



APPARATUS OPERATOR

Pumper

STUDENT

Task Book

Agency: _____

TASK BOOK ASSIGNED TO:

INDIVIDUAL'S PRINTED NAME & TITLE

DO NOT COMPLETE THIS UNLESS YOU ARE RECOMMENDING THE INDIVIDUAL FOR TESTING AND CERTIFICATION

**VERIFICATION/CERTIFICATION OF COMPLETED
STUDENT TASK BOOK FOR TESTING AND CERTIFICATION**

FINAL CANDIDATE'S VERIFICATION

I verify that all tasks have been performed and are documented with appropriate signatures & dates.

I also verify that I have performed all tasks satisfactorily and should therefore be considered for testing and certification.

FINAL CANDIDATE'S SIGNATURE

DATE

FINAL CANDIDATE'S PRINTED NAME

GFSTC ID/SSN

**VERIFICATION/CERTIFICATION OF COMPLETED
DRIVER/OPERATOR COMPETENCY TASK BOOK**

FINAL EVALUATOR'S VERIFICATION

I verify that all tasks have been performed and are documented with appropriate signatures & dates.

I also verify that _____
has performed satisfactorily and should therefore be considered for testing and certification.

FINAL EVALUATOR'S SIGNATURE

DATE

FINAL EVALUATOR'S PRINTED NAME

GFSTC ID/SSN

AGENCY/DEPARTMENT CERTIFICATION

I certify that _____ has met all requirements for testing and certification.

CERTIFYING OFFICIAL'S SIGNATURE

DATE

CERTIFYING OFFICIAL'S PRINTED NAME

GFSTC ID/SSN

Supplying or condoning the submission of false information to this agency may be a violation of the criminal code of Georgia (Georgia Law 1968 PP 1249, 1310).

**GFSTC USE ONLY
VERIFICATION OF COMPLETED TASK BOOK**

PROCTOR'S NAME (PRINT)

GFSTC ID/SSN

DATE

SIGNATURE: _____

FIRE DEPARTMENT POSITION TASK BOOK

This Position Task Book (PTB) has been developed to document the required performance objectives for apparatus/operator pumper certification. Each objective lists the performance requirements (tasks) in a format that allows the individual to be evaluated against written guidelines. Successful performance of all tasks, as observed and recorded by a department approved evaluator, will result in a recommendation to the Fire Chief (or designee) of the fire department that the firefighter be certified in that position.

Evaluation and confirmation of the individual's performance of all tasks may involve more than one evaluator. It is important that performance be critically evaluated and accurately recorded by each evaluator. All tasks must be evaluated before recommending certification. All statements within a task which require an action must be successfully demonstrated before the task is to be signed off.

The local fire department shall issue the entire task book to each member seeking certification as a apparatus/operator (pumper), and by using the list found on pages four and five of this task book verifies completion of training.

RESPONSIBILITIES

The Fire Chief or his/her designee may authorize personnel to be an evaluator and to sign the PTB. Individuals **may not** sign off on themselves.

The Training Chief is normally the designated final evaluator and he/she will review each completed PTB with the Fire Chief or Designee.

The "Evaluator" **CANNOT teach or coach while he/she is evaluating.**

The **Student** is responsible for:

- Reviewing and understanding instructions in the PTB.
- Identifying desired objectives/goals.
- Satisfactorily demonstrating completion of all tasks.
- Assuring the Evaluation Record is complete.
- Notifying his/her "Company Officer/Leader" when the PTB is complete and providing a copy for his/her department records.

The **Evaluator** is responsible for:

- Being qualified and proficient in the position being evaluated.
- Explaining to the student the evaluation procedures that will be utilized.
- Identifying tasks to be performed during the evaluation period.
- Accurately evaluating and recording demonstrated performance of tasks. Satisfactory performance shall be documented by dating and signing after completion of the task.

The **Final Evaluator** is responsible for:

- Signing the verification statement inside the front cover of the PTB when all tasks have been initialed and the student is recommended for testing and certification.

NFPA 1002 “Standard on Fire Apparatus Driver/Operator Professional Qualifications” 2009 Edition

Skill/Task	Date	Candidate Signature	Evaluator Signature
<i>The fire department vehicle driver/operator shall be licensed to drive all vehicles they are expected to operate.</i> 1.4.1			
<i>Operate a fire department (pumper) vehicle, given the vehicle and a predetermined route on a public way that incorporates the maneuvers and features specified in the following list, that the driver/operator is expected to encounter during normal operations, so that the vehicle is operated in compliance with all applicable state and local laws, and departmental rules and regulations</i> 4.3.1			
Operated passenger restraint devices, maintained safe following distances, maintained control of vehicle while accelerating, decelerating and turning, and used automotive gauges and controls			
<i>(1) Four Left Turns and four right turns</i>			
<i>(2) A straight section of urban business street or a two-lane rural road at least 1 mile in length (1.6 km)</i>			
<i>(3) One through-intersection and two intersections where a stop has to be made</i>			
<i>(4) One railroad crossing</i>			
<i>(5) One curve, either left or right</i>			
<i>(6) A section of limited access highway that includes a conventional ramp entrance and exit and A section of road long enough to allow two lane changes.</i>			
<i>(7) A downgrade steep enough and long enough to require down shifting and braking</i>			
<i>(8) An upgrade steep enough and long enough to require gear changing to maintain speed</i>			
<i>(9) One underpass or low clearance bridge</i>			

<i>Back a fire department (pumper) vehicle from a roadway into a restricted space on both the right and left sides of the vehicle</i> 4.3.2			
Operated passenger restraint devices, demonstrated the ability to use mirrors, and judge vehicle clearance			
<i>(1) Using a spotter for backing</i>			
<i>(2) Restricted spaces 12 foot in width (3.7m)</i>			
<i>(3) Requiring 90-degree right hand and left hand turns from the roadway with obstructions</i>			
<i>(4) Vehicle was maneuvered through the obstructions without stopping or pulling forward and without striking obstructions</i>			
<i>Maneuver a fire department (pumper) vehicle around obstructions on a roadway</i> 4.3.3			
Operated passenger restraint devices, demonstrated the ability to use mirrors, and judge vehicle clearance			
<i>(1) Using a spotter for backing</i>			
<i>(2) While moving forward and in reverse</i>			
<i>(3) Having obstructions in the roadway</i>			
<i>(4) Vehicle was maneuvered through the obstructions without stopping to change direction of travel</i>			
<i>(5) Vehicle was maneuvered without striking the obstructions</i>			
<i>Turn a fire department (pumper) vehicle 180 degrees</i> 4.3.4			
Operated passenger restraint devices, demonstrated the ability to use mirrors, and judge vehicle clearance			
<i>(1) Using a spotter for backing</i>			
<i>(2) Vehicle was turned 180 degrees</i>			
<i>(3) Vehicle did not strike obstructions within the given space</i>			
<i>(4) Vehicle was maneuvered in an area in which the vehicle could not perform a U turn without stopping and backing up</i>			

<i>Maneuver a fire department (pumper) vehicle in areas with restricted horizontal and vertical clearances</i> 4.3.5			
Operated passenger restraint devices, demonstrated the ability to use mirrors, and judge vehicle clearance			
<i>(1) Moved vehicle through areas of restricted horizontal and vertical clearances</i>			
<i>(2) Vehicle was maneuvered without striking obstructions</i>			
<i>Operate a fire department (pumper) vehicle using defensive driving techniques under emergency conditions</i> 4.3.6			
Operated passenger restraint devices, maintained safe following distances, maintained control of vehicle while accelerating, decelerating and turning, and used automotive gauges and controls			



HALL COUNTY FIRE ACADEMY



PUMPING OPERATIONS

Skill Number: BAOC - 03

INSTRUCTIONS TO THE MONITOR/EVALUATOR

1. The firefighter shall be provided with the proper equipment and apparatus to complete this objective.
2. The firefighter ensures and maintains safety.
3. The firefighter will be given the instructions below before beginning this exercise.

INSTRUCTIONS TO THE FIREFIGHTER

The firefighter, given the proper equipment and apparatus shall demonstrate procedures for providing 2 attack hand lines. Hydrant connection will be made and operator will obtain positive water supply while maintaining proper flow and pressure.

- _____ 1. Wears appropriate personal protective equipment (helmet and gloves).
- _____ 2. Apparatus placed in position (pump in gear/brake set)
- _____ 3. Placed wheel chocks appropriately
- _____ 4. Makes discharge connection. (visualizes hose before charging)
- _____ 5. Charges attack line from booster tank
- _____ 6. Pumps proper pressure.
- _____ 7. Sets relief valve
- _____ 8. Flushes hydrant/utilizes gate valve
- _____ 9. Connects supply line to hydrant
- _____ 10. Opens hydrant completely
- _____ 11. Opens intake while maintaining constant pressure
- _____ 12. Verbalize positive water supply
- _____ 13. Closes tank-to-pump valve
- _____ 14. Resets relief valve
- _____ 15. Refills booster tank

- _____16. Raises relief valve
- _____17. Flows additional attack line
- _____18. Pumps proper pressure/sets relief valve
- _____19. Removes kinks from hose
- _____20. Tops off booster tank
- _____21. Proper shut down procedures

By signing, the evaluator states that the firefighter successfully and safely completed the skill.

_____	_____	_____
Firefighter's Name	Date	Evaluator's Name
_____	_____	_____
Firefighter's Signature		Evaluator's Signature



HALL COUNTY FIRE ACADEMY



APPARATUS DAILY INSPECTION

Skill Number: BAOC - 02

INSTRUCTIONS TO THE MONITOR/EVALUATOR

1. The driver/operator/relief driver shall perform a daily inspection on a fire apparatus.

INSTRUCTIONS TO THE FIREFIGHTER

The firefighter shall be provided with a fire apparatus and *daily check off sheet*.

- _____ 1. Review the previous fire apparatus report.
- _____ 2. Inspect the exterior of the fire apparatus.
- _____ 3. Inspect the engine compartment.
- _____ 4. Inspect the cab interior.
- _____ 5. Inspect the fire apparatus brakes.
- _____ 6. Inspect the tools and equipment carried on the fire apparatus.
- _____ 7. If applicable, inspect the pump of the fire apparatus and features associated with its function.
- _____ 8. If applicable, inspect the aerial device.

By signing, the evaluator states that the firefighter successfully and safely completed the skill.

_____	_____	_____
Firefighter's Name	Date	Evaluator's Name
_____	_____	_____
Firefighter's Signature		Evaluator's Signature



HALL COUNTY FIRE ACADEMY



IDENTIFYING THE CRITICAL INFORMATION RECEIVED FROM THE DISPATCH

Skill Number: BAOC = 01

INSTRUCTIONS TO THE MONITOR/EVALUATOR

1. The driver/operator/relief driver shall be able to identify the critical information received from the dispatch.

INSTRUCTIONS TO THE FIREFIGHTER

The firefighter shall be provided with a notepad and map.

- _____ 1. Document on a notepad the type of emergency, the location of the emergency, and the assigned tactical radio frequency (if applicable).
- _____ 2. Locate the emergency scene on a map using the information given during the dispatch.
- _____ 3. From the fire station, determine the most efficient response route using the map.
- _____ 4. Determine the fire apparatus response mode for this emergency, using the information from the dispatch

By signing, the evaluator states that the firefighter successfully and safely completed the skill.

Firefighter's Name

Date

Evaluator's Name

Firefighter's Signature

Evaluator's Signature



HALL COUNTY FIRE ACADEMY



MASTER STREAM OPERATION

Skill Number: BAOC - 04

INSTRUCTIONS TO THE MONITOR/EVALUATOR

1. The firefighter shall be provided with the proper equipment and apparatus to complete this objective.
2. The firefighter ensures and maintains safety.
3. The firefighter will be given the instructions below before beginning this exercise.

INSTRUCTIONS TO THE FIREFIGHTER

The firefighter, given the proper equipment and apparatus shall demonstrate procedures for providing an effective master stream for fire suppression or other need with 100% accuracy.

- _____ 1. Wears appropriate personal protective equipment (firefighting boots, helmet, gloves).
- _____ 2. Apparatus placed in position.
- _____ 3. Placed wheel chocks appropriately.
- _____ 4. Placed apparatus into pump gear.
- _____ 5. Ensured a secure water supply.
- _____ 6. If applicable, pressure relief/pressure governor valve was set.
- _____ 7. Selected correct lever for master stream device.
- _____ 8. Discharge pressure was set for master stream device with combination (fog) nozzle or smooth bore tips.
- _____ 9. Monitored for problems that may occur.

By signing, the evaluator states that the firefighter successfully and safely completed the skill.

Firefighter's Name

Date

Evaluator's Name

Firefighter's Signature

Evaluator's Signature

Hall County Fire Services Basic Apparatus Operator Workbook

Directions: Each of the questions or incomplete statements below is followed by four answer choices. Select the one that is best in each case and then completely fill in the answer sheet provided on last page of workbook. (1.2 points each)

Chapter 1

1. According to NFPA 1002, all of the following are responsibilities of the driver/operator except for:
 - a. running the pump or operating the aerial ladder.
 - b. getting the fire apparatus to the scene safely.
 - c. performing routine maintenance on the apparatus.
 - d. setting up the pump.

2. What piece of equipment was used to replace the bucket brigade?
 - a. Hook-and-ladder truck
 - b. Leather buckets
 - c. Straight ladders
 - d. Hand pump

3. The advent of steam-powered steamers in the mid-1800s meant fire fighters were replaced by _____ in moving equipment to the fire ground.
 - a. hand pumps
 - b. horses
 - c. heavy springs
 - d. elevated streams

4. When did the first gasoline-powered fire apparatus emerge?
 - a. Colonial era
 - b. 1900
 - c. 2007
 - d. Early 1800s

5. How much water could an early booster pump generate per minute?
 - a. 50' (15 m)
 - b. 2½" (6.35 cm)
 - c. 200 gallons (757 L)
 - d. 750 GPM (2838 L)

6. Once it became an option, hydraulic pressure could be used for:
 - a. carrying hose.
 - b. braking the fire apparatus.
 - c. monitoring wheel skid.
 - d. manipulating aerial devices.

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7. All of the following are true of diesel engines except that:
 - a. they are more reliable.
 - b. they burn fuel more efficiently.
 - c. they provide the desired horsepower.
 - d. they cannot deliver as much water so they were used mainly for small fires.

8. _____ on some fire apparatus monitors what an apparatus was doing prior to a collision.
 - a. Black boxes
 - b. Corner posts
 - c. ABS
 - d. ATC

9. Visibility for the driver/operator has been enhanced by all of the following except for:
 - a. rotary gear pumps.
 - b. larger windshields.
 - c. heated mirrors.
 - d. rear-mounted cameras.

10. A good candidate for the position of driver/operator has knowledge of:
 - a. firefighting with limited tools.
 - b. hydraulics and pressure regulators.
 - c. operating in areas filled with electrical wires and other obstructions.
 - d. how consistent service delivery provides for a safe and successful outcome.

Chapter 2

1. All of the following are requirements for all fire apparatus that should be conveyed to the manufacturer except the:
 - a. specific performance requirements.
 - b. specialized equipment based on function and capabilities.
 - c. specific electrical loads required.
 - d. maximum number of fire fighters to ride on apparatus.

2. NFPA 1901 states that _____ material(s) should be used for the construction of all water tanks.
 - a. draft
 - b. power
 - c. noncorrosive
 - d. pump-and-roll

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3. Which apparatus is responsible for securing the water source and extinguishing the fire?
 - a. Pumper
 - b. Fire pump
 - c. Initial attack fire apparatus
 - d. Mobile water supply apparatus

4. What does the initial attack fire apparatus have that makes it different from the pumper?
 - a. Four-wheel drive
 - b. A fire pump
 - c. A water tank
 - d. Compartments

5. What is another name for a mobile water supply fire apparatus?
 - a. Pumper
 - b. Tender
 - c. Compartment
 - d. Tiller

6. Which manufacturer introduced the first aerial truck?
 - a. Scott-Uda
 - b. Wivell
 - c. Seagraves
 - d. American LaFrance

7. All of the following functions are associated with the quint except a(n):
 - a. pump.
 - b. water tank.
 - c. foam.
 - d. aerial.

8. Which of the following can a mobile foam fire apparatus be configured with or without?
 - a. Foam concentrate tank
 - b. Fire pump
 - c. Hard suction hose
 - d. Aerial device

9. A manufacturer must use all of the following information when describing an apparatus except the:
 - a. wheel base.
 - b. axle ratios.
 - c. estimated weight.
 - d. compartment signals.

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10. Water must be _____ to get it on a fire.
- delivered
 - driven
 - pressurized
 - mounted

Chapter 3

- How often should hydrants be checked?
 - At least once a month
 - At least once a year
 - Weekly
 - Only when there is a fire
- Define residual pressure.
 - The amount of pressure created by elevation pressure and/or pump pressure
 - The amount of pressure in the system during a period of normal consumption
 - The amount of pressure in the system when water is flowing
 - The amount of pressure in the system when water not moving
- What is used to make clean water available to people in populated areas?
 - Municipal water systems
 - Standpipe systems
 - Chemicals
 - Elevated streams
- What causes a water hammer?
 - Fluid in motion that is forced to stop or change direction suddenly
 - Atmospheric pressure changes
 - Prolonged use of large quantities of water
 - Interruption to the primary water source
- All of the following are used to ensure fire hydrant visibility except:
 - painting hydrants bright reflective colors.
 - planting tall flowers or grasses around a hydrant.
 - clearing snow away from the hydrant.
 - mounting colored reflectors in the pavement in front of a hydrant.

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6. Which law says that pressure acts in all directions equally?
 - a. Einstein's law
 - b. NFPA 1002
 - c. Pascal's law
 - d. Bernoulli's equation

7. Why is residual pressure an important measurement?
 - a. It provides the pressure necessary to deliver water.
 - b. It enables a fire fighter to calculate the water that can be obtained from a group of hydrants on the same water main.
 - c. It is the best indicator of how much more water is available in the system.
 - d. It helps minimize downtime if a water main breaks or needs maintenance work.

8. What does the arrangement of atoms in a water molecule allow?
 - a. continuous water supply
 - b. water supply that is interrupted
 - c. the ability to conduct electrical current
 - d. water molecules to stick to each other

9. All of the following are parts of a municipal water system except the:
 - a. treatment plant.
 - b. distribution system.
 - c. water source.
 - d. standpipe system.

10. When is a wet-barrel hydrant used?
 - a. When water is forced to stop or change direction suddenly
 - b. Where temperatures do drop below freezing
 - c. Where temperatures do not drop below freezing
 - d. On private water systems

Chapter 4

1. All of the following are methods to calculate friction loss in lines to a Siamese connection when the lines are of equal size and length except the:
 - a. percentage method.
 - b. elevation pressure method.
 - c. split flow method.
 - d. coefficient method.

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2. What can fire service hydraulic calculations be used to determine?
 - a. The required PDP for fire-ground operations
 - b. The volume of water moving through a nozzle
 - c. The standard and metric FL for multiple hose lines
 - d. The elevation gain

3. Define friction loss.
 - a. Pressure lost from turbulence as water passes through pipes, hoses, fittings, adapters, and appliances
 - b. Pressure required at the nozzle to deliver the fire stream and flow rate for the nozzle's design
 - c. Pressure needed to overcome all friction, appliance loss, and elevation loss while maintaining adequate nozzle pressure to deliver effective fire streams
 - d. Pressure of attack hose lines

4. Complete this analogy: Elevation is relative to _____ as altitude is relative to sea level.
 - a. nozzle
 - b. pressure
 - c. grade
 - d. pumper

5. What is the purpose of the hand calculation method?
 - a. To supply large amounts of water at a reasonable amount of pump pressure
 - b. To quickly determine the amount of FL per 100' (30 m) of hose
 - c. To exceed hose test pressures
 - d. To determine head pressure

6. What happens if the PDP is inadequate?
 - a. It will produce insufficient flow to overcome the fire.
 - b. It will cause the stream to break up.
 - c. It will create greater nozzle reaction.
 - d. It will allow multiple lines to supply the pumper.

7. Which calculations should a driver/operator be able to calculate at the fire ground?
 - a. AL and PDP
 - b. NP and FL
 - c. FL and PDP
 - d. NP and EP

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8. What are devices used to connect and adapt hoses and direct and control the water flow in various hose layouts?
 - a. Lines
 - b. Appliances
 - c. Streams
 - d. Pumps

9. What is the basic PDP formula?
 - a. $FL = C Q^2 L$
 - b. $TPL = C \times Q^2 \times L + AL + EP$
 - c. $PDP = NP + TPL$
 - d. $PDP = NP + FL$

10. Which is the only kind of pressure to a standpipe that the driver/operator controls?
 - a. Highest pressure needed at any one discharge
 - b. Operating pressure
 - c. In-line pressure
 - d. Pressure gained when the nozzle is below the pump

Chapter 5

1. What are the two types of positive-displacement pumps?
 - a. Piston and rotary
 - b. Rotary and intake
 - c. Piston and discharge
 - d. Rotary and double-acting

2. What does higher water pressure mean?
 - a. Less pressure
 - b. Less volume or flow
 - c. Higher volume or flow
 - d. Higher intake

3. What is the most common fire pump in use today?
 - a. Rotary pump
 - b. Double-acting piston pump
 - c. Priming pump
 - d. Centrifugal pump

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4. What does NFPA 20 define as a provider of liquid flow?
 - a. Pumper
 - b. Pump panel
 - c. Attack line
 - d. Fire pump

5. Which type of pump traps a fixed amount of fluid and forces it into a discharge stream during every revolution of the pumping element?
 - a. Positive-displacement pump
 - b. Multistage pump
 - c. Portable pump
 - d. Single-stage pump

6. The fire service uses two types of pumps: centrifugal pumps and _____ pumps.
 - a. rotary
 - b. positive-displacement
 - c. priming
 - d. aerial

7. What are the two types of piston pumps?
 - a. Positive-displacement and centrifugal
 - b. Single-acting and double-acting
 - c. Piston and rotary
 - d. Intake and discharge

8. What is the most notable device on a pumper apparatus?
 - a. Frame
 - b. Compartments
 - c. Pump panel
 - d. Cab

9. What is the most common operating position for two-stage pumps?
 - a. Parallel/series mode
 - b. Series/volume mode
 - c. Series/pressure mode
 - d. Parallel/volume mode

10. Which of the following substances can be pumped by a centrifugal pump?
 - a. Oxygen gas
 - b. Water or other liquids
 - c. Sand and debris
 - d. Foam

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Chapter 6

1. What is required by NFPA 1901, *Standard for Automotive Fire Apparatus*?
 - a. All apparatus must be designed so the manufacturer's recommended maintenance checks can be performed through a limited-access port without lifting the cab.
 - b. The cab of the apparatus should be secured with a locking device so it does not fall on anyone operating underneath it.
 - c. Exhaust piping should not rub against tires or other moving parts.
 - d. The fuel cap should be labeled with the appropriate fuel.

2. Which part of the apparatus is being inspected if the driver/operator is looking at the compartment doors and tires?
 - a. Aerial device
 - b. Exterior
 - c. Interior
 - d. General tools/equipment

3. Why are inspections performed the same way each time?
 - a. To allow for jumping from one element to another
 - b. To save time so the inspection can be finished sooner
 - c. To allow any fire fighter to be able to complete the inspection
 - d. To reduce the likelihood of missing something during the inspection

4. Which system is being inspected if the driver/operator is looking for cracked drums or rotors or thin shoes or pads?
 - a. Fluid system
 - b. Engine compartment
 - c. Aerial device
 - d. Brake system

5. All of the following fluids are to be checked when inspecting the engine compartment except the:
 - a. brake fluid.
 - b. hydraulic oil.
 - c. coolant level.
 - d. transmission fluid.

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6. Why should an apparatus inspection include securely nesting ground ladders and securing tools and breathing apparatus?
 - a. So the needed equipment is not lost within the fire hall
 - b. So the apparatus is safe to ride on and operate
 - c. So the driver/operator can drive faster to an emergency scene
 - d. So the apparatus matches its manufacturer-recommended curb weight

7. All of the following are times when an apparatus inspection might occur except:
 - a. after a large incident when the apparatus was used extensively at an emergency scene.
 - b. when it is bright and sunny outside.
 - c. at the start of a shift.
 - d. when the apparatus is being put back into service after repairs.

8. What does NFPA 1901 require of seated positions in the cab of the apparatus?
 - a. Positions that are clean and operating correctly
 - b. Seats that are soft and flexible
 - c. Bright orange or red seat belts
 - d. Traffic vests

9. A proper inspection should begin with a(n):
 - a. inspection of the aerial device.
 - b. review of the manufacturer's recommendations.
 - c. review of the inspection form from the previous inspection.
 - d. inspection of the exterior of the apparatus.

10. Which two fluid systems are checked the same way?
 - a. Engine oil and transmission fluid
 - b. Power steering fluid and engine oil
 - c. Power steering fluid and hydraulic oil
 - d. Engine oil and hydraulic oil

Chapter 7

1. All of the following are conditions approved by NFPA for when fire fighters do not have to wear a seat belt while riding in an apparatus except:
 - a. when providing medical care.
 - b. during tiller training.
 - c. when loading hose.
 - d. during the serpentine maneuver.

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2. What name is given to the test that measures the driver/operator's ability to maneuver in close quarters without stopping the apparatus?
 - a. Serpentine maneuver
 - b. Confined-space turnaround
 - c. Diminishing clearance exercise
 - d. Diminishing-space maneuver

3. What is the name given to the person who guides a driver/operator into an appropriate position while the apparatus is operating in a confined space or in reverse?
 - a. Guide
 - b. Officer
 - c. Spotter
 - d. Director

4. What does NFPA 1002 require?
 - a. A parking brake is required to hold an apparatus on a grade of at least 20 percent.
 - b. All apparatus seats must be enclosed and provided with an approved seat belt.
 - c. All driver/operators must complete a simulation of backing an apparatus into the fire station.
 - d. A department should assign units to a separate radio channel for on-scene tactical communications.

5. A driver/operator can influence future apparatus and equipment purchases as well as modifications to existing equipment by:
 - a. demonstrating the safest technique to accomplish a task.
 - b. acknowledging the importance of procedures and guidelines.
 - c. bringing problems to light so all share success.
 - d. explaining or demonstrating potential hazards to management.

6. Who should be the first person on the fire apparatus to buckle his or her seat belt?
 - a. The driver/operator
 - b. The fire officer
 - c. Whomever is first on the apparatus
 - d. The fire fighter in the jump seat

7. All of the following are pieces of information a driver/operator should listen for when dispatched for an emergency except the:
 - a. type of apparatus to be dispatched.
 - b. assigned tactical radio frequency.
 - c. description of the incident.
 - d. location of the emergency.

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8. What is the purpose of delegating riding assignments within the apparatus?
 - a. To establish assignments back at the fire station
 - b. To represent a specific task or function
 - c. To determine levels of crew seniority
 - d. To keep track of who is dressed for the response the most quickly

9. What is the name given to the quick check of the apparatus and its surroundings to ensure it is prepared for an emergency or nonemergency response?
 - a. Apparatus inspection
 - b. 360-degree inspection
 - c. Response inspection
 - d. Physical inspection

10. What are the two basic ways in which all fire apparatus are operated?
 - a. Emergency and on-scene operations
 - b. Emergency and dispatch operations
 - c. On-scene and dispatch operations
 - d. On-scene and general service operations

Chapter 8

1. What are the classifications of control zones surrounding an incident?
 - a. Advance zone, transition zone, and buffer zone
 - b. Hot zone, warm zone, and cold zone
 - c. Zone 1, zone 2, and zone 3
 - d. First-arriving zone, middle-arriving zone, and late-arriving zone

2. What was the fifth leading cause of fatal injuries to fire fighters in 2005?
 - a. Being struck by an object
 - b. Motor vehicle accident
 - c. Smoke inhalation
 - d. Structure collapse

3. Which lane should an apparatus use when traveling on a roadway to an incident?
 - a. Far left
 - b. Far right
 - c. Shoulder
 - d. All of them (by weaving or straddling)

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4. What should be used to divert traffic rather than relying on the warning lights on the apparatus?
 - a. Reflective trim
 - b. Handlines
 - c. Signs and traffic cones
 - d. Level I staging

5. What exercise measures a driver/operator's ability to drive past a simulated area and then back up the apparatus into the dock provided?
 - a. Confined-space exercise
 - b. Alley dock exercise
 - c. Diminishing clearance exercise
 - d. Serpentine exercise

6. When there is nothing showing as the first-arriving units approach an incident, what activity should receive the most emphasis?
 - a. Proper positioning of the apparatus
 - b. Locating the nearest hydrant
 - c. Determining which access provides the best tactical options
 - d. Driving the apparatus as close as possible

7. What are the three response levels?
 - a. Level I, Level II, and Level III
 - b. Advance warning, transition, and termination
 - c. Code 1, Code 2, and Code 3
 - d. Code Red, Code Green, and Code Orange

8. What condition occurs when brake drums become hot and expand away from the brake shoes?
 - a. Shoe expansion
 - b. Brake fade
 - c. Auxiliary braking
 - d. Drum fade

9. All of the following are goals of traffic control except:
 - a. to prevent secondary accidents at the scene.
 - b. to keep traffic flowing smoothly around an incident.
 - c. to improve responder safety while working at an incident.
 - d. to control personnel and maintain discipline at the scene.

10. All of the following are effects of proper staging except:
 - a. prevention of secondary accidents.
 - b. reduction of excessive apparatus congestion at the scene.
 - c. providing the IC with a resource pool.
 - d. reducing unnecessary radio traffic.

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Chapter 9

1. Why is supply hose used?
 - a. To deliver water to attack pumper from pressurized source
 - b. For fire suppression
 - c. For extinguishing small outdoor fires
 - d. To attack interior residential structure fires

2. How should the apparatus be positioned if the hydrant is located in the vicinity of the building on fire?
 - a. So it is not pushed straight ahead or into the other side of the street
 - b. At the corner of the street
 - c. With a section of hose connected to the hydrant instead of performing a forward lay
 - d. With its front wheels turned toward the curb on a 45-degree angle

3. Differentiate between forward and reverse hose lays.
 - a. A reverse lay is from the hydrant to the fire while a forward lay is from the fire to the hydrant.
 - b. A forward lay is in the opposite direction of the water flow while a reverse lay is in the same direction as the water flow.
 - c. A forward lay comes out of the driver's side of the apparatus while a reverse lay starts on the passenger side of the apparatus.
 - d. A forward lay is from the hydrant to the fire while a reverse lay is from the fire to the hydrant.

4. All of the following are fire hose appliances except:
 - a. hand lay
 - b. wye
 - c. double-female adapter
 - d. hose jacket

5. Which of the following is not a common size of supply line hose?
 - a. $\frac{3}{4}$ " (19 mm)
 - b. $2\frac{1}{2}$ " (64 mm)
 - c. 6" (152 mm)
 - d. 4" (102 mm)

6. Why are there FDCs on buildings?
 - a. To attack interior residential structure fires
 - b. To deliver water to the attack pumper from a pressurized source
 - c. So the fire department can pump water into the standpipe and/or sprinkler systems
 - d. To combines two hose lines into one

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7. Which task is the driver/operator's first priority at the scene once the pump is engaged?
 - a. Laying the supply line to the incident
 - b. Chocking the apparatus wheels
 - c. Placing the transmission into neutral or park
 - d. Opening the "tank refill" valve to let water flow from the pump back into the onboard tank

8. What diameter hose is used for attack lines?
 - a. Large
 - b. Booster
 - c. Medium
 - d. Small

9. What type of nozzle is used to make holes in sheet metal, aircraft, or building walls or ceilings?
 - a. Fog-stream
 - b. Handline
 - c. Piercing
 - d. Bresnan distributor

10. Why should a driver/operator position the apparatus with its front wheels toward the curb on a 45-degree angle?
 - a. To supply the attack line with the correct water flow for fire extinguishment
 - b. To establish a water supply without assistance from an additional company
 - c. So if the apparatus moves for any reason, it will move toward the curb and stop
 - d. So it can drop a supply line in either direction

Chapter 10

1. What is the metric system constant used when calculating the available water in a nonmoving source?
 - a. 7.5
 - b. 3.05
 - c. 1034.2
 - d. 1000

2. Which of the following is not a characteristic of an ideal dump site?
 - a. Firm, level ground
 - b. An intersection with multiple lanes
 - c. Enough room for tankers to move in and out
 - d. Strong enough to support water and incoming tankers

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3. All of the following must continuously be observed by a driver/operator while drafting except:
 - a. pump temperature gauge.
 - b. intake pressure.
 - c. discharge lines.
 - d. engine temperature gauge.

4. What might restrict a fire pump's discharge capacity and affect its ability to lift water?
 - a. The dump and fill sites
 - b. The reliability of the static water source
 - c. The proper placement of gaskets
 - d. The amount of vacuum created on the supply side of the pump

5. What is the most efficient traffic plan to use at a dump site?
 - a. It depends on the dump site.
 - b. Circle
 - c. Straight line
 - d. Semi-circle

6. Which piece of equipment is popular for obtaining water in inaccessible areas?
 - a. Manifold
 - b. Portable floating pump
 - c. Dump line
 - d. Hydrant steamer

7. Which of the following is not a type of strainer that can be used when pumping from a draft?
 - a. Flat
 - b. Low-level
 - c. Floating
 - d. Barrel

8. Why does cavitation occur?
 - a. To avoid introducing air into the hard suction hose
 - b. Because of increased engine rpm
 - c. From a vacuum leak, which introduces air into the intake water supply
 - d. Because of seasonal fluctuations in stream flows

9. Which of the following is the most important apparatus in a relay pumping operation?
 - a. Water shuttle
 - b. Source pumper
 - c. Attack pumper
 - d. Relay pumper

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10. What is the first step in preparing to draft from a water source?
- Check the soil to make sure it is dry and solid.
 - Prime the pump.
 - Lay a dry supply line.
 - Ensure the strainer is completely immersed.

Chapter 11

1. What are two types of foam proportioners?
- Eductors and duplex gauges
 - Injectors and fire barriers
 - Injectors and generators
 - Eductors and injectors
2. What is the most common method used today for foam system application?
- Around-the-pump proportioning system
 - Injection system
 - Balanced-pressure proportioning system
 - In-line eductor system
3. On what does the expansion of the foam solution depend?
- Knockdown speed and flow
 - Needed foam percentage
 - Introduction of air into the foam solution
 - Surface tension
4. Which foam concentrate is effective in controlling and extinguishing most Class B fires?
- Low-expansion foam
 - Medium-expansion foam
 - High-expansion foam
 - Protein foam
5. Which of the following does not describe Class A foams?
- They are used as an obstruction to the spread of fire.
 - They are effective on straw and hay.
 - They are referred to as wetting agents.
 - They are used on hydrocarbon, combustible fuels, and polar solvent fires.

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6. Which of the following is not a category of Class B foam?
 - a. AR-FFFP
 - b. Fluoroprotein foam
 - c. AFFF
 - d. Protein foam

7. What of the following components is not necessary for the creation of foam?
 - a. Fire
 - b. Concentrate
 - c. Water
 - d. Air

8. Why is water becoming less effective for extinguishing fires?
 - a. Because water mixes with the foam concentrate in various ratios to produce a foam solution
 - b. Because water has a longer blanket life
 - c. Because water is able to knock down fires faster
 - d. Because of the introduction of automobile and the use of petroleum products

9. Which of the following is not a reason to reduce foam concentrate percentages as low as possible?
 - a. Doubled firefighting capacity by carrying the same volume of foam concentrate
 - b. Testing and approval of foam for certain fires at specific ratios
 - c. Reduced cost of fixed foam system components
 - d. Less bulk in storage for departments

10. All of the following are advantages of an AP system over other foam-creation methods except:
 - a. the variable flow discharge rate allows for adjustment of foam depending on the application.
 - b. the system is not affected by hose length or elevation loss.
 - c. the system is not able to supply some lines with water and others with foam simultaneously.
 - d. the system operates with any size or type of fixed-gallon nozzle.

Chapter 12

1. What kind of nozzles should be used during performance testing?
 - a. Smooth bore
 - b. Fog stream
 - c. Adjustable gallonage
 - d. Water curtain

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2. When can the pump be stopped during the pumping test?
 - a. When the discharges are closed
 - b. Every 10 minutes
 - c. When it overheats
 - d. Never

3. Which test is a test of the priming system?
 - a. Tank-to-pump flow
 - b. Gauge
 - c. Pump engine control interlock
 - d. Vacuum

4. Which of the following is not a possible cause for a difference in engine speed from the original pump test?
 - a. Pump and/or engine wear
 - b. Air leak on pump's intake side
 - c. Improperly adjusted or inoperative transfer valve
 - d. Restrictions in intake arrangements

5. At the test site, the water should be within the reach of _____ of hard suction hose.
 - a. 20' (6.1 m)
 - b. 8' (2.4 m)
 - c. 1000' (305 m)
 - d. 4' (1.2 m)

6. All of the following devices can be turned off or not operated during the pump performance test except:
 - a. running lights.
 - b. a winch.
 - c. a CAFS compressor.
 - d. an aerial hydraulic pump.

7. Which test verifies the indication of the correct pump status when the pump is shifted from road to pump mode?
 - a. Intake relief valve system test
 - b. Pump shift indicator test
 - c. No-load governed engine speed test
 - d. Vacuum test

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8. Which of the following would not be done if the desired pressure is not attained at the pump after increasing pump speed?
 - a. Add one or more lengths of hose
 - b. Use a larger nozzle
 - c. Use a smaller nozzle
 - d. Throttle the discharge valve

9. Under what condition is a variance in engine speed acceptable during the pumping test?
 - a. When a suitable testing site not available
 - b. When the water temperature is 35°F to 90°F
 - c. If the apparatus passes the performance tests without exceeding the no-load governed engine speed
 - d. When the engine temperature must be kept within the proper range

10. Which environmental condition does not need to be recorded before and after testing?
 - a. Wind speed
 - b. Ambient air temperature
 - c. Water temperature
 - d. Atmospheric pressure

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|-----------|-----------|-----------|------------|
| 1. _____ | 31. _____ | 61. _____ | 91. _____ |
| 2. _____ | 32. _____ | 62. _____ | 92. _____ |
| 3. _____ | 33. _____ | 63. _____ | 93. _____ |
| 4. _____ | 34. _____ | 64. _____ | 94. _____ |
| 5. _____ | 35. _____ | 65. _____ | 95. _____ |
| 6. _____ | 36. _____ | 66. _____ | 96. _____ |
| 7. _____ | 37. _____ | 67. _____ | 97. _____ |
| 8. _____ | 38. _____ | 68. _____ | 98. _____ |
| 9. _____ | 39. _____ | 69. _____ | 99. _____ |
| 10. _____ | 40. _____ | 70. _____ | 100. _____ |
| 11. _____ | 41. _____ | 71. _____ | 101. _____ |
| 12. _____ | 42. _____ | 72. _____ | 102. _____ |
| 13. _____ | 43. _____ | 73. _____ | 103. _____ |
| 14. _____ | 44. _____ | 74. _____ | 104. _____ |
| 15. _____ | 45. _____ | 75. _____ | 105. _____ |
| 16. _____ | 46. _____ | 76. _____ | 106. _____ |
| 17. _____ | 47. _____ | 77. _____ | 107. _____ |
| 18. _____ | 48. _____ | 78. _____ | 108. _____ |
| 19. _____ | 49. _____ | 79. _____ | 109. _____ |
| 20. _____ | 50. _____ | 80. _____ | 110. _____ |
| 21. _____ | 51. _____ | 81. _____ | 111. _____ |
| 22. _____ | 52. _____ | 82. _____ | 112. _____ |
| 23. _____ | 53. _____ | 83. _____ | 113. _____ |
| 24. _____ | 54. _____ | 84. _____ | 114. _____ |
| 25. _____ | 55. _____ | 85. _____ | 115. _____ |
| 26. _____ | 56. _____ | 86. _____ | 116. _____ |
| 27. _____ | 57. _____ | 87. _____ | 117. _____ |
| 28. _____ | 58. _____ | 88. _____ | 118. _____ |
| 29. _____ | 59. _____ | 89. _____ | 119. _____ |
| 30. _____ | 60. _____ | 90. _____ | 120. _____ |