical extinguishing systems for commercial cooking equipment is?

A. NFPA 17A and NFPA 96

B. NFPA 13

C. NFPA 14

D. NFPA 25

101. The standard for inspection, testing, and maintenance of water-based fire-protection systems is?

A. NFPA 13

B. NFPA 14

C. NFPA 25

D. NFPA 17

102. The standard for installation of sprinkler systems is?

A. NFPA 14

B. NFPA 13

C. NFPA 17

D. NFPA 25

103. The standard for installation of standpipe and hose systems is?

A. NFPA 13

B. NFPA 14

C. NFPA 17

D. NFPA 25

104. A photoelectric smoke detector is best defined as a device that?

A. Uses an ionizing radioactive source and a sensing electrode

B. Detects temperature rise above a fixed threshold

C. Uses the scattering of light by smoke particles to detect smoke

D. Detects carbon monoxide above background atmospheric levels

105. An ionization smoke detector is best defined as a device that?

A. Uses an ionizing radioactive source and a sensing electrode, responding rapidly to small-particle smoke from flaming fires

B. Uses the scattering of light by smoke particles

C. Detects temperature rise above a fixed threshold

D. Detects carbon monoxide above background atmospheric levels

106. A fixed-temperature heat detector is best defined as a device that?

A. Activates when the surrounding temperature reaches a preset threshold

B. Activates when the rate of temperature change exceeds a set rate

C. Activates when both heat and smoke are above their thresholds

D. Activates when carbon monoxide is detected

107. A rate-of-rise heat detector is best defined as a device that?

A. Activates when the surrounding temperature reaches a preset threshold

B. Activates when both heat and smoke are above their thresholds

C. Activates when carbon monoxide is detected

D. Activates when the rate of temperature change exceeds a set rate

108. A bowline knot is best defined as a knot that?

A. Joins two ropes of different diameters under load

B. Forms a non-slipping loop at the end of a rope

C. Secures a rope to an object such as a pole

D. Joins two ends of webbing in a flat configuration

109. A figure-eight on a bight is best defined as a knot that?

A. Joins two ropes of different diameters

B. Secures a rope to a pole or ladder rung

C. Binds two ends of flat webbing together

D. Forms a fixed loop in the middle or end of a rope, used for rescue applications

110. A clove hitch is best defined as a knot that?

A. Forms a fixed loop in the middle of a rope

B. Joins two ropes of different diameters

C. Binds two ends of flat webbing together

D. Secures a rope to an object such as a pole or ladder rung

111. A half hitch is best defined as a knot that?

A. Forms a fixed loop in the middle of a rope

B. Provides a supplemental wrap used in combination with other knots, such as for hoisting hose

C. Joins two ropes of different diameters

D. Forms the foundational rescue knot

112. A becket bend (sheet bend) is best defined as a knot that?

A. Forms a fixed loop in the middle of a rope

B. Secures a rope to an object such as a pole

C. Joins two ropes, particularly of different diameters

D. Forms the foundational rescue knot

113. A halligan tool is best defined as?

A. A two-handed striking tool with a flat head and pick

B. A specialized cutting tool with a chain blade

C. A combination lock-defeating tool with hydraulic spreading

D. A pry tool with an adze, pick, and forked claw on a steel shaft

114. A flathead axe combined with a halligan tool is collectively known as?

A. The pair

B. The combination

C. The set

D. The irons

115. A roof ladder is distinguished from other ground ladders by?

A. Retractable hooks at the tip that engage the roof ridge

B. A telescoping fly section

C. Aluminum beams with rope-reinforced rungs

D. Wider-than-standard rungs

116. A folding ladder is distinguished from other ground ladders by?

A. Retractable hooks at the tip

B. A telescoping fly section

C. Folding rungs and side rails for attic and confined-space use

D. Wider-than-standard rungs

117. An extension ladder is distinguished from a single ladder by?

A. Retractable hooks at the tip

B. A movable fly section that extends from the bed section

C. Folding rungs

D. Wider-than-standard rungs

118. The K-tool used in through-the-lock entry is designed to?

A. Force open the door at the hinges

B. Cut the door at the lock area

C. Strike the door panel to defeat the lock

D. Extract the lock cylinder to expose the locking mechanism

119. A J-tool used in through-the-lock entry is designed to?

A. Manipulate the panic bar mechanism through a small opening in the door

B. Cut the door at the lock area

C. Force open the door at the hinges

D. Strike the door panel to defeat the lock

120. A salvage cover is best defined as?

A. A heavy waterproof cover used to protect contents from water and debris during fire suppression operations

B. A specialized hose configuration for vertical hose stretches

C. A device for lowering valuable contents from upper floors

D. A funnel system for collecting water

121. A salvage chute is best defined as?

A. A specialized hose configuration for vertical hose stretches

B. A device for lowering valuable contents from upper floors

C. A funnel system for collecting water during sprinkler operations

D. A configured salvage cover that directs water flow out through a window or door

122. A water vacuum used in salvage operations is best defined as?

A. A device for lowering contents from upper floors

B. A portable wet/dry vacuum used to remove accumulated water from floors and contents during salvage

C. A funnel system for collecting water

D. A specialized cover for protecting contents

123. A class B foam is best defined as a foam type primarily designed for?

A. Class B flammable liquid fires

B. Class A combustible fires

C. Class K cooking oil fires

D. Class D combustible metal fires

124. A class A foam is best defined as a foam type primarily designed for?

A. Class A combustible fires, including wildland and structural applications

B. Class B flammable liquid fires

C. Class K cooking oil fires

D. Class D combustible metal fires

125. AFFF foam stands for?

A. Anti-Fire Fluorinated Foam

B. Aqueous Film-Forming Foam

C. Aerated Fire-Fighting Foam

D. Active Fluorinated Fire Foam

126. A class B foam proportioned at 3 percent is typically intended for use on?

A. Polar solvents

B. Class A combustibles

C. Combustible metals

D. Hydrocarbon fuels such as gasoline and diesel

127. A class B foam proportioned at 6 percent is typically intended for use on?

A. Class A combustibles

B. Hydrocarbon fuels only

C. Combustible metals

D. Polar solvents such as alcohols and ketones (with alcohol-resistant formulations)

128. A multipurpose dry chemical extinguisher (ammonium phosphate) carries which class rating?

A. B:C only

B. A:C only

C. A:B:C

D. K only

129. A regular dry chemical extinguisher (sodium bicarbonate) carries which class rating?

A. A:B:C

B. B:C only

C. K only

D. A:C only

130. A clean agent extinguisher using FM-200 (HFC-227ea) is typically intended for use on fires involving?

A. Combustible metals

B. Sensitive electronics and archives without leaving residue

C. Cooking oils and fats

D. Class A combustibles

131. A wet chemical extinguisher (potassium acetate or similar) is intended for use on fires involving?

A. Combustible metals

B. Energized electrical equipment only

C. Cooking oils and fats (Class K)

D. Flammable liquid spills

132. The acronym BLS in fire-EMS interface refers to?

A. Basic Life Standards

B. Basic Lifting Skills

C. Bystander Life Standards

D. Basic Life Support

133. The acronym ALS in fire-EMS interface refers to?

A. Advanced Life Support

B. Advanced Lifting Strategies

C. Air Life Support

D. Advanced Lifting Standards

134. The acronym CPR refers to?

A. Cardiopulmonary Resuscitation

B. Cardiac Pulse Restoration

C. Continuous Pressure Recovery

D. Coronary Pulse Resuscitation

135. The acronym AED refers to?

A. Anti-Electrical Defibrillator

B. Automated External Defibrillator

C. Active Emergency Defibrillator

D. Automatic Emergency Detector

136. The acronym NIOSH refers to?

A. Network for Industrial Operations and Safety Health

B. National Institute for Occupational Safety and Health

C. National Industrial Operations Safety Hub

D. National Institute of Occupational Safety Hazards

137. The acronym CDC refers to?

A. Centers for Disease Control and Prevention

B. Centralized Disease Coordination

C. Center for Domestic Control

D. Central Disease Council

138. The acronym FEMA refers to?

A. Federal Equipment Management Agency

B. Federal Emergency Management Authority

C. Federal Emergency Management Agency

D. Federal Equipment and Materials Administration

139. The acronym SOG refers to?

A. Standard Order Guidelines

B. Sound Operational Guidelines

C. Standard Operating Guidelines (also called SOPs — Standard Operating Procedures)

D. Service Operating Guidelines

140. The acronym PAR refers to?

A. Personnel Allocation Report

B. Personnel Assignment Record

C. Personnel Activity Report

D. Personnel Accountability Report

141. The acronym MCI refers to?

A. Mass Confusion Incident

B. Multiple Casualty Incident — used interchangeably with mass casualty

C. Major Citizen Incident

D. Mass Casualty Incident

142. The acronym WUI refers to?

A. Wildland Universal Incident

B. Working Urban Incident

C. Wildland-Urban Interface

D. Wide-Use Incident

143. The acronym MSDS, the predecessor to SDS, refers to?

A. Material Safety Database System

B. Material Safety Data Sheet

C. Medical Safety Data Sheet

D. Material Standard Data System

144. The acronym PIO refers to?

A. Personal Identification Officer

B. Public Information Operator

C. Personnel In-Office

D. Public Information Officer

145. The acronym SAR refers to?

A. Search and Rescue

B. Standard Alarm Response

C. Specialized Apparatus Response

D. Safety Awareness Report

146. The acronym CISM refers to?

A. Critical Incident Stress Mitigation

B. Critical Incident Stress Management

C. Crisis Incident Stress Management

D. Critical Incident System Management

147. The acronym EAP in firefighter wellness refers to?

A. Emergency Apparatus Program

B. Emergency Action Plan

C. Employee Assistance Program

D. Emergency Alarm Procedure

148. The acronym IAFC refers to?

A. International Association of Firefighters

B. International Association of Fire Chiefs

C. International Association of Fire Cadets

D. International Association of Fire Companies

149. The acronym IAFF refers to?

A. International Association of Fire Companies

B. International Association of Fire Cadets

C. International Association of Fire Chiefs

D. International Association of Fire Fighters

150. The acronym CRR, increasingly used in modern fire prevention, refers to?

A. Community Risk Reduction

B. Coordinated Resource Response

C. Compliance Review Report

D. Community Response Resource

PRACTICE EXAM 12 — ANSWER KEY AND EXPLANATIONS

1. C — Immediately Dangerous to Life or Health. IDLH is the NIOSH-defined atmospheric condition posing an immediate threat to life, irreversible adverse health effects, or impairment of the ability to escape. Identifying IDLH atmospheres mandates SCBA use under OSHA 1910.134.

2. A — Self-Contained Breathing Apparatus. SCBA is the portable respiratory protection device carried by firefighters, consisting of a cylinder, regulator, facepiece, and harness. The acronym is fundamental fire service vocabulary.

3. B — National Fire Protection Association. The NFPA is the standards-development organization producing the consensus codes and standards governing fire protection in the United States. NFPA standards are widely adopted by AHJs.

4. A — Occupational Safety and Health Administration. OSHA is the federal agency within the U.S. Department of Labor that enforces workplace safety and health regulations through 29 CFR.

5. D — Incident Command System. ICS is the standardized incident management system used across U.S. emergency services, originally developed for wildfire response and now integrated within NIMS.

6. B — National Incident Management System. NIMS is the U.S. national framework for emergency management, integrating ICS, training, resource management, and communications. Adopted by Homeland Security Presidential Directive 5.

7. C — Activates automatically when the firefighter remains motionless for a set period and can also be manually activated. PASS (Personal Alert Safety System) is governed by NFPA 1982 and provides automatic motion-triggered and manual emergency signaling. Standard pre-alarm activates around 30 seconds of motionlessness.

8. C — Rapid Intervention Crew. RIC is the dedicated team standing by during interior operations to rescue trapped or distressed firefighters. NFPA 1407 governs RIC training and operations.

9. D — Personal Protective Equipment. PPE refers to all protective equipment worn or used by firefighters, including the structural firefighting ensemble, SCBA, and specialized rescue PPE.

10. C — Emergency Medical Services. EMS is the prehospital medical response system, frequently integrated with or operated by fire departments under fire-based or third-service models.

11. B — The French phrase "m'aider" meaning "help me." The MAYDAY radio signal derives from the French "m'aider" (pronounced may-day), standardized in radio communications for distress signaling.

12. C — Location, Unit, Name, Assignment, Resources needed. LUNAR is the structured MAYDAY message format ensuring critical information is transmitted: where you are, what unit you're with, who you are, what you were doing, and what help you need.

13. A — Fire Department Connection. FDC is the external connection on a building's sprinkler or standpipe system that allows the fire department to supplement system pressure and flow.

14. D — Authority Having Jurisdiction. AHJ is the term in NFPA codes for the organization, office, or individual responsible for enforcing the requirements of a code or standard.

15. D — Emergency Response Guidebook. ERG (published by U.S. DOT) is the field reference for first responders at hazardous materials incidents, providing initial isolation distances and protective action distances.

16. C — Safety Data Sheet. SDS is the current internationally standardized 16-section chemical information document (replacing MSDS) under OSHA HazCom 2012 / GHS.

17. C — Department of Transportation. DOT is the U.S. federal department that regulates hazardous materials transportation through Pipeline and Hazardous Materials Safety Administration (PHMSA) under 49 CFR.

18. A — Code of Federal Regulations. CFR is the codification of U.S. federal agency regulations published by the Office of the Federal Register. OSHA, EPA, and DOT regulations appear in the CFR.

19. C — Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF). The ATF is the federal agency with jurisdiction over arson, explosives, and firearms-related fire investigations. Federal cases involving explosives or interstate arson typically involve ATF.

20. C — International Fire Service Training Association. IFSTA is the major fire service training publisher headquartered at Oklahoma State University, producing widely used fire service textbooks and validating curricula.

21. D — Fire Fighter Professional Qualifications. NFPA 1001 establishes the JPRs (Job Performance Requirements) for Firefighter I and II certification. It is the foundational professional qualification standard.

22. C — Fire Department Occupational Safety, Health, and Wellness Program. NFPA 1500 is the master safety standard for fire departments, addressing risk management, training, PPE, operations, medical, and behavioral health programs.

23. C — Protective Ensembles for Structural Fire Fighting. NFPA 1971 specifies design, performance, and certification requirements for structural firefighting coats, pants, helmets, gloves, hoods, and footwear.

24. D — Selection, Care, and Maintenance of Protective Ensembles. NFPA 1851 governs the inspection, cleaning, repair, retirement, and recordkeeping for structural firefighting PPE after acquisition.

25. B — Open-Circuit Self-Contained Breathing Apparatus. NFPA 1981 specifies design, performance, and certification requirements for SCBA used in IDLH atmospheres by emergency services.

26. B — Life Safety Rope and Equipment for Emergency Services. NFPA 1983 specifies design and performance requirements for life safety rope, harnesses, and auxiliary equipment.

27. D — Manufacturer's Design of Fire Department Ground Ladders and their Use, Maintenance, and Service Testing. NFPA 1931 covers ladder design and construction; NFPA 1932 covers use, maintenance, and service testing.

28. C — Care, Use, Inspection, Service Testing, and Replacement of Fire Hose. NFPA 1962 governs the full lifecycle management of fire hose, couplings, nozzles, and fire hose appliances.

29. C — Guide for Fire and Explosion Investigations. NFPA 921 provides the systematic, scientific-method-based methodology used by fire investigators in cause-and-origin determinations.

30. D — Standard for Professional Qualifications for Fire Investigator. NFPA 1033 establishes the JPRs for fire investigator certification, including required topical knowledge and continuing education.

31. D — Pre-Incident Planning. NFPA 1620 provides the methodology for developing pre-incident plans that capture critical operational information for buildings and facilities before emergencies.

32. A — Rehabilitation Process for Members During Emergency Operations and Training Exercises. NFPA 1584 establishes the criteria and procedures for crew rehab including assessment, hydration, food, rest, and medical monitoring.

33. A — Comprehensive Occupational Medical Program for Fire Departments. NFPA 1582 specifies medical evaluations for fire department members, including pre-employment, periodic, and return-to-duty evaluations.

34. D — Health-Related Fitness Programs for Fire Department Members. NFPA 1583 specifies fitness programs designed to maintain firefighters' physical capacity to perform essential job tasks safely.

35. B — Respiratory Protection. 29 CFR 1910.134 establishes employer requirements for respiratory protection programs, including SCBA fit testing, training, and atmospheric monitoring.

36. C — Permit-Required Confined Spaces. 29 CFR 1910.146 governs permit-required confined space entry, including atmospheric monitoring, lockout/tagout, retrieval systems, and rescue procedures.

37. B — Fire Brigades. 29 CFR 1910.156 governs employer-organized fire brigades, including training, PPE, and operational requirements for industrial fire response.

38. B — Hazardous Waste Operations and Emergency Response (HAZWOPER). 29 CFR 1910.120 governs hazardous waste site work and emergency response operations involving hazardous substances, including training levels (awareness through specialist).

39. A — Hazardous Waste Operations and Emergency Response. HAZWOPER is the colloquial name for OSHA's 29 CFR 1910.120 standard governing hazardous waste site work and hazmat emergency response.

40. C — Ordinary combustibles such as wood, paper, cloth, and rubber. Class A fires involve solid combustibles that leave ash; the class designation drives extinguisher selection and tactical approach.

41. D — Flammable liquids and gases. Class B fires involve hydrocarbons and other flammable/combustible liquids and gases; water alone is generally not effective and may spread the fuel.

42. A — Energized electrical equipment. Class C fires involve energized electrical equipment; the energized state requires non-conductive extinguishing agents until power is removed.

43. A — Combustible metals such as magnesium, titanium, sodium, and potassium. Class D fires involve combustible metals; specialized dry-powder agents are required because water reacts violently with many metals.

44. C — Cooking oils and fats in commercial cooking equipment. Class K fires involve cooking oils and fats; wet-chemical agents producing saponification are required for effective suppression.

45. B — Heat, fuel, oxygen, and the uninhibited chemical chain reaction. The fire tetrahedron adds the chemical chain reaction to the classic fire triangle, accounting for the role of free radicals in sustained combustion.

46. D — An explosive deflagration when a fuel-rich, oxygen-starved compartment is suddenly ventilated. Backdraft occurs when oxygen is introduced into an oxygen-depleted compartment containing super-heated unburned gases, producing an explosive deflagration.

47. C — The transition from growth to fully developed stage, when all exposed combustibles in a compartment reach ignition temperature simultaneously. Flashover marks the transition from a localized fire to full room involvement, typically at compartment temperatures of 1,000°F or more.

48. A — Ignition of unburned hot gases in the upper smoke layer, with flame rolling along the ceiling. Rollover (flameover) precedes flashover and indicates the upper layer is approaching ignition conditions, warranting immediate cooling and ventilation coordination.

49. A — A Boiling Liquid Expanding Vapor Explosion involving a pressurized container. BLEVE occurs when a pressurized container of liquid is heated above its boiling point and then ruptures, producing an explosive vapor release with potential fireball.

50. D — Fire-resistive construction with protected non-combustible structural elements. Type I construction has fire-resistance-rated structural elements (typically 2–4 hours), used in high-rises and major occupancies.

51. D — Non-combustible construction with non-combustible structural elements typically without protection. Type II construction uses non-combustible materials (steel, concrete) but typically without fire-resistance protection, vulnerable to early failure.

52. A — Ordinary construction with non-combustible exterior walls and combustible interior structural elements. Type III ("ordinary") construction has masonry exterior walls with combustible wood interior framing, common in older commercial buildings.

53. A — Heavy timber construction with masonry exterior walls and large-dimension wood interior structural elements. Type IV ("heavy timber" or "mill") construction uses large-dimension wood members that char rather than burn through quickly.

54. D — Wood-frame construction with combustible structural elements throughout. Type V construction uses combustible wood framing throughout; lightweight engineered components (TJI, trusses) are especially vulnerable to early collapse.

55. D — The weight of the gas relative to air (with air = 1.0). Vapor density determines whether a gas will rise (vapor density less than 1.0) or settle (greater than 1.0), critical for hazmat tactics and ventilation.

56. A — The minimum temperature at which the liquid produces sufficient vapor to ignite when exposed to an ignition source. Flash point determines flammable vs. combustible liquid classification under NFPA 30; lower flash point means more hazardous storage and handling.

57. A — The minimum temperature at which the liquid will sustain combustion. Fire point is typically a few degrees above flash point; at flash point ignition is momentary, while at fire point combustion is sustained.

58. B — The minimum temperature at which the substance ignites without an external ignition source. Auto-ignition (self-ignition) temperature is the temperature at which the substance spontaneously ignites without spark or flame, critical for hot-work safety.

59. B — The minimum concentration of the gas in air at which combustion will occur. LEL (lower flammable limit) marks the lean limit of the flammable range; below LEL the mixture is too lean to ignite.

60. D — The maximum concentration of the gas in air at which combustion will occur. UEL (upper flammable limit) marks the rich limit; above UEL the mixture is too rich to ignite. The range between LEL and UEL is the flammable range.

61. B — 50 feet. The U.S. standard fire hose section is 50 feet, used for both attack and supply lines, with quick-connect couplings at each end.

62. A — 150 gallons per minute. A standard 1¾-inch combination nozzle attack line at 100 psi commonly flows 150 gpm; this is the typical reference value for interior attack calculations.

63. D — 265 gallons per minute. A 1⅛-inch smooth-bore tip at 50 psi delivers 265 gpm ($GPM = 29.7 \times d^2 \times \sqrt{NP} = 29.7 \times 1.266 \times 7.07 = 265$).

64. D — 50 psi. Smooth-bore handline tip nozzle pressure is 50 psi (compared to 80 psi for smooth-bore master streams and 100 psi for combination nozzles).

65. C — 100 psi. Combination (fog) nozzle handline tip nozzle pressure is 100 psi; lower pressure (e.g., 75 psi) is available with low-pressure combination nozzles.

66. C — 80 psi. Smooth-bore master stream tip nozzle pressure is 80 psi (compared to 50 psi for smooth-bore handlines). Higher pressure produces the longer reach needed for master stream applications.

67. B — Orange. NFPA 291 color coding: Class AA = light blue (≥1500 gpm), Class A = green (1000–1499 gpm), Class B = orange (500–999 gpm), Class C = red (<500 gpm). Class C at 500–999 gpm maps to orange.

68. C — 6 feet. Using the 1:4 climbing-angle ratio, a 24-foot ladder requires 24 ÷ 4 = 6 feet of butt offset from the building.

69. D — 75 degrees from horizontal. The proper climbing angle for fire service ground ladders is 75 degrees (more precisely 75.5°), achieved by the 1:4 placement ratio.

70. B — One foot of base offset for every four feet of working height. The traditional 1:4 placement ratio produces the proper 75-degree climbing angle when applied consistently.

71. B — At or just below the sill. Ladder tip placement for window rescue puts the tip at or just below the windowsill, allowing the rescuer to step from the windowsill onto the ladder.

72. A — Five feet above the eave. Ladder tip placement for roof access projects the tip approximately five feet (about 5 rungs) above the eave to provide a handhold for climbing onto and off the roof.

73. A — 160 gpm. A 7/8-inch smooth-bore tip at 50 psi delivers approximately 161 gpm (GPM = 29.7 × 0.766 × 7.07 = 161).

74. A — 210 gpm. A 1-inch smooth-bore tip at 50 psi delivers approximately 210 gpm (GPM = 29.7 × 1 × 7.07 = 210).

75. B — 325 gpm. A 1¼-inch smooth-bore tip at 50 psi delivers approximately 328 gpm, commonly rounded to 325 gpm in field tables.

76. A — 500 gpm. A 1⅜-inch smooth-bore master stream tip at 80 psi delivers approximately 502 gpm, rounded to 500 gpm.

77. A — 600 gpm. A 1½-inch smooth-bore master stream tip at 80 psi delivers approximately 600 gpm.

78. B — 800 gpm. A 1¾-inch smooth-bore master stream tip at 80 psi delivers approximately 813 gpm, rounded to 800 gpm.

79. C — 1,065 gpm. A 2-inch smooth-bore master stream tip at 80 psi delivers approximately 1,062 gpm, rounded to 1,065 gpm.

80. D — 30 minutes. A 30-cubic-foot SCBA cylinder is rated for 30 minutes of laboratory work-rate consumption; actual heavy-work duration is approximately 50% of the rating.

81. C — 45 minutes. A 45-cubic-foot SCBA cylinder is rated for 45 minutes of laboratory work-rate consumption; actual heavy-work duration is approximately 50% of the rating.

82. B — 60 minutes. A 60-cubic-foot SCBA cylinder is rated for 60 minutes of laboratory work-rate consumption; actual heavy-work duration is approximately 50% of the rating.

83. C — One-third of full. The SCBA end-of-service-time indicator (low-air alarm) activates at one-third of full cylinder pressure (e.g., 1,500 psi for a 4,500 psi cylinder), per NFPA 1981.

84. C — 4,500 pounds. NFPA 1983 minimum breaking strength for one-person (technical-use) life safety rope is 4,500 pounds (20 kN).

85. A — 9,000 pounds. NFPA 1983 minimum breaking strength for two-person (general-use) life safety rope is 9,000 pounds (40 kN).

86. B — 150 psi. Standard sprinkler system FDC supply pressure is approximately 150 psi at the FDC, which combined with internal fire pumps maintains adequate pressure throughout the system.

87. D — Quick response (QR). Residential sprinkler heads use quick-response activation (faster thermal element response) to provide faster suppression and tenability in dwelling occupancies.

88. B — Orange. NFPA 13 color coding: 135°F = orange glass bulb (ordinary temp), used in standard occupancies.

89. B — Red. NFPA 13: 155°F = red glass bulb (ordinary temp), the most common residential and commercial activation temperature.

90. C — Yellow. NFPA 13: 175°F = yellow glass bulb (intermediate temp), used where ambient temperatures are higher.

91. A — Green. NFPA 13: 200°F = green glass bulb (intermediate temp), used in warmer environments.

92. C — Blue. NFPA 13: 286°F = blue glass bulb (high temp), used in industrial or high-heat environments where higher activation prevents nuisance discharge.

93. B — 2½-inch outlets for fire department use only. Class I standpipes provide 2½-inch outlets for trained fire department personnel; not equipped with hose for occupant use.

94. A — 1½-inch outlets for occupant use only. Class II standpipes provide 1½-inch outlets with attached hose for occupant use; designed for incipient-stage fire response.

95. B — Combined 1½-inch outlets for occupant use and 2½-inch outlets for fire department use. Class III standpipes combine both occupant and FD use capabilities, providing maximum versatility.

96. B — Contains water under pressure at all times, allowing immediate flow upon head activation. Wet-pipe systems are the most common sprinkler design, providing immediate water flow on heat-activated head operation.

97. A — Contains compressed air with water admitted upon head activation, used where freezing is possible. Dry-pipe systems prevent freeze damage in unheated spaces; the compressed air maintains the dry-pipe valve closed until head activation drops pressure.

98. C — Requires both a detection device activation and head activation before water flow, used where accidental discharge would damage contents. Pre-action systems combine detection and head activation, preventing accidental discharge that would damage sensitive contents (data centers, museums).

99. A — Has open heads that all discharge simultaneously when the system is activated, used for high-hazard applications. Deluge systems flood the entire protected area through open heads, used for high-hazard occupancies (aircraft hangars, transformer rooms).

100. A — NFPA 17A and NFPA 96. NFPA 17A governs wet-chemical extinguishing systems for commercial cooking equipment; NFPA 96 governs commercial cooking ventilation and protection requirements.

101. C — NFPA 25. NFPA 25 establishes inspection, testing, and maintenance requirements for water-based fire-protection systems (sprinklers, standpipes, fire pumps, water tanks).

102. B — NFPA 13. NFPA 13 establishes installation requirements for sprinkler systems in commercial, industrial, and residential occupancies (with NFPA 13R for low-rise residential and 13D for one- and two-family dwellings).

103. B — NFPA 14. NFPA 14 establishes installation requirements for standpipe and hose systems in buildings, including Class I, II, and III system designs.

104. C — Uses the scattering of light by smoke particles to detect smoke. Photoelectric smoke detectors use an LED light source and a photoelectric sensor; smoke particles scatter the light to the sensor, triggering the alarm. Responds well to smoldering fires.

105. A — Uses an ionizing radioactive source and a sensing electrode, responding rapidly to small-particle smoke from flaming fires. Ionization detectors use americium-241 to ionize a small air sample; smoke particles disrupt the ion current. Responds well to flaming fires.

106. A — Activates when the surrounding temperature reaches a preset threshold. Fixed-temperature heat detectors use a thermal element (bimetal, glass bulb) that activates at a specific temperature, similar to sprinkler heads.

107. D — Activates when the rate of temperature change exceeds a set rate. Rate-of-rise detectors activate when temperature increases at a specific rate per minute (typically 12–15°F/min), responding to rapidly developing fires.

108. B — Forms a non-slipping loop at the end of a rope. The bowline forms a fixed, non-slipping loop and is one of the most fundamental fire service knots, used for hoisting and self-rescue applications.

109. D — Forms a fixed loop in the middle or end of a rope, used for rescue applications. The figure-eight on a bight is the primary fire service rescue knot, providing a strong, dressable loop suitable for life safety applications.

110. D — Secures a rope to an object such as a pole or ladder rung. The clove hitch is used to attach a rope to a cylindrical object such as a ladder rung or pole, often combined with a half hitch for security.

111. B — Provides a supplemental wrap used in combination with other knots, such as for hoisting hose. The half hitch is not a stand-alone knot but a supplemental wrap that secures tools, hose, or other equipment when combined with other knots.

112. C — Joins two ropes, particularly of different diameters. The becket bend (sheet bend) joins two ropes of different diameters; useful when extending a rope or joining ropes of differing thicknesses.

113. D — A pry tool with an adze, pick, and forked claw on a steel shaft. The Halligan tool is the principal forcible-entry tool in U.S. fire service, designed for prying, striking, and cutting applications.

114. D — The irons. The flathead axe combined with a Halligan tool ("married" together) is collectively called "the irons" in fire service parlance; the irons are the primary forcible-entry kit.

115. A — Retractable hooks at the tip that engage the roof ridge. Roof ladders feature folding hooks that deploy at the tip to grab the roof ridge or peak, securing the ladder on a pitched roof for vertical operations.

116. C — Folding rungs and side rails for attic and confined-space use. Folding ladders (attic ladders) collapse to fit through small openings (scuttle holes, attic accesses), then deploy with folding rungs and rails.

117. B — A movable fly section that extends from the bed section. Extension ladders consist of a bed (base) section and one or more fly sections that extend via a halyard system to achieve adjustable working height.

118. D — Extract the lock cylinder to expose the locking mechanism. The K-tool is designed to pull (extract) the lock cylinder from the door, exposing the lock mechanism for operation with a key tool. Used in through-the-lock forcible entry.

119. A — Manipulate the panic bar mechanism through a small opening in the door. The J-tool (also called Detroit door opener) reaches through the gap between double doors to manipulate the panic bar from outside, providing rapid entry through panic-hardware doors.

120. A — A heavy waterproof cover used to protect contents from water and debris during fire suppression operations. Salvage covers are traditional canvas (now often synthetic) covers used to protect building contents from water and debris during operations.

121. D — A configured salvage cover that directs water flow out through a window or door. Salvage chutes channel accumulated water out of the structure, typically through a window or door, using salvage cover material configured for flow.

122. B — A portable wet/dry vacuum used to remove accumulated water from floors and contents during salvage. Water vacuums extract accumulated water during salvage operations, reducing water damage and supporting cleanup.

123. A — Class B flammable liquid fires. Class B foam (AFFF, AR-AFFF, fluoroprotein) is formulated specifically for flammable liquid fires, producing a vapor-suppressing film over the fuel surface.

124. A — Class A combustible fires, including wildland and structural applications. Class A foam reduces water surface tension, allowing better penetration into Class A combustibles; widely used in wildland-urban interface and structural overhaul.

125. B — Aqueous Film-Forming Foam. AFFF is the predominant Class B foam, forming an aqueous film over hydrocarbon fuels that suppresses vapor production and resists burnback.

126. D — Hydrocarbon fuels such as gasoline and diesel. The 3% proportioning standard is used with AFFF on hydrocarbon fuels; 3% concentrate to 97% water by volume.

127. D — Polar solvents such as alcohols and ketones (with alcohol-resistant formulations). The 6% proportioning standard with AR-AFFF (alcohol-resistant) is used on polar solvents that would dissolve standard AFFF film; higher concentrate is needed for the polymer-forming chemistry.

128. C — A:B:C. Multipurpose dry chemical (monoammonium phosphate, the yellow powder) is rated for Class A, B, and C fires, providing the broadest extinguisher coverage.

129. B — B:C only. Regular dry chemical (sodium bicarbonate, the white powder) is rated for Class B and C fires only; not effective on Class A combustibles because it doesn't penetrate or smother solid fuels.

130. B — Sensitive electronics and archives without leaving residue. Clean agents (FM-200/HFC-227ea, Novec 1230, inert gases) extinguish fires without leaving residue or damaging sensitive equipment; used in data centers, telecom facilities, and museums.

131. C — Cooking oils and fats (Class K). Wet-chemical agents (potassium acetate, potassium citrate) saponify cooking oils and fats, smothering Class K fires; used in commercial cooking equipment hood-and-duct systems.

132. D — Basic Life Support. BLS is the level of emergency medical care including CPR, AED, basic airway management, and bleeding control, performed by EMTs and trained first responders.

133. A — Advanced Life Support. ALS includes advanced airway management, IV access, medication administration, and cardiac monitoring; performed by paramedics.

134. A — Cardiopulmonary Resuscitation. CPR combines chest compressions and rescue breaths to maintain circulation and oxygenation in cardiac arrest patients.

135. B — Automated External Defibrillator. AEDs analyze cardiac rhythm and deliver defibrillation shocks for shockable rhythms (VF, pulseless VT), critical for early defibrillation in cardiac arrest.

136. B — National Institute for Occupational Safety and Health. NIOSH is the federal research agency (within CDC) that investigates firefighter line-of-duty deaths through the Fire Fighter Fatality Investigation and Prevention Program.

137. A — Centers for Disease Control and Prevention. The CDC is the federal public health agency; NIOSH operates within CDC for occupational health research.

138. C — Federal Emergency Management Agency. FEMA is the federal agency responsible for emergency management coordination, disaster declarations, USAR teams, and emergency management training (EMI).

139. C — Standard Operating Guidelines (also called SOPs — Standard Operating Procedures). SOGs/SOPs are the written procedures that govern fire department operations; SOG terminology is favored where guidance flexibility is desired, SOP where strict compliance is required.

140. D — Personnel Accountability Report. PAR is the formal accountability check at incidents, with crews reporting personnel status to incident command at scheduled or event-driven intervals.

141. D — Mass Casualty Incident. MCI is the standard term for incidents with multiple casualties exceeding routine response capacity; the term "Mass Casualty Incident" is the canonical NFPA and NIMS expansion.

142. C — Wildland-Urban Interface. WUI describes the geographic transition zone where wildland vegetation and urban development meet, presenting unique fire spread risks and operational challenges.

143. B — Material Safety Data Sheet. MSDS was the predecessor term for SDS (Safety Data Sheet) under OSHA's pre-2012 HazCom standard; replaced by 16-section SDS format under GHS alignment in 2012.

144. D — Public Information Officer. The PIO is the ICS position responsible for media interface and public communication during incidents, ensuring consistent and accurate information.

145. A — Search and Rescue. SAR encompasses all search and rescue operations, including urban, wildland, water, and technical rescue applications. USAR (Urban Search and Rescue) is a FEMA-coordinated specialty.

146. B — Critical Incident Stress Management. CISM provides peer-led psychological intervention following traumatic incidents, including defusings, debriefings, and individual support.

147. C — Employee Assistance Program. EAPs provide confidential support services for firefighters and family members, including behavioral health counseling, substance abuse support, and family services.

148. B — International Association of Fire Chiefs. The IAFC is the professional organization for fire chiefs and chief officers, advocating for fire service leadership and policy.

149. D — International Association of Fire Fighters. The IAFF is the labor union representing professional firefighters and paramedics in the U.S. and Canada, advocating for member rights and presumptive cancer legislation.

150. A — Community Risk Reduction. CRR is the modern fire prevention framework that uses data-driven analysis to target prevention resources at the specific risks present in each community, expanding beyond traditional fire prevention to include all community risks.