

FIRE ACADEMY

Candidate Preparation

Questions Pertaining to Probationary Firefighter Reading Assignments (Cycles 1-26)

Cycle 1

Fill in the blank with the appropriate choice

Chapter 11: Engine Co. Tools and Hose Rolling

- 1) The 1 $\frac{3}{4}$ " hand line is the primary attack line used at structural fires. This hose when used in conjunction with the 15/16" main stream tip and controlling nozzle, provides an adequate fire stream and has better maneuverability and easier handling than the larger 2 $\frac{1}{2}$ " hand line. At a nozzle pressure of 50 PSI, the 1 $\frac{3}{4}$ " hand line will flow approximately _____ GPM.
 - A) 80
 - B) 150
 - C) 180
 - D) 210

- 2) 2 $\frac{1}{2}$ " hose is the most versatile type of hose in the FDNY. What is true about 2 $\frac{1}{2}$ " hose?
 - A) It can be used as an attack line at a fire only.
 - B) It can be used as a supply line in a number of situations.
 - C) The coupling size is 2".
 - D) The friction loss in each 50-foot length of 2 $\frac{1}{2}$ " hose is 10 psi.
 - E) Operating pressure is normally limited to 200 psi.

- 3) When using a standpipe system in residential building fires a ____ light weight lead length should be used.
 - A) 2"
 - B) 2 $\frac{1}{2}$ "
 - C) 1 $\frac{3}{4}$ "

- 4) 2 $\frac{1}{2}$ " polyurethane-lined lightweight hose is colored _____ with _____ stripes.
 - A) Green, Red
 - B) Red, Green
 - C) White, Red
 - D) Red, White

- 5) Each size hose has different coupling sizes and friction losses. Both the 2 ½" rubber lined hose and 2 ½" light weight hose has 5 psi friction loss and 2 ½" couplings. For and 1 ¾" the friction loss is ___psi with ___ couplings
- A) 15 psi, 1 ½"
 - B) 10 psi, 2"
 - C) 15 psi, 2"
 - D) 10 psi, 1 ½"
 - E) 20 psi, 1 ½"
- 6) Operating pressure for 1 ¾", 2" light weight, 2 ½" rubber lined, 2 ½" light weight, and 3 ½" hose are normally limited to ___ psi.
- A) 150
 - B) 200
 - C) 250
 - D) 300
- 7) An 1 ¾" nozzle is used with the 1 ¾" hose with 15/16" MST. The required nozzle pressure is 50 psi at the tip. What is the required nozzle pressure for a 2" nozzle with 2" light weight hose?
- A) 40 psi
 - B) 50 psi
 - C) 55 psi
 - D) 60 psi
- 8) The 2 ½" nozzle should be marked with a _____ around the MST
- A) Red stripe
 - B) White stripe
 - C) Green stripe
 - D) Yellow stripe
- 9) Fog nozzles can produce either a straight stream or a fog pattern. The straight stream is hollow. The fog pattern is adjusted by rotating the outer barrel and the reach of the stream depends on the width of the pattern: when the fog pattern is _____, the reach of the pattern will become _____.
- A) Wider, Longer
 - B) Narrower, Shorter
 - C) Wider, Shorter
- 10) The required nozzle pressure for an 1 ¾" fog nozzle is ___ psi with a flowrate of 200 GPM, while the required nozzle pressure for a 2 ½" fog nozzle is ___ psi with a flowrate of 250 GPM.
- A) 100, 125
 - B) 125, 150
 - C) 100, 100
 - D) 100, 150

11) When using a 2" solid stream nozzle, what type of hose is used?

- A) 2" hose
- B) 2 ½" hose
- C) 2" lightweight hose
- D) 2 ½" lightweight hose

12) Fog patterns are effective for?

- A) Maximizing hydraulic ventilation
- B) Dispersing gas vapors
- C) Extinguishing fire near electrical equipment
- D) A and B
- E) All of the above

Chapter 12: Basic Engine Co. Ops

1) As soon as the Engine Officer has determined a hoseline is needed, they should contact the _____ firefighter via the handie-talkie and order a hoseline to be stretched.

- A) Nozzle
- B) Back Up
- C) Door
- D) Control

2) As soon as the Engine Officer has determined a hoseline is needed, they should contact the nozzle firefighter via the handie-talkie and order a hoseline to be stretched. With this transmission, the Engine Officer should include the following information:

- A) The number of lengths to be stretched
- B) The route and method by which the line should be stretched (even if obvious)
- C) The size of the line to be stretched

3) **True or False:** If the need for a hoseline is evident before the exact location of the fire is confirmed, the engine officer should wait till until the exact location is found. _____

4) The 2nd Hoseline will generally be stretched for how many of the following purposes? (more than 1 correct)

- A) Back-up the 1st hoseline
- B) Address extending fire
- C) Attack the main body of fire directly
- D) Protect a life hazard from fire

5) At most fires, the primary purpose for the 2nd hoseline will be to _____?

- A) Back-up the 1st hoseline
- B) Address extending fire
- C) Attack the main body of fire directly
- D) Protect a life hazard from fire

- 6) When backing up the 1st line, the 2nd will _____?
- A) protect the 1st line in case of a kinked length or other water loss.
 - B) be used simultaneously with the 1st line if warranted by advanced fire conditions
 - C) stretched to the same location as the 1st line and use an alternative path to get there.
- 7) If a hoseline is operating in a cellar or similar area below grade, an additional charged hoseline must be positioned _____.
- A) at the main entrance door
 - B) at the top of the cellar stairs
 - C) at a secondary entrance to the cellar
 - D) floor above
- 8) Typically, the 2nd arriving engine company will _____.
- A) stretch a 2nd hoseline
 - B) secure a positive water source
 - C) team up with the 1st arriving engine to operate the 1st hoseline
- 9) In which situation should a larger hoseline be used instead of an 1 ¾" hoseline?
- A) Mostly defensive position
 - B) Known size or extent of the fire area
 - C) Moderate fire conditions
 - D) Small, uncomparted fire area
 - E) Smoldering operations
 - F) 1 or 2 story taxpayer (2 ½" hoseline)

Chapter 14: Intro to Ladder Co. Tools

- 1) In Ladder Company Tools Manual, hooks come in various sizes, such as 6', 10', 12', 15, and 20'. Hooks are used mostly for _____.
- A) Pulling ceilings and opening walls.
 - B) Forcible entry and the prying open of a bulkhead door.
 - C) Probe the floor while searching a smoke filled apartment.
- 2) When using a hook to release a drop ladder on a fire escape, use the _____ the tool, keep pressure on the bottom rung as ladder is lowered and when possible, stand _____ fire escape
- A) Handle of, to side of
 - B) Hook end of, to side of
 - C) handle of, under the
 - D) hook end of, under the

- 3) Hooks come in various sizes: 6', 10', 12', 15', or 20'. The 6' is most commonly used. Which one of the following is considered a Halligan hook? (A or B)



A)



B)

- 4) When carrying hooks, care must be taken to avoid injuring people in front or behind. Hook should be carried with the _____, to the rear and close to the body.
- A) Hook end straight up
 - B) Hook end down
- 5) The Halligan hook has a shaft that is made of _____.
- A) Wood
 - B) Metal
 - C) Fiberglass
 - D) Both B or C
- 6) The hook that has a pike end has a shaft made of _____.
- A) Wood
 - B) Metal
 - C) Fiberglass
 - D) Both B or C
- 7) Which of the following is not one of the many uses of a hook? (more than one answer)
- A) Opening up concealed spaces
 - B) Pulling ceilings
 - C) Releasing drop ladders
 - D) Prying open windows
 - E) Prying open doors
 - F) Venting windows

True or False (Questions 9-10)

- 8) When pulling sheet rock ceilings, be aware they may fall in large heavy sections. _____
- 9) When venting windows from above stand directly above window to be vented. _____
- 10) Use the handle of the hook or the point to make small probing holes to check for extension or to allow water to flow out as opposed to pulling.
- 11) When pulling ceilings, penetrate the ceiling with one firm stroke with the hook end _____ to the lath.
A) Parallel
B) Perpendicular
- 12) When pulling through the lath, always pull with _____ strokes close to the beam.
A) Long
B) Short
- 13) The _____ is usually carried by the forcible entry firefighter, married together with the halligan tool.
A) Hook
B) Halligan hook
C) Pike head axe
D) Flat head axe
- 14) Besides being used as a striking tool against the halligan, axes can be used to cut floors and roofs. When cutting a floor, cut at a _____ degree angle and on a bias.
A) 30
B) 45
C) 60
D) 75
- 15) When cutting a roof with an axe, which of the following is an incorrect procedure?
A) Determine the location of the hole
B) Cut through the roof covering and remove it exposing the sheathing
C) Roof sheathing is placed at right angles to the beam and generally run front to rear
D) Cut through the sheathing at opposite sides of the proposed opening close to the beam to lessen the bounce of the axe.
E) After making hole, push down top floor ceiling with the axe

- 16) One of the most versatile tool in the FDNY arsenal is the _____.
- A) 6' hook
 - B) Axe
 - C) 6" halligan hook
 - D) Halligan tool
- 17) Which one of the following members would not carry a halligan?
- A) Roof firefighter
 - B) Outside vent firefighter
 - C) Forcible entry firefighter
 - D) Can firefighter
- 18) Which of the following is incorrect regarding the hydra ram?
- A) Can only be used to force inward opening doors
 - B) Can be used under water
 - C) Jaws open from $\frac{3}{4}$ " to a max of 4"
 - D) Exerts a maximum of 10,000 lbs. of force

Chapter 2-6

Matching (Questions 1-4):

- A) Flammable or explosive limits
 - B) Flash point
 - C) Ignition temperature
 - D) Heat
- 1) _____ The minimum temperature to which a fuel in air must be heated to start self-sustained combustion without a separate ignition source.
- 2) _____ The form of energy that raises temperature. Heat can be measured by the amount of work it does; for example, the amount of heat needed to make a column of mercury expand inside a glass thermometer.
- 3) _____ The percentage of a substance (vapor) in air that will burn once it is ignited. Most substances have an upper (too rich) and a lower (too lean) flammable limit.
- 4) _____ The minimum temperature at which a liquid fuel gives off sufficient vapors to form an ignitable mixture with the air near the surface. At this temperature, the ignited vapors will flash and will not continue to burn.
- 5) In Chapter 5, Rope, a _____ is a temporary method of securing an object, fastened so it can be readily undone while a _____ is formed by making a loop in the rope.
- A) Bend, bight
 - B) Bend, knot
 - C) Hitch, bight
 - D) Hitch, knot

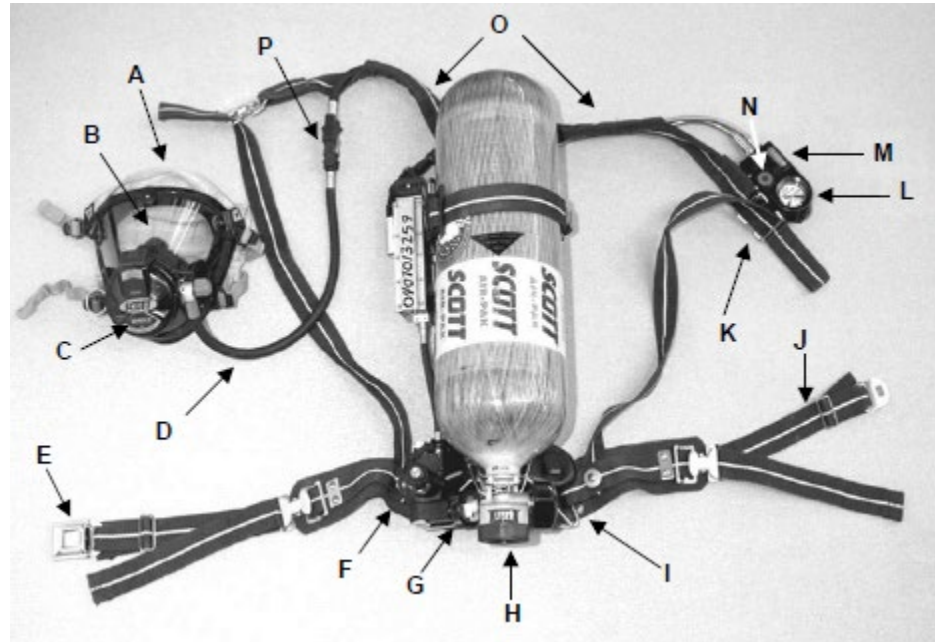
- 6) According to the PFM Chapter 4, Personal Protective Clothing, it is important to clean your gear semi-annually. Additionally bunker gear is not a close proximity suit such as what is used in Airport Crash and Fire Rescues. In a flashover situation a bunker gear equipped member must be within _____ and _____ feet from exit in order to survive.
- A) 1, 5
 - B) 10,15
 - C) 5,10
 - D) 15, 20
- 7) Regarding the FDNY's policy on the wearing of hoods to reduce the number of burn injuries to members, the hood _____ be worn whether damp or saturated with moisture.
- A) Shall
 - B) Shall never

Chapter 6 Intro to Scott 4.5 Mask I

- 1) Chapter 6 of the Probationary Firefighter Manual teaches about the respiratory protection the FDNY provides which is regulated by the U.S. Department of Labor Safety and Health Act. The Scott 4.5, Positive Pressure Self Contained Breathing Apparatus (SCBA) together with full firefighting clothing makes it part of the framework of firefighters' personal protective equipment. The face piece protects against entry of contaminants through the _____, but will not prevent entry of contaminants through a _____.
- A) Eyes, ruptured eardrum
 - B) Ruptured eardrum, eyes
 - C) Eyes, nose
 - D) Nose, eyes
- 2) The Code of Federal Regulations 29-CFR 1910.146 defines a confined space as any area that is _____.
- A) Not designed for continuous human occupancy
 - B) Large enough so a person can enter and work
 - C) Has limited means for entry and escape
 - D) All of the above
 - E) A and C
- 3) The End of Service Time Indicator alarms (vibralert and HUD) actuate when approximately ____ of full cylinder pressure remains in the cylinder and valve assembly.
- A) 15%
 - B) 20%
 - C) 25%
 - D) 30%

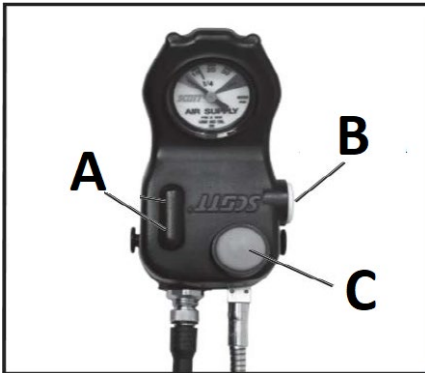
- 4) If a member runs out of air, that member should _____.
- A) Remove the facepiece
 - B) Remove the regulator
 - C) Notify another member and immediately leave the contaminated area
 - D) Be accompanied to a safe area by officer using an SCBA
 - E) Share facepieces with another member

Match the name of the piece to the letter in the picture (questions 5-11)



- 5) Quick Connect/Disconnect ____
- 6) Low Pressure Hose ____
- 7) High Pressure Coupling ____
- 8) Regulator ____
- 9) Manual Alert Button ____
- 10) Remote Console ____
- 11) Facepiece ____

- 12) Cylinders are constructed of an aluminum shell and wrapped with a fiber composite including neck and bottom, which strengthen and protect the shell. What else is true about SCBA cylinders?
- A) Pressurized to 4500psi, the cylinder holds purified breathing oxygen.
 - B) The service life of an air cylinder is 5 years.
 - C) Avoid fully depleting cylinders and leaving valve open.
 - D) Designated training cylinders are identified with a red top and/or a polymer protective sleeve. These cylinders are not to be used for firefighting purpose.
 - E) Inspect all spare cylinders weekly on Tuesdays for FULL pressure.
- 13) What is true about cylinder exchange procedures?
- A) Exchange cylinder for one that is FULL when: Prior to operating, the cylinder gauge reads less than FULL (green area).
 - B) Exchange cylinder for one that is FULL when: While operating, when the remote gauge and HUD reads 1/4(Vibralert, Remote Gauge and HUD (EOSTI) will warn of this).
 - C) Use a wrench to tighten the high pressure hand coupling to ensure a proper seal
 - D) During inspection of the SCBA, there may be a need to tighten or replace the Nylon O-Ring. To do so, use a 1/8" Allen wrench and a 7/16" open end wrench.
- 14) SCOTT 4.5 SCBAs are fitted with a UAC System. What is true about the use of this system?
- A) this is a Quick Charge attachment
 - B) can be used for routine recharging of the air cylinder
 - C) cannot be used for buddy breathing
 - D) transferring air from another SCBA
- 15) The Heads-Up Display (HUD) is fitted to the facepiece-mounted regulator and appears across the bottom of the user's field of view through the facepiece. What is true about the lights that are displaced?
- A) One red round light indicates $\frac{1}{4}$ cylinder
 - B) One solid yellow light indicates $\frac{1}{2}$ cylinder
 - C) One red rectangular light flashing rapidly you should leave the hazardous area immediately
 - D) One green light glowing is a full cylinder
 - E) When SCBA's cylinder valve is turned on, the HUD will initialize and illuminate all lights for fifteen (15) seconds
 - F) The Heads-Up Display works in conjunction with the vibralert to activate at precisely the same time to inform member when to immediately leave the contaminated area.



- 16) Which button is pressed on the remote console assembly with Pak-Alert SE 7 in order to manually cause the full alarm signal to be given? ____
- 17) In the automatic mode, the Scott Pak-Alert SE 7 constantly monitors motion of the SCBA backframe. The motion sensor is located in the sensor module along with the audible alarm. What else is true about the Scott Pak-Alert SE 7?
- A) Pre-alarm if the SCBA remains motionless for more than 12 seconds.
 - B) Full-alarm if the SCBA remains motionless for more than 20 seconds.
 - C) A pre-alarm may also be reset by pressing the reset button twice.
 - D) After the full alarm has been silenced holding the reset button until 3 quick audible chirps are heard.
 - E) The manual alarm may be activated by pressing the manual alarm button at any time, even when the SCBA is not pressurized.
- 18) How can you tell of the SCBA batteries are low?
- A) If while using the SCBA, the batteries begin to approach the end of their useful life, the sensor module will begin to sound a chirp every two seconds and the green light on the control module will go out.
 - B) When the Pak-Alert SE 7 is in the off condition, the batteries can be checked by pressing and holding the reset button on the console. A red light indicates that the batteries must be replaced before the SCBA is used again.
 - C) On the HUD, when the batteries require changing, the round low battery indicator at the far right of the display will light for twenty (20) seconds and then begin to flash slowly at once a second.
 - D) All of the above
 - E) A and B

Cycle 1 Answer Key

Chapter 11: Intro to Engine Co. Tools

1. C (CH11 sec 3.6.2) pg. 8
2. B (CH11 sec 2.3) pg. 3
3. A (CH11 sec 2.4) pg. 4
4. C (CH11 sec 2.5) pg. 5
5. E (CH11 sec 2.2.3, 2.3.4, 2.4.4, 2.5.4) pg. 2-5
6. C (CH11 sec 2.2-2.6) pg. 2-6
7. B (CH11 sec 3.6.2-3.6.4) pg. 8-10
8. B (CH11 sec 3.6.3.l) pg. 9
9. C (CH11 sec 3.7.1) pg. 11
10. C (CH11 sec 3.7.5.D, 3.7.6.D)
pg. 12-13
11. C (CH 11 sec 3.6.4.A) pg. 10
12. E (CH 11 sec 3.7.3) pg. 11

Chapter 12: Basic Engine Co. Ops

1. A (CH 12 sec 2.1) pg. 1
2. C (CH 12 sec 2.1) pg. 1
3. False (CH 12 sec 2.3) pg. 2
4. A, B, D (CH 12 sec 3.3.1) pg. 3
5. A (CH 12 sec 3.3.2) pg. 3
6. B (CH 12 sec 3.3.2) pg. 3
7. B (CH 12 sec 3.4.2) pg. 5
8. C (CH 12 sec 3.5) pg. 5
9. F (CH12 sec 4.7 & sec 4.9.1.B) pg. 8-9

Chapter 14: Intro to Ladder Co. Tools

1. A (CH14) pg. 1
2. D (CH 14) pg. 4 bullet 2 and Note
3. B (CH14) pg. 1
4. A (CH14) pg. 1 bullet 3
5. D (CH14 sec 2) pg. 1
6. A (CH14 sec 1) pg. 1
7. D, E (CH14) pg. 2-4
8. True (CH14) pg. 2 Note
9. False (CH14) pg. 4
10. True (CH14) pg. 3
11. A (CH14) pg. 2
12. B (CH14) pg. 2
13. D (CH14) pg. 5 bullet 2
14. C (CH14) pg. 5 axes
15. E (CH14) pg. 6
16. D (CH14) pg. 7
17. D (CH14) pg. 7
18. A (CH14) pg. 8

Chapter 2-6

1. C (CH2) pg. 1
2. D
3. A
4. B
5. C (CH 5) pg. 1
6. C (CH 4 sec 2.4) pg. 1
7. A (CH4 sec 2.7) pg. 1

Chapter 6: Intro to Scott 4.5 Mask I

1. A (CH6 sec 2.1.2 - 2.1.3) pg. 2
2. D (CH6 sec 2.2) pg. 2
3. C (CH6 sec 3.2.8) pg. 5
4. B (CH6 sec 2.1.7)
5. P (CH6 pg. 1 Photo)
6. D
7. G
8. C
9. N
10. L
11. B
12. C (CH6 sec 3.2.1, 3.2.2, 3.2.3, 3.2.13, 3.2.14, 3.2.11) pg. 5-6
13. D (CH6 3.3.1, 3.4.2, 3.4.3) pg. 7-8
14. C (CH6 sec 3.5.1) pg. 9
15. C (CH6 sec 3.8.9, fig 13) pg. 13-14
16. C (CH6 3.10 Fig 16, 3.10.8) pg. 17 & 20
17. E (CH6 sec 3.10.5, 3.10.6.C, 3.10.7.C, 3.10.8.B) pg. 18-19
18. D (CH6 sec 3.8.9.C, 3.10.10.A, 3.10.11) pg. 14, 20-21