Name: _____ Class: _____ Date: _____ ID: A

Study Guide

____ 1. Which of the following should be specified in a systematic maintenance program?
A. Manufacturer's representative numbers and equipment depreciation
B. Budget request guidelines, request for proposal forms, and spending limits
C. Maintenance procedures, when they are performed, and who is responsible
D. Employee accountability procedures and neighboring jurisdiction maintenance policies

____ 2. Which of the following statements about the driver/operator and maintenance responsibilities is MOST accurate?
A. All maintenance is generally contracted out to a service shop.
B. The driver/operator is often able to correct minor deficiencies.
C. The driver/operator performs all maintenance of the apparatus.
D. A certified mechanic must perform all maintenance on the apparatus.

____ 3. Which of the following would be an appropriate option for a systematic maintenance program?
A. Contract out repair work
B. Bid out repair work at the end of the fiscal year
C. Assign repair work to any available personnel
D. Discontinue repair work and purchase new items

____ 4. Why should a driver/operator use an inspection checklist?
A. Eliminates the need for a certified mechanic
B. Enables fewer inspections to be conducted on the apparatus
C. Ensures the driver/operator does not lie about the inspection
D. Ensures the driver/operator conducts a uniform and complete inspection

____ 5. What should a driver/operator do when a piece of equipment onboard is found broken, defective, or in need of any type of repair?
A. Immediately take the apparatus out of service
B. Contact the department mechanic or contract service shop
C. Remedy the situation, if possible, so documentation is not required
D. Follow the established policy of the AHJ for documenting, reporting, and following up on status of repair

____ 6. Which of the following is a function of apparatus maintenance and inspection records?
A. Provide employees tasks during downtime
B. Provide employees with a sense of ownership of the apparatus
C. In a warranty claim, may be needed to document that required maintenance was performed
D. Meet union requirements outlining how and when apparatus is to be maintained and inspected

____ 7. Which of the following can cause a corrosive effect on steel body components?
A. Cold temperatures and high winds
B. Bright sunlight and hot temperatures
C. Protective finishes applied after washing
D. Road salt used during inclement weather

____ 8. The engine compartment where linkages, fuel injectors, or other controls are located:
A. is not affected by the accumulation of dirt.
B. should not be cleaned by fire department staff.
C. is not easily accessible, so dirt is not a problem.
D. may become inoperable due to the collection of dirt.

____ 9. Which of the following is an adverse effect of overcleaning fire apparatus?
A. May make parts slippery and difficult to work with
B. May weaken the structural integrity of body components
C. May void any type of warranty associated with the apparatus
D. May remove lubrication from the chassis, engine, pump and underbody

____ 10. What should be done during the first six months after an apparatus is received?
A. Wash infrequently or not at all
B. Wash frequently using hot water
C. Wash frequently using cold water
D. Wash frequently, alternating hot and cold water

____ 11. Which of the following can be used to clean automotive glass?
A. Dry towels or cloths
B. Putty knives and a damp cloth rag
C. Warm soapy water in conjunction with shop towels
D. Commercial glass cleaner in conjunction with a clean cloth rag

____ 12. When cleaning the interior of an apparatus using cleaning agents:
A. remove all electrical equipment.
B. wear approved masks for cleaning.
C. ventilate the cab or crew riding area.
D. keep all windows rolled up when in the cab.

____ 13. Before using any waxes or polishes on a fire apparatus:
A. reference the manufacturer's manual.
B. cover any equipment on the apparatus.
C. allot at least four hours to finish the tack.
D. ensure no emergency incidents are ongoing.

____ 14. When performing a walk-around inspection, the driver/operator begins inspection at the:
A. rear of the apparatus and works around apparatus in a clockwise pattern.
B. front of the apparatus and works around apparatus in a counterclockwise pattern.
C. driver's door on the cab and works around apparatus in a clockwise pattern.
D. passenger's door on the cab and works around apparatus in a clockwise pattern.

____ 15. When performing a walk-around inspection, who should the driver/operator talk to in order to get the MOST accurate impression of how the vehicle last operated?
A. Last person to drive apparatus
B. Communications personnel who talked with driver
C. Department mechanic who last serviced apparatus
D. Any department member who last rode in apparatus

____ 16. Which of the following should driver/operators look for when approaching a vehicle to be inspected?
A. Whether or not doors are locked
B. Terrain on which vehicle is parked
C. Levels on all gauges on the apparatus
D. Damage to interior of the apparatus cab

____ 17. Which of the following statements about inspecting a parked apparatus is MOST accurate?
A. Whenever an apparatus is parked, chock its wheels.
B. Whenever an apparatus is parked, turn the front wheels slightly.
C. Whenever an apparatus is parked, ensure all windows are rolled up.
D. Whenever an apparatus is parked, disengage all electrical devices.

____ 18. Which of the following statements about tire types and condition is MOST accurate?
A. Tires must be of the same size ratings, but weight ratings can vary up to 20%.
B. Any tire types are acceptable, as long as all tires are similar in size and weight ratings.
C. It is acceptable to mix radial tires with bias-ply tires, as long as they are the same in the front and rear.
D. All tires should be the same size and weight ratings according to appropriate manufacturer specifications.

____ 19. Tire selections for fire apparatus are based on:
A. gross axle weight ratings for the apparatus.
B. projected number of miles driven on the tires.
C. minimum and maximum speeds for the apparatus.
D. condition of roadways and highways in the jurisdiction.

____ 20. When examining tire condition, driver/operators should check:
A. tire color.
B. tire diameter.
C. excessive wear on the sidewalls.
D. distance between top of tire and apparatus body.

____ 21. According to NFPA® 1911, tires must be replaced every:
A. three years.
B. five years.
C. seven years.
D. ten years.

____ 22. The component in a load management system that turns on various lights at specified intervals so the startup electrical load for all devices does not occur at the same time is called the:
A. load monitor.
B. load delineator.
C. load sequencer.
D. load alignment indicator.

____ 23. Which component in a load management system will shut down less important electrical equipment systems if an overload condition occurs?
A. Load monitor
B. Load delineator
C. Load sequencer
D. Load alignment indicator

____ 24. In a manual transmission, excessive freeplay of the pedal may:
A. result in the clutch not releasing completely.
B. require the driver/operator to change gears.
C. result in the vehicle locking up and stopping suddenly.
D. cause the clutch to slip, overheat, and wear out sooner than necessary.

____ 25. In general, steering wheel play should be no more than approximately:
A. 5 degrees in either direction.
B. 10 degrees in either direction.
C. 15 degrees in either direction.
D. 20 degrees in either direction.

____ 26. The Gross Vehicle Weight Rating (GVWR) is the:
A. suggested ideal weight of the apparatus.
B. weight of the apparatus before any equipment or personnel are added.
C. maximum weight at which a vehicle can be safely operated on roadways in ideal conditions.
D. minimum weight at which a vehicle can be operated without noticing changes in the operation.

____ 27. On apparatus equipped with air brakes, if the engine must be run longer than the specified period of time to build sufficient air pressure:
A. the apparatus should be equipped with auxiliary braking.
B. the air brakes should be disconnected and not used at all.
C. the driver/operator should apply pressure to the gas pedal.
D. the apparatus should be inspected and repaired by a certified mechanic.

____ 28. Apparatus with air brakes are to be equipped with an air pressure protection valve that prevents air horns or other nonessential devices from being operated when the pressure in the air reservoir drops below:
A. 80 psi (560 kPa).
B. 90 psi (630 kPa).
C. 100 psi (700 kPa).
D. 120 psi (840 kPa).

____ 29. Which of the following is a function of antilock braking systems (ABS)?
A. Enables the driver/operator to stop much more quickly
B. Warns the driver/operator about oncoming vehicles and hidden hazards in the roadway
C. Allows the driver/operator to observe the road and not worry about the braking system
D. Assists the driver/operator in keeping apparatus in a straight trajectory during heavy or emergency braking

____ 30. How often should apparatus brakes be thoroughly tested?
A. Monthly
B. Bi-annually
C. Annually
D. Every three years

____ 31. Which National Fire Protection Association® standard specifies methods for brake tests?
A. 1021
B. 1031
C. 1900
D. 1911

____ 32. Which of the following statements about checking fluid levels is MOST accurate?
A. Most checks can be conducted while the engine is running.
B. Unless gauges have been inaccurate, they can be relied upon for inspections.
C. Fluid level measurements should be the same whether the engine is hot or cold.
D. Never rely solely on warning lights or gauges; all fluid levels should be inspected.

____ 33. What is the function of diesel particulate filters (DPF)?
A. Improve mileage
B. Improve engine performance
C. Protect vital engine components
D. Provide for cleaner emissions from diesel engines

____ 34. Engines produced after January 1, 2010, may be equipped with an exhaust after-treatment system called Selective Catalyst Reductant (SCR) that:
A. uses the latest technology to reduce emissions to zero.
B. transforms emissions so they are no longer harmful to the environment.
C. uses Diesel Exhaust Fluid (DEF) to help further reduce emissions.
D. monitors and records all levels of exhaust from the apparatus and corrects for malfunctions.

____ 35. When performing chassis lubrication, the manufacturer's manual will recommend the:
A. minimum and maximum price range for engine oil.
B. number of minutes the chassis lubrication should take.
C. Society of Automotive Engineers (SAE) numbers for engine oil.
D. Automotive Engineers Association (AEA) numbers for engine oil.

____ 36. Which of the following statements about vehicle batteries is MOST accurate?
A. Most modern truck batteries are maintenance free.
B. Most modern truck batteries require moderate maintenance.
C. Most modern truck batteries require considerable maintenance.
D. Most modern truck batteries require specialized factory maintenance.

____ 37. When checking vehicle batteries, driver/operators should check that cable connections are tight and protected with:
A. a covering over the entire battery component.
B. a coating of specialized apparatus paint product.
C. small plastic or rubber caps over the connections.
D. a film of grease, petroleum jelly, or battery terminal protection product.

____ 38. What type of highly explosive gas can batteries give off?
A. Methane gas
B. Nitrogen gas
C. Hydrogen gas
D. Carbon dioxide gas

____ 39. When jump-starting a vehicle, the vehicle being used as the power source must have the same voltage electrical system as the apparatus being jump-started in order to:
A. connect the vehicles.
B. permit the batteries to charge at all.
C. prevent damage from occurring to either system.
D. provide enough power to jump-start the apparatus.

____ 40. When is a posttrip inspection conducted?
A. After the apparatus has been driven 50 miles
B. After the apparatus has been driven 100 miles
C. After the apparatus is taken out for any length of time
D. After the apparatus has been operated for an extended period of time

____ 41. Fire pumps are tested at regularly scheduled intervals to compare actual performance to:
A. past performance.
B. specific standards.
C. national averages for performance.
D. neighboring jurisdiction performance.

____ 42. Which of the following statements about inspections to detect deficiencies or failure of the fire pump or other fire suppression equipment is MOST accurate?
A. Items should be checked as personnel have additional time.
B. All items should be on the same inspection schedule, either daily or weekly.
C. Some items should be checked daily, but other checks may be performed weekly.
D. Items should be rotated for inspections, being checked daily then checked weekly.

____ 43. Which of the following statements about driver/operator training is MOST accurate?
A. All firefighters must be qualified as driver/operators.
B. Driver/operators do not need to have firefighter certification.
C. All fire departments must select driver/operators in the same manner.
D. All fire departments must establish and maintain a thorough training program.

____ 44. Which ability or skill is necessary to understand maps, dispatch instructions, and preincident plans?
A. Reading skills
B. Computer skills
C. Physical fitness
D. Mathematical skills

____ 45. Which of the following is a reason computer skills are important for a driver/operator?
A. To complete maintenance forms
B. To solve mathematical equations
C. To comprehend fire service manuals and periodicals
D. To access and operate online mapping software and dispatch instructions

____ 46. Which skill or ability is MOST needed to connect an intake hose to a hydrant?
A. Visual acuity
B. Reading skills
C. Physical fitness
D. Adequate hearing

____ 47. What agency in the United States establishes basic requirements for licensing a driver?
A. National Fire Academy (NFA)
B. Federal Trade Commission (FTC)
C. Federal Department of Transportation (DOT)
D. Occupational Safety and Health Administration (OSHA)

____ 48. Which of the following statements about states/provinces and driver/operator regulations is MOST accurate?
A. States or provinces must vote to change federal regulations.
B. State or province requirements must be similar within regions.
C. States or provinces cannot alter basic federal requirements.
D. States or provinces have latitude to alter federal requirements as necessary.

____ 49. Driver/operators are subject to any statute, rule, regulation, or ordinance that governs any other vehicle operator:
A. unless specifically exempt.
B. and no exemptions can be made.
C. for the first year of employment as a driver/operator.
D. for the first two years of employment as a driver/operator.

____ 50. Which of the following would MOST likely be exempt when emergency vehicles have their audible and visual warning lights on?
A. Speed limits
B. Use of seat belts
C. Use of turn signals
D. Yielding to pedestrians

____ 51. Which of the following statements about the driver/operator and organization in civil or criminal cases is MOST accurate?
A. Only the organization can be held responsible.
B. Only the driver/operator can be held responsible.
C. Neither the driver/operator nor organization can be held responsible.
D. Both the driver/operator and organization can be held responsible.

____ 52. Which of the following is the most common place for accidents to occur?
A. Parking lots
B. Intersections
C. Undivided highways
D. Bridges or overpasses

____ 53. Which of the following generally accounts for a significant percentage of all damage repair costs for a fire department?
A. Parking accidents
B. Backing accidents
C. Dumping operations
D. Maintenance mishaps

____ 54. Which of the following actions would MOST likely be considered reckless when driving an apparatus?
A. Driving while talking to a passenger
B. Using both visual and auditory warnings
C. Taking short cuts to the emergency incident scene
D. Failing to yield to other responding emergency vehicles

____ 55. Which of the following statements about excessive speed and braking is MOST accurate?
A. Excessive speed affects reaction time, not braking.
B. Excessive speed can cause difficulties when braking.
C. Excessive speed is dangerous but has no effect on braking.
D. Excessive speed affects braking only when brakes are pumped.

____ 56. What must driver/operators complete before being allowed to drive under emergency conditions?
A. A thorough training program
B. A six-month observation period
C. A twelve-month observation period
D. A commercial emergency apparatus certificate

____ 57. Because apparatus of similar function and manufacturer may handle differently or have differing controls, driver/operators must be:
A. assigned to only one apparatus.
B. assigned no more than two apparatus.
C. trained or qualified to drive all assigned vehicles.
D. trained or qualified on apparatus with the most features.

____ 58. Which of the following is the primary reason for daily pretrip inspections?
A. Minimize mechanical failure
B. Justify additional shift hours
C. Keep warranties from lapsing
D. Maintain discipline in the department

____ 59. Which of the following apparatus are MOST likely to have design problems?
A. Apparatus built before 2002
B. Apparatus designs that have been discontinued
C. Apparatus built by smaller commercial companies
D. Apparatus built on government surplus or other used vehicle chassis

____ 60. Who should advise a driver/operator who may be mentally or physically impaired to seek appropriate assistance?
A. Any firefighter
B. Shift supervisor
C. Union representative
D. Human resources personnel

____ 61. In most fire departments, it is standard operating procedure (SOP) for firefighters to don protective gear:
A. after getting into apparatus.
B. before getting into apparatus.
C. after initial incident survey has occurred.
D. after arrival at the site of the emergency.

____ 62. Which of the following must all riders be doing, in addition to being seated within the cab or body, before the apparatus is put into motion?
A. Wearing helmets
B. Wearing seat belts
C. Wearing universal precaution equipment
D. Carrying extra personal protective clothing

____ 63. When loading fire hose while driving the apparatus, the safety observer to the operation:
A. can be the driver/operator.
B. must be the first firefighter loading hose.
C. can be any member of the hose loading team.
D. must be a member, other than driver/operator and the firefighters loading the hose.

____ 64. Which of the following is a guideline for loading hose while driving an apparatus?
A. Drive apparatus only in a forward direction.
B. Drive apparatus only forward or backward; do not turn.
C. Put out caution cones for other traffic driving in the area.
D. Members may stand on apparatus only to reposition themselves.

____ 65. Which of the following is a guideline for apparatus rider safety?
A. Firefighters riding in jump seats must wear reflective vests.
B. Every firefighter riding on the apparatus must have an individual radio.
C. Stop any operation involving apparatus every 15 minutes for a safety check.
D. Never allow firefighters to ride on the tailboard, front bumper, or running boards of any moving apparatus.

____ 66. Which of the following statements about training for tiller operations is MOST correct?
A. The tiller instructor must train operators remotely.
B. The tiller instructor can stand beside the operator.
C. A detachable seat may be placed next to tiller operator's position.
D. A built-in harness may be placed next to the tiller operator's position.

____ 67. When preparing to start the apparatus, whether for emergency response or a routine trip, the driver/operator must first know the destination and:
A. route of travel.
B. number of victims.
C. travel time to incident.
D. parking options at the incident.

____ 68. Which of the following is a reason that diesel engines should not be idled unnecessarily?
A. May interfere with communications systems
B. May cause hearing damage to those in the cab
C. May cause damage to internal engine components and emission systems
D. May cause the electrical system components to turn on and off intermittently

____ 69. On apparatus equipped with a diesel particulate filter (DPF), which of the following lights up when the exhaust system is very hot, usually due to an active regeneration in process?
A. DPF indicator
B. Regeneration inhibit switch
C. Manual regeneration switch
D. High Exhaust System Temperature indicator

____ 70. On apparatus equipped with a diesel particulate filter (DPF), which of the following lights up to indicate that the DPF is loading up with soot?
A. DPF indicator
B. Regeneration inhibit switch
C. Manual regeneration switch
D. High Exhaust System Temperature indicator

____ 71. Apparatus equipped with a diesel particulate filter (DPF) will have:
A. very clean exhaust emissions and no black smoke.
B. the same exhaust emissions as all other apparatus.
C. exhaust emissions 25% cleaner than most apparatus.
D. exhaust emissions 30% cleaner than most apparatus.

____ 72. An apparatus equipped with Selective Catalyst Reductant (SCR) will have a tank in addition to a fuel tank that must be filled with Diesel Exhaust Fluid (DEF) and the DEF tank should be:
A. topped off every time the apparatus is fueled.
B. topped off every other time the apparatus is fueled.
C. filled every time the apparatus undergoes a weekly inspection.
D. filled every time the apparatus undergoes a monthly inspection.

____ 73. Which of the following statements about shutting down a hot engine is MOST accurate?
A. Hot engines should immediately be shut down.
B. Allow the engine to idle for one minute before shutting down.
C. Usually an idling time of three to five minutes is sufficient before shutting down.
D. Allow the engine to idle for ten to fifteen minutes before shutting down.

____ 74. When should the mirrors be adjusted on an apparatus?
A. During weekly inspections
B. During monthly inspections
C. Whenever it changes from day to night
D. Any time driving responsibility changes from one individual to another

____ 75. On an aerial apparatus, which of the following refers to the angle formed by level ground and a line from the point where front tires touch the ground to the lowest projection at the front of the apparatus?
A. Breakover angle
B. Angle of approach
C. Angle of departure
D. Angle of culmination

____ 76. On an aerial apparatus, which of the following refers to the angle formed by level ground and a line from the point where the rear tires touch the ground to the bottom of the frame at wheelbase midpoint?
A. Breakover angle
B. Angle of approach
C. Angle of departure
D. Angle of culmination

____ 77. Weight carried on most apparatus can contribute to:
A. problems with the apparatus brakes.
B. skidding or possible rollover due to lateral weight transfer.
C. increased road traction, causing decreased ability for speed.
D. inability of the apparatus to navigate normal road conditions.

____ 78. Which of the following is a guideline for keeping weight transfer to a minimum?
A. Speed should be ten miles below posted limits.
B. Speed should be intermittently slow and then fast.
C. Steering should be accomplished in a series of quick motions.
D. Steering should be accomplished in a smooth and fluid motion.

____ 79. Which of the following can cause poor traction?
A. Under-loaded front axles
B. Too little weight on driving axles
C. Too much weight on steering axle
D. Either too much or too little weight on steering axles

____ 80. Apparatus should be weighed after loading it with all equipment and personnel to ensure that axle loading is balanced:
A. within 2 percent from side to side.
B. within 7 percent from side to side.
C. within 15 percent from side to side.
D. within 21 percent from side to side.

____ 81. When driving downhill, which of the following should be done to prevent engine damage?
A. Allow the vehicle to coast out of gear downhill.
B. Limit downhill speed to lower than minimum rpm.
C. Lower downhill speed to lower than maximum rpm.
D. Stop apparatus frequently to avoid speed buildup.

____ 82. NFPA® 1901, *Standard for Automotive Fire Apparatus*, requires a placard in every apparatus, listing:
A. vehicle height and weight in feet and tons.
B. the year apparatus was initially put into service.
C. vehicle width and the distance from undercarriage to roadway.
D. maximum allowed combined passenger and equipment weight.

____ 83. In order for apparatus to come to a complete stop on show and ice, it may take:
A. 15% more distance than it does on dry pavement.
B. 25% more distance than it does on dry pavement.
C. 3 to 15 times greater distance than it does on dry pavement.
D. 6 to 25 times greater distance than it does on dry pavement.

____ 84. In most jurisdictions, when civilian drivers encounter emergency vehicles responding with warning lights activated and audible devices sounding, they must:
A. continue driving, but at much reduced speeds.
B. continue driving as normal so as not to disrupt traffic.
C. pull to the left, stop, continue through intersections, and remain motionless.
D. pull to the right, stop, clear intersections, and remain motionless.

____ 85. Which of the following statements about warning devices is MOST accurate?
A. Visual warning devices should be used before audible devices.
B. Audible warning devices should be used before visible devices.
C. Warning devices should be used whenever fire apparatus are on streets.
D. Use of warning devices should be limited to response to true emergencies.

____ 86. When more than one emergency vehicle is responding along the same route, they should travel:
A. at least 50 to 150 feet (15 to 45 m) apart.
B. at least 100 to 300 feet (30 to 90 m) apart.
C. at least 300 to 500 feet (90 to 150 m) apart.
D. at least 700 to 900 feet (210 to 270 m) apart.

____ 87. At intersections with a red light, apparatus should:
A. slow down and then proceed.
B. sound the horn and then proceed.
C. drive through as quickly as possible.
D. be brought to a complete stop before proceeding.

____ 88. When responding to emergencies, apparatus should:
A. leave headlights off unless it is night time.
B. flash headlights as the apparatus is moving.
C. drive with high beam headlights on constantly.
D. turn on headlights as part of the emergency response.

____ 89. When traffic lights along routes heavily used by fire apparatus are controlled, signals should be controlled by a dispatcher, from the fire station, or by:
A. police units.
B. utility personnel.
C. remote control on apparatus.
D. remote control carried by shift supervisor.

____ 90. When strobe lights (emitters) mounted on apparatus are used to activate sensors in traffic lights, the signal:
A. causes a red light in all directions.
B. causes either a red or green light for the fire apparatus direction of travel.
C. causes a red light for the fire apparatus direction of travel, and a green light in all other directions.
D. causes a green light for the fire apparatus direction of travel, and a red light in all other directions.

____ 91. Which of the following transmits data to a radio receiver on a traffic light in order to preempt a signal at the intersection and will operate automatically as long as the apparatus is in range and the transmitter is turned on?
A. Traffic Signals at Stations
B. Voice-Activated Preemption Devices
C. GPS Based Traffic Signal Preemption
D. Strobe Light Activated Preemption Devices

____ 92. How do drivers establish visual lead time?
A. By dividing speed by travel distance
B. By counting the seconds it takes to travel between landmarks
C. By scanning the path of travel far enough ahead based on their speed
D. By watching the vehicle directly in front of the apparatus and estimating stop time

____ 93. Which of the following refers to the distance that the vehicle travels from the time brakes are applied until the apparatus comes to a complete stop?
A. Braking distance
B. Reaction distance
C. Total stopping distance
D. Complete stopping distance

____ 94. After the driver/operator perceives the need to stop the vehicle, the distance the apparatus travels while the driver/operator transfers his or her foot from the accelerator to the brake pedal is:
A. braking distance.
B. reaction distance.
C. total stopping distance.
D. complete stopping distance.

____ 95. To maintain control when in an acceleration skid, the driver/operator should not apply brakes, but should instead ease off of the accelerator, and:
A. then apply the brakes forcefully.
B. straighten out the front wheels as the vehicle begins to respond.
C. turn the front wheels in the same direction as the skid.
D. turn the front wheels in the opposite direction from the skid.

____ 96. Which of the following is the MOST likely reason for a locked wheel skid?
A. Braking too hard at high speed
B. Braking intermittently at low speed
C. Braking while turning the wheels more than twenty degrees
D. Braking while turning the wheels more than forty-five degrees

____ 97. While driving a vehicle equipped with anti-lock brakes:
A. push the pedal to the floor.
B. intermittently pump the pedal and apply pressure.
C. pump the pedal repeatedly until apparatus comes to a complete stop.
D. maintain a steady pressure on the brake pedal until apparatus comes to a complete stop.

____ 98. Which of the following auxiliary brake devices uses a valve to restrict the flow of the exhaust, which creates back pressure that adds to the engine's inherent braking ability?
A. Exhaust brake
B. Electromagnetic retarder
C. Engine compression brake
D. Transmission output retarder

____ 99. Which of the following automatically reduces engine torque and applies brakes to wheels that have lost traction and have begun to spin?
A. Antilock braking system (ABS)
B. Automatic traction control (ATC)
C. Inclement weather control (IWC)
D. Secondary braking control system (SBC)

____ 100. What is the purpose of the Driver Controlled Differential Lock (DCDL)?
A. Improve traction and handling
B. Decrease time for total stopping
C. Increase the amount of weight carried
D. Improve visual lead time of the driver/operator

____ 101. Which of the following stability control systems becomes active when the antilock braking system computer senses an imminent roll over condition?
A. Roll stability control
B. Electronic stability control
C. Axle differential stability control
D. Automatic sensor stability control

____ 102. Which of the following stability control systems applies brakes independently to aim the vehicle in the direction the operator positions the steering wheel?
A. Roll stability control
B. Electronic stability control
C. Axle differential stability control
D. Automatic sensor stability control

____ 103. Which of the following is recommended by IFSTA when backing apparatus?
A. Use one or more spotters.
B. Use radios or hand signals, but not both.
C. Back the apparatus as quickly as possible.
D. Avoid using the backup camera at incidents.

____ 104. Which of the following is a guideline IFSTA recommends when backing apparatus?
A. Sound horn in a series with as many blasts as possible in thirty seconds
B. Sound one long blast of vehicle's horn immediately before backing apparatus
C. Sound two short blasts of vehicle's horn immediately before backing apparatus
D. Sound four short blasts of vehicle's horn immediately before backing apparatus

____ 105. What should firefighters be wearing when performing spotting duties?
A. Reflective vests
B. Standard turnout clothing
C. International orange jumpsuits
D. Standard station clothing

____ 106. What should the driver/operator do if he or she loses sight of the spotter during backing?
A. Stop and set the parking brake.
B. Continue backing the apparatus slowly.
C. Sound the horn twice then continue backing.
D. Call for additional spotters for the backing operation.

____ 107. When giving hand signals for backing apparatus, hand signals should be:
A. repeated twice.
B. repeated three times.
C. done in a fast, exaggerated motion.
D. done in a slow, exaggerated motion.

____ 108. When giving a hand signal, the spotter crosses both forearms into a large X. This means:
A. stop the apparatus.
B. continue backing slowly.
C. slow down the apparatus.
D. pull forward and reestablish backing.

____ 109. Which of the following is a factor that tiller operators must be particularly aware of?
A. Poor gas mileage
B. Proper overhead clearance
C. Excessive wear on apparatus tires
D. Improper storage of items on apparatus

____ 110. Which of the following is a factor in tiller operation that officers and instructors should stress in training?
A. Overcorrecting rather than undercorrecting
B. Keeping only one hand on the wheel at all times
C. Focusing on overhead obstructions rather than side and rear obstructions
D. Bringing the trailer quickly into line again as soon as a turn is completed

____ 111. Driver/operator candidates should be evaluated:
A. using only one method.
B. by multiple departments to ensure objectivity.
C. before being allowed to operate apparatus under emergency conditions.
D. after being given the opportunity to operate apparatus under emergency conditions.

____ 112. Which of the following statements about the written test for driver/operators is MOST accurate?
A. Written tests must have a computer option.
B. Written tests must always be closed book tests.
C. The style of questions may vary according to local needs.
D. Questions used in the test must be verified by an independent agency.

____ 113. Driver/operators must perform practical driving exercises:
A. by driving at least two different apparatus.
B. with the most common apparatus in the department.
C. with each type of apparatus they are expected to drive.
D. by driving one apparatus they are familiar with and one they are not familiar with.

____ 114. Which of the following is a guideline when working on, around, or under apparatus?
A. Always carry a hand-held radio.
B. Always have a second person present.
C. Always let at least one person know where you are.
D. Work on apparatus only when maintenance personnel are present.

____ 115. Before placing apparatus in motion, the driver/operator should ensure any hose carried on apparatus:
A. will not come loose during travel.
B. are tied down in at least two different places.
C. are tied down in at least five different places.
D. take up a minimum of 60% of the apparatus storage space.

____ 116. Any equipment not needed while driving to the scene must be:
A. placed underneath the seats or to the side of the seats.
B. secured in brackets or contained in a storage cabinet.
C. placed in storage compartments on the outside of the apparatus.
D. held in place by rope, webbing, or other secure means.

____ 117. Why should firefighters open the bleeder valve or drain valve between the control valve and cap?
A. To prevent loss of water pressure
B. To ensure tasks are done in order
C. To ensure any trapped pressure is released
D. To prevent valves from threading incorrectly

____ 118. Which of the following BEST determines the most advantageous position for an attack pumper?
A. Size-up
B. Mutual aid
C. Experience of crew
D. Time of day or night

____ 119. When fire conditions are evident upon arrival, the driver/operator should place the apparatus in a safe position that:
A. includes room for vehicles in front of and behind the apparatus.
B. puts the apparatus as physically close to the fire scene as possible.
C. allows personnel to view the entire fire scene from the apparatus.
D. includes an exit route for apparatus should a withdrawal become necessary.

____ 120. When the first apparatus arrives at an incident where no fire is evident, the driver/operator should:
A. pull to the center of the building.
B. pull apparatus past the front of the building.
C. stop apparatus short of the front of the building.
D. drive apparatus around the block and back to the building.

____ 121. Which of the following is a guideline for positioning apparatus at a fire scene?
A. Park uphill at all types of incidents
B. Park on a soft surface whenever practical
C. Attempt to position apparatus upwind of incident
D. Attempt to position apparatus downwind of incident

____ 122. Which of the following is a method of protecting personnel from traffic at an incident?
A. Allow vehicles through one at a time
B. Block lanes of the road where firefighters are operating
C. Stop all traffic within 50 yards of the scene in any direction
D. Stop all traffic within 100 yards of the scene in any direction

____ 123. When laying supply hose to the fire scene during a roadway response, lay the hose:
A. to the side of the street.
B. so that it is not on the street.
C. alternating sides of the street.
D. down the middle of the street.

____ 124. What location is generally considered the safest position for apparatus placement should a structural collapse occur?
A. Middle of the structure
B. Corners of the structure
C. Slightly to the front of the structure
D. One-third the distance from the middle of the structure

____ 125. Why do some jurisdictions require pumpers to yield an optimum position close to a building for an aerial apparatus?
A. A pumper needs to be able to quickly leave incident scenes.
B. A pumper crew is generally more experienced than the aerial crew.
C. An aerial crew is generally more experienced than the pumper crew.
D. An aerial device, with its fixed length ladder or boom, is of no use positioned beyond its maximum reach.

____ 126. In the "inside/outside" method, when would an attack pumper be positioned on the side of the street closest to the building and the aerial apparatus be placed outboard of the pumper?
A. If building is not totally engulfed
B. If building is a high value property
C. If building is less than five floors tall
D. If building is less than ten floors tall

____ 127. When positioning to support aerial apparatus, pumpers providing water supply for elevated stream operations should position:
A. near the closest exit for the incident.
B. as closely to aerial apparatus as practical.
C. between the building and aerial apparatus.
D. as far away from aerial apparatus as practical.

____ 128. Where should a pumper be positioned to supply a fire department connection most efficiently?
A. As close as possible to the water source
B. As close as possible to the seat of the fire
C. Half way between the water source and the fire
D. The first available parking area near the incident

____ 129. How is the pumper position to supply a fire department connection best determined?
A. At the incident scene
B. As the incident progresses
C. Through preincident planning
D. During post-incident analysis and critique

____ 130. When should fire departments identify suitable drafting sites in their response district?
A. During preincident planning
B. En route to the incident scene
C. After occupants/owners request
D. After arriving at the incident scene

____ 131. Which site would be given preference for a drafting location?
A. A surface with a large open area
B. A surface near a bank of a waterway
C. A location accessible from a hard surface
D. A site that is accessible without turning or backing

____ 132. Which is the preferred type of hose for making hydrant connections?
A. Small diameter intake hose
B. Large diameter intake hose
C. Hose in sections at least 100 feet in length
D. Hose in sections less than 50 feet in length

____ 133. When might tandem pumping operations be needed?
A. During inclement weather conditions
B. During the growth stages of a fully involved building
C. When one strong hydrant is used to supply two pumpers
D. When pressures higher than a single engine is capable of supplying are required

____ 134. Which of the following statements about positioning for wildland fire attack is MOST accurate?
A. Wildland positioning is similar to structural positioning.
B. Apparatus should be moved a maximum of three times.
C. Apparatus are positioned in a single location and rarely move from that position.
D. Apparatus are seldom positioned in the same location for the duration of the incident.

____ 135. Which of the following is a guideline for positioning for structure protection during a wildland fire?
A. Park apparatus on the roadway
B. Position apparatus on the windward side of the structure
C. Park as close as physically possible to the structure
D. Clear away any nearby brush that may serve as fuel

____ 136. What may be needed when driving the vehicle in conditions of reduced visibility during a wildland fire attack?
A. LED or other special headlights
B. Use of aircraft identifying hazards
C. Spotter walking ahead of the apparatus
D. Firefighter in cab using high quality binoculars

____ 137. When the apparatus is operated in a stationary position during a wildland fire attack, it should be placed in an area that:
A. provides an overview of the fire.
B. can also be used as the command center.
C. allows firefighters to make a temporary fire break.
D. affords maximum protection from heat and flames.

____ 138. When positioning during wildland fire attack, the vehicle should be positioned facing the direction of an exit path with the:
A. front wheels straight.
B. wheels left unchocked.
C. emergency brake disengaged.
D. front wheels turned slightly to the left or right.

____ 139. Vehicles should not be driven over bridges unless the:
A. bridge provides the fastest route.
B. bridge was constructed within the last ten years.
C. bridge is constructed with supports underneath it.
D. weight of the apparatus is known to be within the capacity of the structure.

____ 140. Driver/operators should not attempt to ford streams with a vehicle unless:
A. the stream depth will not reach the top of the tires.
B. there is not another route to reach the intended destination.
C. It has been specifically designed to operate in such conditions.
D. the driver/operator has witnessed another vehicle crossing the stream.

____ 141. Why should hoselines be kept short for apparatus capable of mounting a mobile fire attack?
A. To facilitate movement
B. To minimize possible damage
C. To ensure backup hose is available
D. To allow for use by fewer firefighters

____ 142. Which of the following is a safety guideline for operating pumping apparatus in a wildland environment?
A. Keep headlights on whenever engine is running
B. Position in unburned fuel areas whenever possible
C. Use a frontal attack if fire is spreading rapidly upslope
D. Leave windows opened slightly to hear outside environment

____ 143. What staging protocol is MOST likely to be applied to initial response of more than one fire department unit?
A. Level I staging
B. Level II staging
C. Level III staging
D. Level IV staging

____ 144. What staging protocol is MOST likely to be enacted when a large number of units are responding to an incident?
A. Level I staging
B. Level II staging
C. Level III staging
D. Level IV staging

____ 145. In Level II staging, units responding:
A. park at the closest available site to the incident scene.
B. receive directions on where to respond once at the scene.
C. are advised of the staging area location when dispatched and respond directly to that location.
D. stage approximately one block away from the scene in their direction of travel and await further instruction.

____ 146. Once on the scene of a highway incident, the use of warning lights should be:
A. reduced as much as possible.
B. used as a major means of notifying motorists.
C. used intermittently to limit incident scene noise.
D. continued until the incident reaches the termination stage.

____ 147. A safe zone must be established around roadway incidents in order to:
A. prevent any onlookers.
B. protect personnel and victims.
C. provide multiple areas for staging.
D. allow traffic to be routed normally.

____ 148. During response to a possible hazardous materials incident, the apparatus should approach from:
A. uphill and upwind.
B. uphill and downwind.
C. upwind and downhill.
D. downhill and downwind.

____ 149. When responding to a hazardous materials incident, the driver/operator should:
A. drive the apparatus to the scene and initiate defensive actions.
B. drive the apparatus to the scene and initiate offensive actions.
C. drive the apparatus directly to the scene but not exit vehicle until material is identified.
D. not drive the apparatus directly to the scene until the material involved can be identified.

____ 150. Which of the following statements about control zones is MOST accurate?
A. They must be decided upon en route.
B. They are unnecessary if there are no bystanders.
C. They may be expanded or contracted as needed.
D. Once set, they cannot be expanded or contracted.

____ 151. What incident scene control zone includes the area closest to the release of the material?
A. Hot zone
B. Warm zone
C. Cold zone
D. Center zone

____ 152. What zone is also known as the yellow zone?
A. Hot zone
B. Warm zone
C. Cold zone
D. Center zone

____ 153. In which scene control zone does the decontamination process usually occur?
A. Hot zone
B. Warm zone
C. Cold zone
D. Center zone

____ 154. What zone is considered safe and does not require personal protective equipment?
A. Hot zone
B. Warm zone
C. Cold zone
D. Center zone

____ 155. In which zone are driver/operators MOST likely to stage their apparatus?
A. Hot zone
B. Warm zone
C. Cold zone
D. Center zone

____ 156. What must be done if stretching a hoseline across a railroad track is absolutely necessary?
A. Speed of operations must become a priority.
B. Apparatus with warning lights must be stationed at track.
C. All local police and highway patrol must be notified of incident.
D. The rail company must be notified to confirm rail traffic has been halted along section in question.

____ 157. Which of the following is an important consideration when positioning apparatus at a medical incident?
A. Positioning so apparatus can exit quickly
B. Blocking the view of incident from onlookers
C. Leaving ambulance enough room for patient loading
D. Positioning near corners of building to mark location

____ 158. When an emergency medical incident requires a driver/operator to position apparatus in a street or highway:
A. turn on all warning lights and sirens.
B. position the vehicle so it takes up as little room as possible.
C. use the vehicle as a shield between work area and oncoming traffic.
D. conduct operations as quickly as possible with speed as the main priority.

____ 159. Which of the following is MOST likely a consideration when parking the apparatus at an emergency medical incident?
A. Avoiding sightline of onlookers at the scene
B. Allowing room for media personnel to enter and exit
C. Proximity of exhaust discharge relative to nearby businesses
D. Proximity of exhaust discharge relative to location of patients

____ 160. Which of the following statements about the freezing point of water is MOST accurate?
A. Below 32°F (0°C), water converts to a solid state of matter.
B. Below 40°F (4°C), water is able to convert to a solid state of matter.
C. Water will not freeze until ambient temperature and surface water temperature are the same.
D. Water will not freeze until surface water temperature is lower than ambient temperature.

____ 161. When water converts to a gas, water vapor, or steam, the water:
A. immediately dissipates so it is rarely visible.
B. changes to droplets that will fall back to the surface.
C. only becomes visible if the ambient air temperature is above 40° (4°C).
D. only becomes visible as it rises away from the surface of the liquid and begins to condense.

____ 162. Which of the following statements about properties of water is MOST accurate?
A. Water is compressible only in a vacuum.
B. Water is considered to be virtually incompressible.
C. Water is compressible only at very low temperatures.
D. Water is compressible only at very high temperatures.

____ 163. For fire protection purposes, ordinary fresh water is considered to weigh:
A. 5.5 lb/gal (.66 kg/L).
B. 8.3 lb/gal (1 kg/L).
C. 10.2 lb/gal (1.2 kg/L).
D. 12 lb/gal (1.5 kg/L).

____ 164. Water may be used to smother fires in a combustible liquid:
A. when the liquid's specific gravity is higher than 1.
B. when the liquid's specific gravity is less than 1.
C. when the ambient air temperature is below 32°F (0°C).
D. when the ambient air temperature is above 32°F (0°C).

____ 165. When water converts to steam within a closed space, the fire:
A. may react with the steam violently.
B. may be extinguished by smothering.
C. will become larger and more difficult to extinguish.
D. will stay in the incipient stage until it is extinguished.

____ 166. Which of the following is a characteristic of water?
A. Its heat-absorbing capacity is greatest when paired with other extinguishing agents.
B. Its heat-absorbing capacity is reduced when paired with other extinguishing agents.
C. It has lower heat-absorbing capacity than other common extinguishing agents.
D. It has greater heat-absorbing capacity than other common extinguishing agents.

____ 167. At 212°F (100°C), water converted to steam occupies approximately:
A. 20 times its original volume.
B. 100 times its original volume.
C. 1,200 times its original volume.
D. 1,700 times its original volume.

____ 168. Which of the following statements about water as an extinguishing agent is MOST accurate?
A. Generally, it is an expensive but readily available commodity.
B. Generally, it is an inexpensive and readily available commodity.
C. Generally, it is an expensive and not readily available commodity.
D. Generally, it is an inexpensive but not readily available commodity.

____ 169. A characteristic of water as an extinguishing agent is that it:
A. has a low surface tension that makes it easy to soak into dense materials.
B. initially has a low surface tension but after being applied has a high surface tension.
C. initially has a high surface tension but after being applied has a low surface tension.
D. has a high surface tension that makes it somewhat difficult to soak into dense materials.

____ 170. Which of the following statements about water curtains is MOST accurate?
A. Radiant heat does not pass through water, so water curtains are very effective.
B. Radiant heat easily passes through water, rendering water curtains ineffective.
C. Radiant heat passes through water but with difficulty, so the effectiveness of water curtains is difficult to determine.
D. Radiant heat passes through cold water but not warm water, so the effectiveness of water curtains depends on temperature.

____ 171. Which of the following statements about water and electricity is MOST accurate?
A. Water is a poor conductor of electricity.
B. Water is a good conductor of electricity.
C. Water conducts electricity only at very high voltages.
D. Water can conduct electricity, but does not create hazardous situations.

____ 172. Which is the BEST description of pressure?
A. Force per unit area
B. Weight per unit area
C. Relative measure of weight
D. Simple measure of movement

____ 173. The first principle of pressure states that fluid pressure is:
A. greatest at the center of the vessel.
B. different depending upon the vessel.
C. congruent to any surface on which it acts.
D. perpendicular to any surface on which it acts.

____ 174. The second principle of pressure states that fluid pressure at a point in fluid at rest is:
A. greater near the top.
B. greater near the bottom.
C. the same intensity in all directions.
D. variable and not the same in all directions.

____ 175. The third principle of pressure states that pressure applied to a confined fluid is:
A. greater near the top.
B. greater near the bottom.
C. transmitted equally in all directions.
D. variable and not the same in all directions.

____ 176. The fourth principle of pressure states that the pressure of a liquid in an open vessel is:
A. proportional to its depth.
B. independent of its depth.
C. dependent upon the length of time in the vessel.
D. variable even when vessels remain the same.

____ 177. The fifth principle of pressure states that the pressure of a liquid in an open vessel is:
A. variable for similar liquids.
B. dependent upon the vessel size.
C. independent of the density of the liquid.
D. proportional to the density of the liquid.

____ 178. The sixth principle of pressure states that the pressure of a liquid at the bottom of a vessel is:
A. greater at the center.
B. independent of the shape of the vessel.
C. greater toward the outside of the vessel.
D. dependent upon the shape of the vessel.

____ 179. Which of the following statements about atmospheric pressure is the MOST accurate?
A. Pressure is independent of the altitude.
B. Pressure is similar at low and very high altitudes.
C. Pressure is greatest at low altitudes and least at very high altitudes.
D. Pressure is greatest at very high altitudes and least at low altitudes.

____ 180. Which of the following refers to any pressure less than atmospheric pressure?
A. Vacuum
B. Head pressure
C. Static pressure
D. Perfect vacuum

____ 181. Which of the following refers to absolute zero pressure?
A. Vacuum
B. Head pressure
C. Static pressure
D. Perfect vacuum

____ 182. In order to convert head in feet to head pressure in psi, you must divide the number of feet by:
A. 1.50.
B. 2.304.
C. 4.302.
D. 6.32.

____ 183. Which of the following refers to stored potential energy available to force water through pipes, fittings, hose and adapters?
A. Head pressure
B. Static pressure
C. Residual pressure
D. Normal operating pressure

____ 184. Which of the following refers to the pressure found in a water distribution system during normal consumption demands?
A. Head pressure
B. Static pressure
C. Residual pressure
D. Normal operating pressure

____ 185. The difference between static pressure and normal operating pressure is:
A. static pressure is normal operating pressure minus 1.0.
B. static pressure is normal operating pressure minus 2.30.
C. normal operating pressure is residual pressure plus static pressure.
D. the friction caused by water flowing through the pipes, valves and fittings.

____ 186. Which of the following refers to the portion of total available pressure not used to overcome friction loss or gravity while forcing water through pipes, fittings, hoses, adapters?
A. Flow pressure
B. Head pressure
C. Residual pressure
D. Normal operating pressure

____ 187. Which of the following refers to the forward velocity pressure while water is flowing from a discharge opening?
A. Flow pressure
B. Head pressure
C. Residual pressure
D. Normal operating pressure

____ 188. When a nozzle is above the level of the pump, there is:
A. pressure loss.
B. pressure gain.
C. no change in pressure.
D. either pressure loss or pressure gain.

____ 189. When a nozzle is below the level of the pump, there is:
A. pressure loss.
B. pressure gain.
C. no change in pressure.
D. either pressure loss or pressure gain.

____ 190. Which of the following BEST describes why altitude impacts the production of fire streams?
A. Because atmospheric pressure affects temperature
B. Because atmospheric pressure affects foam production
C. Because atmospheric pressure drops as height above sea level increases
D. Because atmospheric pressure increases as height above sea level increases

____ 191. Friction loss is that part of the total pressure lost:
A. while water is stationary in pipes.
B. as water contacts its intended object.
C. as water moves through the atmosphere.
D. while forcing water through pipe, fittings, fire hose, and adapters.

____ 192. Which of the following is MOST likely a cause of friction loss in fire hose?
A. Sharp bends
B. Use of newer nozzles
C. Ambient temperature
D. Lack of adequate personnel

____ 193. Why is friction loss in newer, modern fire hose much less than in older fire hose?
A. Modern fire hose has shorter sections.
B. Modern fire hose has much larger diameters.
C. Modern fire hose has a smoother inner lining.
D. Modern fire hose has a smoother outer lining.

____ 194. The first principle of friction loss states that if all other conditions are the same, friction loss:
A. varies directly with length of hose or pipe.
B. is independent of the length of hose or pipe.
C. is reduced by half each time the length of hose or pipe doubles.
D. increases by 25% every time the length of hose or pipe doubles.

____ 195. The second principle of friction loss illustrates that:
A. friction loss and velocity are unrelated.
B. friction loss develops much faster than change in velocity.
C. friction loss develops much slower than change in velocity.
D. friction loss develops at the same rate as change in velocity.

____ 196. Why does the third principle of friction loss demonstrate the advantage of larger size hose?
A. For the same discharge, friction loss varies inversely as the second power of diameter of hose.
B. For the same discharge, friction loss varies inversely as the third power of diameter of hose.
C. For the same discharge, friction loss varies inversely as the fifth power of diameter of hose.
D. For the same discharge, friction loss varies inversely as the tenth power of diameter of hose.

____ 197. The fourth principle of friction loss states that for a given velocity, friction loss is:
A. widely variable, regardless of pressure on the water.
B. inversely proportional to the pressure on the water.
C. approximately the same, regardless of pressure on the water.
D. increased by 25% for every 25% increase of pressure on the water.

____ 198. Which of the following statements about fire hose and friction loss is MOST accurate?
A. Given the same velocity, small and large hose will deliver the same volume.
B. Hose size has relatively little effect on velocity required to deliver water.
C. The larger the hose, the greater the velocity needed to deliver the same volume.
D. The smaller the hose, the greater the velocity needed to deliver the same volume.

____ 199. Which of the following statements about friction loss is MOST accurate?
A. Flow pressure is greatest at the farthest point in the system.
B. Flow pressure will always be lowest closest to the course of supply.
C. Friction loss in a water system decreases as length of hose or piping increases.
D. Friction loss in a water system increases as length of hose or piping increases.

____ 200. Which would be the BEST option to reduce friction loss caused by hose length?
A. Reduce the length of the lay
B. Increase the length of the lay
C. Use a different type of nozzle
D. Increase the velocity of the water

____ 201. Which type of friction loss can usually be minimized by employing proper hose handling techniques?
A. Hose length
B. Water pressure
C. Hose diameter
D. Sharp bends in the hose

____ 202. Which of the following causes water hammer?
A. Increasing the water pressure
B. Hoses or pipes that have deformities
C. Suddenly stopping water moving through a hose or pipe
D. Suddenly increasing the amount of water moving through a hose or pipe

____ 203. Which of the following is an action that fire departments should take when a large volume of water is needed in an area?
A. Request that water utility department increase water pressure
B. Request that nearby homeowners and businesses stop water usage
C. Completely fill pumpers with water then attempt an offensive fire attack
D. Ration water used at the incident scene so that exposures are protected first

____ 204. When engineers estimate the amount of water that a large city needs, the:
A. only needs taken into account are the industrial/domestic needs.
B. domestic/industrial requirements will far exceed that needed for fire protection.
C. requirements for fire protection will far exceed those for domestic/industrial needs.
D. needs for fire protection and domestic/industrial needs should be considered to be the same.

____ 205. Which means of moving water uses one or more pumps that take water from a primary source and discharge it through filtration and treatment processes?
A. Direct pumping system
B. Linear pumping system
C. Primary pumping system
D. Forced distribution system

____ 206. Which statement about a gravity system is MOST accurate?
A. Uses a primary water source at the same elevation as the distribution system
B. Uses a primary water source located at a lower elevation than the distribution system
C. Uses a primary water source located at a higher elevation than the distribution system
D. Uses two primary water sources, one at a higher elevation and one at a lower elevation

____ 207. For water supply, most communities use a:
A. gravity system.
B. direct pumping system.
C. combination of the direct pumping and gravity systems.
D. proprietary pumping system that is designed specifically for that community.

____ 208. Which of the following is the MAIN concern of fire departments regarding water treatment facilities?
A. Amount of chemicals put into the water
B. Cost of the water for the fire department
C. Possible damage to apparatus tanks caused by treatment
D. Maintenance failure or other events could disable pumping station(s) or severely hamper the purification process

____ 209. A dead-end fire hydrant is a fire hydrant that:
A. is located last on a street.
B. receives water from two directions.
C. receives water from only one direction.
D. is located where turn-around is not possible.

____ 210. Which of the following refers to a circulating feed or looped line?
A. When a fire hydrant is located in a cul-de-sac
B. When a fire hydrant is located at an intersection
C. When a fire hydrant receives water from only one direction
D. When a fire hydrant receives water from two or more directions

____ 211. In a grid system, large pipes (mains), with relatively widespread spacing, that convey large quantities of water to various points of the system for local distribution to smaller mains are called:
A. distributors.
B. primary feeders.
C. secondary feeders.
D. circulating feeders.

____ 212. In a grid system, a network of intermediate-sized pipes that reinforce the grid and aid the concentration of required fire flow at any point are called:
A. distributors.
B. primary feeders.
C. secondary feeders.
D. circulating feeders.

____ 213. The valves within a water distribution system should be:
A. inspected and operated yearly by the fire department.
B. inspected and operated monthly by the fire department.
C. inspected and operated yearly by the water supply utility.
D. inspected and operated monthly by the water supply utility.

____ 214. Which type of valve is commonly used on private water supply systems and the words *open* or *shut* appear in a window as the valve approaches one position or the other?
A. Gate valve
B. Butterfly valve
C. Post indicator (PIV) valve
D. Outside screw and yoke (OS&Y) valve

____ 215. Which type of valve has a yoke on the outside with threaded stem that controls the gate's opening or closing and is most commonly used on sprinkler systems?
A. Gate valve
B. Butterfly valve
C. Post indicator (PIV) valve
D. Outside screw and yoke (OS&Y) valve

____ 216. Which are the most common type of valves used on most public water distribution systems?
A. Primary valves
B. Indicating valves
C. Secondary valves
D. Nonindicating valves

____ 217. If a gate valve resists turning after fewer than the indicated number of turns required to close the valve, the:
A. valve should be considered closed.
B. valve should be blown out with water.
C. condition should be noted for later repair.
D. condition should be reported to the responsible agency.

____ 218. Who should the fire department coordinate with before flushing hydrants in nonemergency situations?
A. Law enforcement
B. Local water authority
C. Local transportation authority
D. Neighboring housing additions

____ 219. Rates of consumption allow engineers and fire protection personnel to determine:
A. size of pumpers.
B. charges for consumers.
C. mutual aid agreements.
D. adequacy of the water distribution system.

____ 220. Most commonly, private water supply systems receive their water from a(an):
A. cistern.
B. underground well.
C. nearby lake or reservoir.
D. municipal water supply system.

____ 221. If a property is served by both the municipal system and a private source consisting of nonpotable water:
A. backflow measures are not needed.
B. the systems can be interconnected.
C. the private source cannot be considered usable.
D. measures must be taken to prevent cross contamination.

____ 222. The piping for fire protection and domestic/industrial services for private water supply systems are:
A. almost always separate.
B. generally interconnected.
C. cost prohibitive for businesses.
D. prone to multiple breakdowns.

____ 223. Which is an advantage to having separate piping arrangements for a private water supply system?
A. Allows business not to follow codes
B. More cost effective than just one system
C. Systems can be used as redundant supply systems
D. Neither of the systems is affected by service interruptions to the other

Study Guide
Answer Section

1. ANS: C PTS: 1 REF: 30
   OBJ: 2.1 Explain a systematic maintenance program.
   NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1
2. ANS: B PTS: 1 REF: 30
   OBJ: 2.1 Explain a systematic maintenance program.
   NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1
3. ANS: A PTS: 1 REF: 30
   OBJ: 2.1 Explain a systematic maintenance program.
   NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1
4. ANS: D PTS: 1 REF: 31
   OBJ: 2.2 Explain the importance of accurate documentation, reporting, and follow-up for apparatus inspections.
   NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1
5. ANS: D PTS: 1 REF: 31
   OBJ: 2.2 Explain the importance of accurate documentation, reporting, and follow-up for apparatus inspections.
   NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1
6. ANS: C PTS: 1 REF: 31
   OBJ: 2.2 Explain the importance of accurate documentation, reporting, and follow-up for apparatus inspections.
   NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1
7. ANS: D PTS: 1 REF: 32
   OBJ: 2.3 Describe actions taken to ensure vehicle cleanliness.
8. ANS: D PTS: 1 REF: 32
   OBJ: 2.3 Describe actions taken to ensure vehicle cleanliness.
9. ANS: D PTS: 1 REF: 32
   OBJ: 2.3 Describe actions taken to ensure vehicle cleanliness.
10. ANS: C PTS: 1 REF: 33
    OBJ: 2.3 Describe actions taken to ensure vehicle cleanliness.
11. ANS: D PTS: 1 REF: 34
    OBJ: 2.3 Describe actions taken to ensure vehicle cleanliness.
12. ANS: C PTS: 1 REF: 35
    OBJ: 2.3 Describe actions taken to ensure vehicle cleanliness.
13. ANS: A PTS: 1 REF: 35
    OBJ: 2.3 Describe actions taken to ensure vehicle cleanliness.
14. ANS: C PTS: 1 REF: 36
    OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
    NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
15. ANS: A PTS: 1 REF: 36
    OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
    NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1

16. ANS: B PTS: 1 REF: 37
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
17. ANS: A PTS: 1 REF: 37
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
18. ANS: D PTS: 1 REF: 38
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
19. ANS: A PTS: 1 REF: 38
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
20. ANS: C PTS: 1 REF: 39
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
21. ANS: C PTS: 1 REF: 39
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
22. ANS: C PTS: 1 REF: 40
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
23. ANS: A PTS: 1 REF: 40
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
24. ANS: A PTS: 1 REF: 41
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
25. ANS: B PTS: 1 REF: 41
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
26. ANS: C PTS: 1 REF: 41
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
27. ANS: D PTS: 1 REF: 43
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1

28. ANS: A PTS: 1 REF: 43
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
29. ANS: D PTS: 1 REF: 43
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
30. ANS: C PTS: 1 REF: 43
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
31. ANS: D PTS: 1 REF: 43
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
32. ANS: D PTS: 1 REF: 44
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
33. ANS: D PTS: 1 REF: 45
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
34. ANS: C PTS: 1 REF: 45
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
35. ANS: C PTS: 1 REF: 46
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
36. ANS: A PTS: 1 REF: 46
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
37. ANS: D PTS: 1 REF: 46
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
38. ANS: C PTS: 1 REF: 47
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
39. ANS: C PTS: 1 REF: 48
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1

40. ANS: D PTS: 1 REF: 48
OBJ: 2.4 Summarize considerations for conducting an apparatus inspection.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
41. ANS: B PTS: 1 REF: 48
OBJ: 2.6 Describe general fire suppression equipment maintenance procedures.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
42. ANS: C PTS: 1 REF: 48
OBJ: 2.6 Describe general fire suppression equipment maintenance procedures.
NAT: NFPA® 1002 4.2.1 | NFPA® 1002 4.2.2 | NFPA® 1002 4.3.7 | NFPA® 1002 5.1.1 | NFPA® 1002 10.1.1
43. ANS: D PTS: 1 REF: 80
OBJ: 3.1 Identify the considerations taken when selecting qualified driver/operators.
44. ANS: A PTS: 1 REF: 80
OBJ: 3.1 Identify the considerations taken when selecting qualified driver/operators.
45. ANS: D PTS: 1 REF: 81
OBJ: 3.1 Identify the considerations taken when selecting qualified driver/operators.
46. ANS: C PTS: 1 REF: 82
OBJ: 3.1 Identify the considerations taken when selecting qualified driver/operators.
47. ANS: C PTS: 1 REF: 82
OBJ: 3.1 Identify the considerations taken when selecting qualified driver/operators.
48. ANS: D PTS: 1 REF: 83
OBJ: 3.1 Identify the considerations taken when selecting qualified driver/operators.
49. ANS: A PTS: 1 REF: 83
OBJ: 3.2 List driving regulations that affect apparatus driver/operators.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
50. ANS: A PTS: 1 REF: 84
OBJ: 3.2 List driving regulations that affect apparatus driver/operators.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
51. ANS: D PTS: 1 REF: 84
OBJ: 3.2 List driving regulations that affect apparatus driver/operators.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
52. ANS: B PTS: 1 REF: 85 OBJ: 3.3 Detect reasons for accidents.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
53. ANS: B PTS: 1 REF: 86 OBJ: 3.3 Detect reasons for accidents.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
54. ANS: D PTS: 1 REF: 86 OBJ: 3.3 Detect reasons for accidents.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
55. ANS: B PTS: 1 REF: 87 OBJ: 3.3 Detect reasons for accidents.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
56. ANS: A PTS: 1 REF: 87 OBJ: 3.3 Detect reasons for accidents.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
57. ANS: C PTS: 1 REF: 87 OBJ: 3.3 Detect reasons for accidents.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
58. ANS: A PTS: 1 REF: 89 OBJ: 3.3 Detect reasons for accidents.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6

59. ANS: D PTS: 1 REF: 89 OBJ: 3.3 Detect reasons for accidents.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
60. ANS: A PTS: 1 REF: 89 OBJ: 3.3 Detect reasons for accidents.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
61. ANS: B PTS: 1 REF: 90
OBJ: 3.4 Review apparatus rider safety considerations.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
62. ANS: B PTS: 1 REF: 90
OBJ: 3.4 Review apparatus rider safety considerations.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
63. ANS: D PTS: 1 REF: 91
OBJ: 3.4 Review apparatus rider safety considerations.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
64. ANS: A PTS: 1 REF: 91
OBJ: 3.4 Review apparatus rider safety considerations.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
65. ANS: D PTS: 1 REF: 92
OBJ: 3.4 Review apparatus rider safety considerations.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
66. ANS: C PTS: 1 REF: 93
OBJ: 3.4 Review apparatus rider safety considerations.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
67. ANS: A PTS: 1 REF: 94
OBJ: 3.5 Explain considerations to take when starting, idling, and shutting down apparatus.
NAT: NFPA® 1002 4.3.1
68. ANS: C PTS: 1 REF: 94
OBJ: 3.5 Explain considerations to take when starting, idling, and shutting down apparatus.
NAT: NFPA® 1002 4.3.1
69. ANS: D PTS: 1 REF: 94
OBJ: 3.5 Explain considerations to take when starting, idling, and shutting down apparatus.
NAT: NFPA® 1002 4.3.1
70. ANS: A PTS: 1 REF: 94
OBJ: 3.5 Explain considerations to take when starting, idling, and shutting down apparatus.
NAT: NFPA® 1002 4.3.1
71. ANS: A PTS: 1 REF: 95
OBJ: 3.5 Explain considerations to take when starting, idling, and shutting down apparatus.
NAT: NFPA® 1002 4.3.1
72. ANS: A PTS: 1 REF: 95
OBJ: 3.5 Explain considerations to take when starting, idling, and shutting down apparatus.
NAT: NFPA® 1002 4.3.1
73. ANS: C PTS: 1 REF: 95
OBJ: 3.5 Explain considerations to take when starting, idling, and shutting down apparatus.
NAT: NFPA® 1002 4.3.1
74. ANS: D PTS: 1 REF: 96
OBJ: 3.6 Explain considerations for operation of an apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6 | NFPA® 1002 7.2.2

75. ANS: B PTS: 1 REF: 97
OBJ: 3.6 Explain considerations for operation of an apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6 | NFPA® 1002 7.2.2
76. ANS: A PTS: 1 REF: 97
OBJ: 3.6 Explain considerations for operation of an apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6 | NFPA® 1002 7.2.2
77. ANS: B PTS: 1 REF: 98
OBJ: 3.6 Explain considerations for operation of an apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6 | NFPA® 1002 7.2.2
78. ANS: D PTS: 1 REF: 98
OBJ: 3.6 Explain considerations for operation of an apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6 | NFPA® 1002 7.2.2
79. ANS: B PTS: 1 REF: 98
OBJ: 3.6 Explain considerations for operation of an apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6 | NFPA® 1002 7.2.2
80. ANS: B PTS: 1 REF: 98
OBJ: 3.6 Explain considerations for operation of an apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6 | NFPA® 1002 7.2.2
81. ANS: C PTS: 1 REF: 98
OBJ: 3.6 Explain considerations for operation of an apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6 | NFPA® 1002 7.2.2
82. ANS: A PTS: 1 REF: 99
OBJ: 3.6 Explain considerations for operation of an apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6 | NFPA® 1002 7.2.2
83. ANS: C PTS: 1 REF: 99
OBJ: 3.6 Explain considerations for operation of an apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6 | NFPA® 1002 7.2.2
84. ANS: D PTS: 1 REF: 100
OBJ: 3.7 Explain apparatus emergency response considerations.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.2 | NFPA® 1002 4.3.3 | NFPA® 1002 4.3.4 | NFPA® 1002 4.3.5 | NFPA® 1002 4.3.6
85. ANS: D PTS: 1 REF: 100
OBJ: 3.7 Explain apparatus emergency response considerations.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.2 | NFPA® 1002 4.3.3 | NFPA® 1002 4.3.4 | NFPA® 1002 4.3.5 | NFPA® 1002 4.3.6
86. ANS: C PTS: 1 REF: 101
OBJ: 3.7 Explain apparatus emergency response considerations.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.2 | NFPA® 1002 4.3.3 | NFPA® 1002 4.3.4 | NFPA® 1002 4.3.5 | NFPA® 1002 4.3.6
87. ANS: D PTS: 1 REF: 102
OBJ: 3.7 Explain apparatus emergency response considerations.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.2 | NFPA® 1002 4.3.3 | NFPA® 1002 4.3.4 | NFPA® 1002 4.3.5 | NFPA® 1002 4.3.6
88. ANS: D PTS: 1 REF: 101
OBJ: 3.7 Explain apparatus emergency response considerations.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.2 | NFPA® 1002 4.3.3 | NFPA® 1002 4.3.4 | NFPA® 1002 4.3.5 | NFPA® 1002 4.3.6

89. ANS: C PTS: 1 REF: 102
OBJ: 3.7 Explain apparatus emergency response considerations.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.2 | NFPA® 1002 4.3.3 | NFPA® 1002 4.3.4 | NFPA® 1002 4.3.5 | NFPA® 1002 4.3.6
90. ANS: D PTS: 1 REF: 102
OBJ: 3.7 Explain apparatus emergency response considerations.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.2 | NFPA® 1002 4.3.3 | NFPA® 1002 4.3.4 | NFPA® 1002 4.3.5 | NFPA® 1002 4.3.6
91. ANS: C PTS: 1 REF: 103
OBJ: 3.7 Explain apparatus emergency response considerations.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.2 | NFPA® 1002 4.3.3 | NFPA® 1002 4.3.4 | NFPA® 1002 4.3.5 | NFPA® 1002 4.3.6
92. ANS: C PTS: 1 REF: 105
OBJ: 3.10 Explain considerations when stopping and braking apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
93. ANS: A PTS: 1 REF: 105
OBJ: 3.10 Explain considerations when stopping and braking apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
94. ANS: B PTS: 1 REF: 105
OBJ: 3.10 Explain considerations when stopping and braking apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
95. ANS: B PTS: 1 REF: 108
OBJ: 3.10 Explain considerations when stopping and braking apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
96. ANS: A PTS: 1 REF: 108
OBJ: 3.10 Explain considerations when stopping and braking apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
97. ANS: D PTS: 1 REF: 109
OBJ: 3.10 Explain considerations when stopping and braking apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
98. ANS: A PTS: 1 REF: 110
OBJ: 3.10 Explain considerations when stopping and braking apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
99. ANS: B PTS: 1 REF: 111
OBJ: 3.10 Explain considerations when stopping and braking apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
100. ANS: A PTS: 1 REF: 111
OBJ: 3.10 Explain considerations when stopping and braking apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
101. ANS: A PTS: 1 REF: 112
OBJ: 3.10 Explain considerations when stopping and braking apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
102. ANS: B PTS: 1 REF: 112
OBJ: 3.10 Explain considerations when stopping and braking apparatus.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.6
103. ANS: A PTS: 1 REF: 113
OBJ: 3.11 Explain considerations when backing apparatus.
NAT: NFPA® 1002 4.3.2 | NFPA® 1002 4.3.3 | NFPA® 1002 4.3.4 | NFPA® 1002 4.3.6

104. ANS: C PTS: 1 REF: 113
OBJ: 3.11 Explain considerations when backing apparatus.
NAT: NFPA® 1002 4.3.2 | NFPA® 1002 4.3.3 | NFPA® 1002 4.3.4 | NFPA® 1002 4.3.6
105. ANS: A PTS: 1 REF: 114
OBJ: 3.11 Explain considerations when backing apparatus.
NAT: NFPA® 1002 4.3.2 | NFPA® 1002 4.3.3 | NFPA® 1002 4.3.4 | NFPA® 1002 4.3.6
106. ANS: A PTS: 1 REF: 114
OBJ: 3.11 Explain considerations when backing apparatus.
NAT: NFPA® 1002 4.3.2 | NFPA® 1002 4.3.3 | NFPA® 1002 4.3.4 | NFPA® 1002 4.3.6
107. ANS: D PTS: 1 REF: 115
OBJ: 3.11 Explain considerations when backing apparatus.
NAT: NFPA® 1002 4.3.2 | NFPA® 1002 4.3.3 | NFPA® 1002 4.3.4 | NFPA® 1002 4.3.6
108. ANS: A PTS: 1 REF: 116
OBJ: 3.11 Explain considerations when backing apparatus.
NAT: NFPA® 1002 4.3.2 | NFPA® 1002 4.3.3 | NFPA® 1002 4.3.4 | NFPA® 1002 4.3.6
109. ANS: B PTS: 1 REF: 117
OBJ: 3.12 Explain considerations when performing tillering operations.
NAT: NFPA® 1002 7.2.2
110. ANS: D PTS: 1 REF: 117
OBJ: 3.12 Explain considerations when performing tillering operations.
NAT: NFPA® 1002 7.2.2
111. ANS: C PTS: 1 REF: 118
OBJ: 3.13 Describe driving exercises and evaluation methods.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.2 | NFPA® 1002 4.3.3 | NFPA® 1002 4.3.4 | NFPA® 1002 4.3.5 | NFPA® 1002 4.3.6
112. ANS: C PTS: 1 REF: 118
OBJ: 3.13 Describe driving exercises and evaluation methods.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.2 | NFPA® 1002 4.3.3 | NFPA® 1002 4.3.4 | NFPA® 1002 4.3.5 | NFPA® 1002 4.3.6
113. ANS: C PTS: 1 REF: 118
OBJ: 3.13 Describe driving exercises and evaluation methods.
NAT: NFPA® 1002 4.3.1 | NFPA® 1002 4.3.2 | NFPA® 1002 4.3.3 | NFPA® 1002 4.3.4 | NFPA® 1002 4.3.5 | NFPA® 1002 4.3.6
114. ANS: B PTS: 1 REF: 119
OBJ: 3.14 Summarize considerations for working safely on and around fire apparatus.
115. ANS: A PTS: 1 REF: 120
OBJ: 3.14 Summarize considerations for working safely on and around fire apparatus.
116. ANS: B PTS: 1 REF: 120
OBJ: 3.14 Summarize considerations for working safely on and around fire apparatus.
117. ANS: C PTS: 1 REF: 122
OBJ: 3.14 Summarize considerations for working safely on and around fire apparatus.
118. ANS: A PTS: 1 REF: 136
OBJ: 4.1 Describe positioning of pumpers for fire attack.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
119. ANS: D PTS: 1 REF: 136
OBJ: 4.1 Describe positioning of pumpers for fire attack.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4

120. ANS: B PTS: 1 REF: 136
OBJ: 4.1 Describe positioning of pumpers for fire attack.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
121. ANS: C PTS: 1 REF: 138
OBJ: 4.1 Describe positioning of pumpers for fire attack.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
122. ANS: B PTS: 1 REF: 138
OBJ: 4.1 Describe positioning of pumpers for fire attack.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
123. ANS: A PTS: 1 REF: 138
OBJ: 4.1 Describe positioning of pumpers for fire attack.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
124. ANS: B PTS: 1 REF: 138
OBJ: 4.1 Describe positioning of pumpers for fire attack.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
125. ANS: D PTS: 1 REF: 140
OBJ: 4.1 Describe positioning of pumpers for fire attack.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
126. ANS: C PTS: 1 REF: 140
OBJ: 4.1 Describe positioning of pumpers for fire attack.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
127. ANS: B PTS: 1 REF: 141
OBJ: 4.1 Describe positioning of pumpers for fire attack.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
128. ANS: A PTS: 1 REF: 141
OBJ: 4.1 Describe positioning of pumpers for fire attack.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
129. ANS: C PTS: 1 REF: 141
OBJ: 4.1 Describe positioning of pumpers for fire attack.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
130. ANS: A PTS: 1 REF: 141
OBJ: 4.2 Describe positioning water source supply pumpers.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
131. ANS: C PTS: 1 REF: 142
OBJ: 4.2 Describe positioning water source supply pumpers.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
132. ANS: B PTS: 1 REF: 143
OBJ: 4.2 Describe positioning water source supply pumpers.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
133. ANS: D PTS: 1 REF: 144
OBJ: 4.2 Describe positioning water source supply pumpers.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
134. ANS: D PTS: 1 REF: 146
OBJ: 4.3 Summarize apparatus positioning considerations for wildland fire attack.
135. ANS: D PTS: 1 REF: 147
OBJ: 4.3 Summarize apparatus positioning considerations for wildland fire attack.
136. ANS: C PTS: 1 REF: 147
OBJ: 4.3 Summarize apparatus positioning considerations for wildland fire attack.

137. ANS: D PTS: 1 REF: 147
OBJ: 4.3 Summarize apparatus positioning considerations for wildland fire attack.
138. ANS: A PTS: 1 REF: 148
OBJ: 4.3 Summarize apparatus positioning considerations for wildland fire attack.
139. ANS: D PTS: 1 REF: 148
OBJ: 4.3 Summarize apparatus positioning considerations for wildland fire attack.
140. ANS: C PTS: 1 REF: 148
OBJ: 4.3 Summarize apparatus positioning considerations for wildland fire attack.
141. ANS: A PTS: 1 REF: 148
OBJ: 4.3 Summarize apparatus positioning considerations for wildland fire attack.
142. ANS: A PTS: 1 REF: 148
OBJ: 4.3 Summarize apparatus positioning considerations for wildland fire attack.
143. ANS: A PTS: 1 REF: 150
OBJ: 4.4 Identify considerations for special positioning situations.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
144. ANS: B PTS: 1 REF: 150
OBJ: 4.4 Identify considerations for special positioning situations.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
145. ANS: C PTS: 1 REF: 150
OBJ: 4.4 Identify considerations for special positioning situations.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
146. ANS: A PTS: 1 REF: 151
OBJ: 4.4 Identify considerations for special positioning situations.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
147. ANS: B PTS: 1 REF: 151
OBJ: 4.4 Identify considerations for special positioning situations.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
148. ANS: A PTS: 1 REF: 153
OBJ: 4.4 Identify considerations for special positioning situations.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
149. ANS: D PTS: 1 REF: 153
OBJ: 4.4 Identify considerations for special positioning situations.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
150. ANS: C PTS: 1 REF: 153
OBJ: 4.4 Identify considerations for special positioning situations.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
151. ANS: A PTS: 1 REF: 154
OBJ: 4.4 Identify considerations for special positioning situations.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
152. ANS: B PTS: 1 REF: 154
OBJ: 4.4 Identify considerations for special positioning situations.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
153. ANS: B PTS: 1 REF: 154
OBJ: 4.4 Identify considerations for special positioning situations.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
154. ANS: C PTS: 1 REF: 154
OBJ: 4.4 Identify considerations for special positioning situations.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4

155. ANS: C PTS: 1 REF: 154
OBJ: 4.4 Identify considerations for special positioning situations.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
156. ANS: D PTS: 1 REF: 154
OBJ: 4.4 Identify considerations for special positioning situations.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
157. ANS: C PTS: 1 REF: 155
OBJ: 4.4 Identify considerations for special positioning situations.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
158. ANS: C PTS: 1 REF: 155
OBJ: 4.4 Identify considerations for special positioning situations.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
159. ANS: D PTS: 1 REF: 155
OBJ: 4.4 Identify considerations for special positioning situations.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2 | NFPA® 1002 5.2.4
160. ANS: A PTS: 1 REF: 167
OBJ: 5.1 Describe the characteristics of water.
161. ANS: D PTS: 1 REF: 167
OBJ: 5.1 Describe the characteristics of water.
162. ANS: B PTS: 1 REF: 167
OBJ: 5.1 Describe the characteristics of water.
163. ANS: B PTS: 1 REF: 167
OBJ: 5.1 Describe the characteristics of water.
164. ANS: A PTS: 1 REF: 168
OBJ: 5.1 Describe the characteristics of water.
165. ANS: B PTS: 1 REF: 168
OBJ: 5.1 Describe the characteristics of water.
166. ANS: D PTS: 1 REF: 169
OBJ: 5.2 Identify the advantages and disadvantages of water.
167. ANS: D PTS: 1 REF: 169
OBJ: 5.2 Identify the advantages and disadvantages of water.
168. ANS: B PTS: 1 REF: 169
OBJ: 5.2 Identify the advantages and disadvantages of water.
169. ANS: D PTS: 1 REF: 169
OBJ: 5.2 Identify the advantages and disadvantages of water.
170. ANS: B PTS: 1 REF: 169
OBJ: 5.2 Identify the advantages and disadvantages of water.
171. ANS: B PTS: 1 REF: 170
OBJ: 5.2 Identify the advantages and disadvantages of water.
172. ANS: A PTS: 1 REF: 170
OBJ: 5.3 Summarize facts about water pressure and velocity.
173. ANS: D PTS: 1 REF: 172
OBJ: 5.3 Summarize facts about water pressure and velocity.
174. ANS: C PTS: 1 REF: 172
OBJ: 5.3 Summarize facts about water pressure and velocity.
175. ANS: C PTS: 1 REF: 172
OBJ: 5.3 Summarize facts about water pressure and velocity.

176. ANS: A PTS: 1 REF: 173
OBJ: 5.3 Summarize facts about water pressure and velocity.
177. ANS: D PTS: 1 REF: 173
OBJ: 5.3 Summarize facts about water pressure and velocity.
178. ANS: B PTS: 1 REF: 174
OBJ: 5.3 Summarize facts about water pressure and velocity.
179. ANS: C PTS: 1 REF: 174
OBJ: 5.3 Summarize facts about water pressure and velocity.
180. ANS: A PTS: 1 REF: 175
OBJ: 5.3 Summarize facts about water pressure and velocity.
181. ANS: D PTS: 1 REF: 175
OBJ: 5.3 Summarize facts about water pressure and velocity.
182. ANS: B PTS: 1 REF: 175
OBJ: 5.3 Summarize facts about water pressure and velocity.
183. ANS: B PTS: 1 REF: 175
OBJ: 5.3 Summarize facts about water pressure and velocity.
184. ANS: D PTS: 1 REF: 176
OBJ: 5.3 Summarize facts about water pressure and velocity.
185. ANS: D PTS: 1 REF: 176
OBJ: 5.3 Summarize facts about water pressure and velocity.
186. ANS: C PTS: 1 REF: 176
OBJ: 5.3 Summarize facts about water pressure and velocity.
187. ANS: A PTS: 1 REF: 176
OBJ: 5.3 Summarize facts about water pressure and velocity.
188. ANS: A PTS: 1 REF: 176
OBJ: 5.3 Summarize facts about water pressure and velocity.
189. ANS: B PTS: 1 REF: 176
OBJ: 5.3 Summarize facts about water pressure and velocity.
190. ANS: C PTS: 1 REF: 176
OBJ: 5.3 Summarize facts about water pressure and velocity.
191. ANS: D PTS: 1 REF: 177
OBJ: 5.3 Summarize facts about water pressure and velocity.
192. ANS: A PTS: 1 REF: 177
OBJ: 5.3 Summarize facts about water pressure and velocity.
193. ANS: C PTS: 1 REF: 177
OBJ: 5.3 Summarize facts about water pressure and velocity.
194. ANS: A PTS: 1 REF: 178
OBJ: 5.4 Summarize the principles of friction loss.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2
195. ANS: B PTS: 1 REF: 178
OBJ: 5.4 Summarize the principles of friction loss.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2
196. ANS: C PTS: 1 REF: 179
OBJ: 5.4 Summarize the principles of friction loss.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2

197. ANS: C PTS: 1 REF: 179
OBJ: 5.4 Summarize the principles of friction loss.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2
198. ANS: D PTS: 1 REF: 179
OBJ: 5.5 Identify how friction loss principles can be applied to the fire service.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2
199. ANS: D PTS: 1 REF: 180
OBJ: 5.5 Identify how friction loss principles can be applied to the fire service.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2
200. ANS: A PTS: 1 REF: 181
OBJ: 5.5 Identify how friction loss principles can be applied to the fire service.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2
201. ANS: D PTS: 1 REF: 181
OBJ: 5.5 Identify how friction loss principles can be applied to the fire service.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2
202. ANS: C PTS: 1 REF: 181
OBJ: 5.5 Identify how friction loss principles can be applied to the fire service.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2
203. ANS: A PTS: 1 REF: 182
OBJ: 5.6 Identify the principles of municipal water supply systems.
204. ANS: B PTS: 1 REF: 183
OBJ: 5.6 Identify the principles of municipal water supply systems.
205. ANS: A PTS: 1 REF: 183
OBJ: 5.6 Identify the principles of municipal water supply systems.
206. ANS: C PTS: 1 REF: 183
OBJ: 5.6 Identify the principles of municipal water supply systems.
207. ANS: C PTS: 1 REF: 183
OBJ: 5.6 Identify the principles of municipal water supply systems.
208. ANS: D PTS: 1 REF: 184
OBJ: 5.6 Identify the principles of municipal water supply systems.
209. ANS: C PTS: 1 REF: 184
OBJ: 5.6 Identify the principles of municipal water supply systems.
210. ANS: D PTS: 1 REF: 184
OBJ: 5.6 Identify the principles of municipal water supply systems.
211. ANS: B PTS: 1 REF: 184
OBJ: 5.6 Identify the principles of municipal water supply systems.
212. ANS: C PTS: 1 REF: 185
OBJ: 5.6 Identify the principles of municipal water supply systems.
213. ANS: C PTS: 1 REF: 186
OBJ: 5.6 Identify the principles of municipal water supply systems.
214. ANS: C PTS: 1 REF: 186
OBJ: 5.6 Identify the principles of municipal water supply systems.
215. ANS: D PTS: 1 REF: 186
OBJ: 5.6 Identify the principles of municipal water supply systems.
216. ANS: D PTS: 1 REF: 186
OBJ: 5.6 Identify the principles of municipal water supply systems.

217. ANS: D PTS: 1 REF: 187
OBJ: 5.6 Identify the principles of municipal water supply systems.
218. ANS: B PTS: 1 REF: 188
OBJ: 5.6 Identify the principles of municipal water supply systems.
219. ANS: D PTS: 1 REF: 188
OBJ: 5.6 Identify the principles of municipal water supply systems.
220. ANS: D PTS: 1 REF: 188
OBJ: 5.7 Describe private water supply systems.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2
221. ANS: D PTS: 1 REF: 188
OBJ: 5.7 Describe private water supply systems.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2
222. ANS: A PTS: 1 REF: 189
OBJ: 5.7 Describe private water supply systems.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2
223. ANS: D PTS: 1 REF: 189
OBJ: 5.7 Describe private water supply systems.
NAT: NFPA® 1002 5.2.1 | NFPA® 1002 5.2.2