

# FIRE ACADEMY

## Candidate Preparation

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

#### Cycle 16

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**Fill in the blank with the answer that is most correct:**

#### Chapter 24: Hurst Tool

- 1) Which of the following is incorrect regarding safety advancements made in construction of new vehicles?
  - A) Reinforced wheel and engine deflection systems that upon impact deflect the wheels and motor away from the passenger compartment.
  - B) Crumple zones that absorb the energy of the impact, preventing it from being absorbed into the passenger compartment.
  - C) Reinforced dashboards that have been developed to protect the occupants in case of a front or side impact
  - D) These changes have drastically increased the ability of occupants to survive the impact and have made disentanglement efforts easier.
  
- 2) Airbags present several challenges. Exact location, volume and mechanism of deployment will vary. Many newer systems include the use of dual stage inflators which means there could be a second airbag deployment. Our members should always treat the area around the airbags as if they have not been deployed. Which of the following is incorrect in abiding by the "5-10-20" rule?
  - A) Stay away from deployment path of side airbags at least 5"
  - B) Stay away from deployment path of driver airbags at least 10"
  - C) Stay away from deployment path of passenger airbags at least 20"
  - D) Stay away from deployment path of curtain type airbags at least 20"
  
- 3) The seats in vehicles today are generally stronger, some wrapping around the occupant, and are mounted more firmly to the floor pan making seat displacement more difficult. Many new design vehicles have airbag components mounted in the seats upholstery. During disentanglement, members should avoid cutting through all of the following except which choice?
  - A) Airbag sensors
  - B) Gas cylinders
  - C) Airbags
  - D) Rocker Channel

- 4) Which of the following are places where batteries may be found? (more than one)
- A) Under the hood
  - B) In the wheel well
  - C) Under the seats
  - D) In the trunk
- 5) Which of the following is incorrect regarding Hurst tool tactical procedures?
- A) Disentanglement is the removal of wreckage from around the victim
  - B) Extrication is the physical removal of the victim from the vehicle
  - C) Position yourself between the tool and the vehicle only in an emergency and due safety
  - D) The power unit should be placed in front or rear of vehicle
- 6) Engine company assignments at a vehicle extrication are correctly stated in all of the following except which one?
- A) Officer should divide the company into two teams
  - B) The officer and 1 firefighter ( equipped with trauma bag and cervical collars) proceed to the scene of the accident
  - C) The remaining members stretch and charge a precautionary hoseline
  - D) Consider the use of a foam handline
- 7) Ladder company operations are correctly stated in all of the following except which one?
- A) Officer and inside team proceed to scene to initiate perimeter survey, chock the vehicle and gain access to the victim.
  - B) The officer should ensure disconnection of battery, always removing positive terminal first.
  - C) Ensure car is in park, windows are opened, seats are moved back and seatbelts are removed before shutting down ignition.
  - D) If an engine or EMS is not on the scene, stabilize the patient.
- 8) The goal of vehicle stabilization is to prevent rocking of the vehicle. How many of the following are listed as part of vehicle stabilization? (more than one correct)
- A) Placing step chocks
  - B) Shutting the engine down
  - C) Engaging the parking brake
  - D) Putting transmission into park
  - E) Disconnecting the battery
  - F) Placing a cervical collar on the patient
- 9) Vehicles encountered on their side or roof presents a unique challenge. Which of the following is an incorrect tactic in these situations?
- A) Immediately enter the vehicle to administer first aid to the patient
  - B) Place step chocks and wedges under side of car and tires
  - C) Secure vehicle to a substantial object
  - D) Utility rope may be used to secure vehicle to a tree or apparatus
  - E) Entry into these vehicle could be the front or rear window

- 10) Which of the following is an incorrect statement regarding door removal in a vehicle extrication?
- A) There are two options, the Nader pin/ staple or hinge side
  - B) Protect victim from any flying debris
  - C) When cutting on the hinge side, cut the top and bottom hinges in that order. If the hinge has a spring, it must be removed with a halligan or officer's tool prior to cutting
  - D) While attacking the hinge side has been successful in the past, the Nader pin/staple side may be an improved approach with new car construction.

## Chapter 17 and 19: Oil burner/Compactor Fires

- 1) Oil burner emergencies usually result in a heavy odor or visible smoke on scene which may be caused by delayed ignition. Actions to be taken include either disconnecting electrical power and/or fuel shut off. Which one of the following statements listed is incorrect?
- A) Shut off electric power by use of oil burner remote control which is generally painted red.
  - B) In private dwellings, switch is usually located at top of interior cellar stairs.
  - C) In an old law tenement, brownstone or frame building outside of the oil burner room.
  - D) Shut off fuel at tank (all tanks have a shut off)
- 2) The FDNY spends many hours at emergencies and minor fires that involve incinerators and compactors. We must know how to deal with them in a professional and safe way. New York City Regulations encourage the use of compactors rather than incinerators, and require that incinerators be used only with safeguards. This policy reduces the risk of fire or smoke emergencies occurring, but does not eliminate them. Which of the following is an incorrect statement regarding these emergencies?
- A) For a fire in a compactor our priority is to extinguish the fire.
  - B) For a fire in an incinerator our priority is to clear the blockage
  - C) A large number of bags on the sidewalk may indicate a compactor
  - D) In city housing projects, the chute door on the 1<sup>st</sup> floor may be color coded: RED for incinerator, BLUE for compactor
- 3) Which one of the following is correct when dealing with a fire in an incinerator or compactor?
- A) When approaching building, steel cans filled with ashes may indicate an incinerator
  - B) All hallways have windows that can be ventilated
  - C) A compactor fire is considered an emergency, not a structural fire
  - D) Extension is likely in an incinerator shaft
- 4) In regards to incinerator operations, which of the following is an incorrect statement?
- A) Officer and FE team, and OVM of the ladder company will generally operate inside the building to ventilate, search and locate the blockage.
  - B) The Ladder Company chauffeur can vent stairways by opening the door of the bulkhead and securing it
  - C) If you open a chute door on a floor and smoke comes out, the blockage is generally above that floor.
  - D) If you open a chute door and a draft goes inward or there is little smoke, the blockage is generally below that floor.

- 5) How many of the following are listed as good practices in incinerator safety? (more than one)
- A) When opening a chute door wear full firefighting gear
  - B) Stand to the side of the hopper door
  - C) Consider using a mask
  - D) Always stay clear of the opening, in case there should be an explosion or eruption of fire
  - E) If attempting to clear a blockage from the base of an incinerator, shut off the auxiliary burner before commencing operations
- 6) A compactor is designed to reduce the volume of raw refuse. The refuse is dropped down a chute from the floors above, and guided by a shaped hopper into the compactor chamber. When the chamber is full, a photo electric beam is broken, initiating a ram that forces the refuse through a nozzle leading to a bag or container. Which of the following is incorrect regarding compactor room fire protection?
- A) Room should be fire resistive and protected by a fire door
  - B) A water outlet and hose are required to be located just outside the room
  - C) Sprinkler heads shall be provided in compactor units
  - D) A small O.S. & Y. valve controlling both the automatic head within the compactor and any heads within the compactor room is usually found on the water line in or near the compactor room.
- 7) Engine company operations, for incinerator chutes or unit fires, shall be guided by all of the following correct operations except which one?
- A) Engine company will stand fast in the lobby with masks, rolled ups and standpipe kit
  - B) If it is determined that the chute is to be flooded, a line is stretched to the floor below and operated into the chute
  - C) Hand stretch a line from the apparatus if there is no standpipe in the building
  - D) If fire is in basement incinerator room, entry may have to be made via an outside entrance, use Standard Operating Procedure (S.O.P.) for a basement fire.
- 8) Operations at compactor fires are governed by the location of the fire. There are three categories of compactor fires. Which of the following is not one of those categories?
- A) Fire in spark arrester
  - B) Chute fire
  - C) Fire in the compactor unit
  - D) Fire extended from the compactor into room
- 9) Compactor chute fire operations are correctly listed in how many of the following. (more than one answer)
- A) OV of the ladder company operates with the engine company to provide access to the chute and check for extension
  - B) Before operations commence, the officer and FE team must go to compactor room and shut off power.
  - C) Never operate the compactor unit to help clear the unit.
  - D) OV Firefighter, after providing access for the engine company, proceeds to roof to search and vent stairways.

- 10) Proper tactics for a fire in a compactor unit are correct in all of the following except which one?
- A) If fire has not extended to the room, the engine company stretches a line to the first floor, and operates into the chute to extinguish the fire.
  - B) Electrical shut off will be on the wall just outside the compactor room.
  - C) Ladder Company will begin overhauling after the engine company extinguishes the fire. Before opening the compactor unit access door, be sure the hoseline is shut down and the sprinkler O.S.& Y. is closed.
  - D) Open door to the unit and pull garbage to reach the fire.

## Chapter 7: Handie Talkie Emergencies/Code

- 1) Which of the following scenarios would you NOT transmit a "Mayday" for?
- A) The rear wall of the fire building which is a 3 story frame is peeling away, indicating a structural collapse in a matter of seconds.
  - B) You're operating on the 1<sup>st</sup> floor of a private dwelling and suddenly the floor beams burn through and collapse the floor.
  - C) The fire has not been extinguished and you sprain your ankle as you step onto roof from the aerial.
  - D) You're searching a basement of a taxpayer with your officer and you get turned around losing voice/visual contact. You're also not sure of your escape route.
- 2) You're the OV for Ladder Company 113 searching the top floor apartment of an old law tenement. You locate an unconscious firefighter, which one of the following procedures is considered incorrect?
- A) You contact your officer in the following format "Mayday-Mayday- Mayday. L113 OV to L113, Mayday."
  - B) After a response you continue with "L113 to command, mayday- unconscious member"
  - C) You also provide the location, unit, identity of the injured member, extent of their injuries, and if resources are needed.
  - D) In an attempt to identify the firefighter, you check the name on the back of his bunker coat
- 3) If a member becomes lost, which of the following procedures is considered incorrect?
- A) Immediately activate your pass alarm prior to contacting the Incident Commander
  - B) Provide to the Incident Commander the number and identity of members involved
  - C) Provide your location if known, or last recognizable reference point if location is unknown
  - D) Provide any imminent conditions that might affect trapped members
- 4) Which is the correct initial *communication* procedure when a member finds a trapped or lost member?
- A) Begin with a Handie Talkie message "Mayday-Mayday-Mayday, L113 OV to command, Mayday"
  - B) Begin by pressing your Emergency Alert Button
  - C) Begin by pressing the lost members Emergency Alert Button
  - D) Begin by pressing the lost members pass alarm

- 5) Which of the following serious change of conditions is NOT considered an Urgent message?
- A) There is a structural problem indicating the danger of collapse
  - B) There is a lost member
  - C) An interior attack is to be discontinued, and an exterior attack instituted
  - D) The 1<sup>st</sup> arriving engine is unable to secure a positive water source
- 6) An Urgent message shall be initiated anytime a change in conditions will severely impact an operation or the safety of members. A member aware of a change shall immediately press their Emergency Alert Button, and then contact the IC. Which of the following information is not necessary for the member to report?
- A) Nature of the problem
  - B) Location
  - C) Members/units affected
  - D) How much air reporting member has left in his cylinder
- 7) Effective Handie Talkie communications in High rise buildings and hospitals are generally hampered in all of the following areas except?
- A) Elevator cars
  - B) Core areas
  - C) Stairs
  - D) Unobstructed shafts

### Chapter 6: Mask Confidence 3

- 1) Mask cylinder valve assembly consists of 5 parts. Which of the following is an **incorrect** statement regarding these parts?
- A) The **Rubber bumper** protects the assembly
  - B) The **Cylinder hanger** connects the cylinder to back frame assembly
  - C) The **Cylinder gauge** reads the pressure within cylinder and gauge assembly
  - D) The **Cylinder valve** needs one full turn counter clockwise when in use
- 2) How many of the following statements are correct regarding cylinders?(more than one)
- A) Place spare cylinders in storage boxes or apparatus holders. Extra cylinders should be placed on their sides with the valve stem and handle protected from damage.
  - B) Inspect all spare cylinders weekly on Tuesdays for FULL pressure (4500 psi)
  - C) Avoid depleting cylinders and leaving valve open. Doing so will allow moisture and contaminants to build up inside the cylinder
  - D) Cylinders with a blue top and/or a polymer protective sleeve are designated training cylinders. These cylinders may be used for firefighting purposes.

- 3) How many of the following situations necessitate the exchange of a cylinder? (more than one)
- A) Prior to operating, the remote gauge reads less than full (green area)
  - B) While operating, the remote gauge and the HUD read less than  $\frac{1}{4}$ .
  - C) While operating the Vibralert sounds
  - D) When turning on a round red light illuminated on the HUD

### True or False (4-8)

- 4) \_\_\_\_\_ Never use a wrench to tighten the high-pressure hand coupling.
- 5) \_\_\_\_\_ During inspection of the SCBA, there may be a need to tighten or replace the Nylon O- ring. To do so use a  $\frac{1}{8}$ " Allen wrench and a  $\frac{7}{16}$ " open end wrench
- 6) \_\_\_\_\_ The universal air connection (UAC) permits the emergency replenishment of an approved SCBA breathing air supply cylinder on a user's SCBA from an approved air supply source while in use
- 7) \_\_\_\_\_ The UAC is not a Quick charge attachment and must not be used for routine recharging of the air cylinder
- 8) \_\_\_\_\_ It is not necessary for the UAC dust cover to be in place. If missing, requisition one from Mask Service Unit and place over the UAC.
- 9) The Pressure Reducer Assembly (PRA), mounted on the left side of the back frame, reduces the high-pressure breathing air received from the cylinder. Consisting of two systems, the PRA normally reduces the operating pressure to \_\_\_\_\_ before entering the regulator's low pressure hose. The regulator then controls the pressure within the facepiece to slightly above atmospheric.
- A) 50 psi
  - B) 100 psi
  - C) 150 psi
  - D) 185 psi
- 10) A malfunction of the PRA's primary system will automatically direct breathing air into a secondary system. When this occurs, the operating pressure will only be reduced to \_\_\_\_\_ and cause the vibralert alarm to activate. The member will only know that the vibralert alarm has activated and MUST NOTIFY THEIR OFFICER AND IMMEDIATELY LEAVE THE CONTAMINATED AREA.
- A) 50 psi
  - B) 100 psi
  - C) 150 psi
  - D) 185 psi

11) Failure of both the primary and secondary systems in the open position will activate a Relief Valve in the PRA, which will rapidly discharge all pressure in excess of \_\_\_\_\_ into the atmosphere. When this occurs, the cylinder valve should be partially closed, allowing only a minimal amount of air to release, permitting the member to both breathe and conserve air. MEMBER MUST NOTIFY THEIR OFFICER AND IMMEDIATELY LEAVE THE CONTAMINATED AREA.

- A) 50 psi
- B) 100 psi
- C) 150 psi
- D) 185 psi

12) **True or False:** If a member of a company, using an SCBA, leaves a contaminated area, this member must be accompanied to a safe area by another member using a SCBA.

### Chapter 9: High Rise Tactics

- 1) General descriptions of High Rise Office buildings can be seen in all of the following examples except?
- A) They are 75' or more in height
  - B) They vary from 2000 to over 300,000 sq. feet
  - C) They are considered Class 1 non-combustible
  - D) Buildings shall be classified as Class E when they are primarily occupied for residential purposes.

### **Match the approximate year built with the description: (Questions 2-6)**

- A) "Heavy weight" built before 1945
  - B) "Medium weight" built between 1945 and 1968
  - C) "Light weight" built after 1968
- 2) \_\_\_\_\_ 10-20 lbs. per cubic foot, fire towers required.
- 3) \_\_\_\_\_ Exterior windows were open able, core construction techniques were not used
- 4) \_\_\_\_\_ Extensive plenum ceilings with a lack of fire stopping, core construction used extensively
- 5) \_\_\_\_\_ Lack of compartmentation, exterior curtain walls leave a space of 6-12", requiring additional fire stopping
- 6) \_\_\_\_\_ Floors constructed of reinforced concrete, structural steel components were encased in concrete.



- 7) In High Rise office buildings, a Class E communication system consists of all of the following components except which one?
- A) A fire command station, located in the Lobby near the elevator control panel, with a public address serving all floors, elevators and stairways.
  - B) Manual alarm sending station in each stairwell
  - C) Associated systems such as smoke detectors and sprinkler water flow alarms
  - D) Floor warden stations, on each floor, with two-way communications with the fire command station
- 8) Which of the following is an incorrect statement regarding High Rise office buildings?
- A) A curtain wall is non-bearing and built between piers or columns for the enclosure of the structure, but not supported at each story.
  - B) Q decking is a type of composite floor construction in which corrugated steel is used to support the concrete floor.
  - C) A fire safety director is a civilian employee of the building, holding a certificate of fitness from the FDNY. This person is required whenever there are more than 250 people anywhere in the building.
  - D) Core construction is when a building's elevators, stairway and building support systems are grouped together in one area of the building.
- 9) **True or False:** Compartmentation is the subdividing of floor areas by fire resistive separations into smaller spaces or compartments, such as numerous enclosed offices as compared to open space cubicles.

# Cycle 16 Answer Key

## Chapter 24: Hurst Tool

1. D (CH24 sec 2.1 thru 2.4) pg1
2. D (CH24 sec 2.6) pg. 2
3. D (CH24 sec 2.12) pg. 3
4. All (CH24 sec 2.15) pg. 3
5. C (CH24 sec 3.3) pg. 4
6. B (CH24 sec 4.2) pg. 5
7. B (CH24 sec 4.2.1 and 4.2.4) pg. 5
8. A, B, C, D, E (CH24 sec 5.1) pg. 5
9. A (CH24 sec 5.6) pg. 7
10. D (CH24 sec 6.1) pg. 8

## Chapters 17 and 19: Oil Burner/Compactor Fire

1. C (CH17 sec 5.1 and 5.2) pg. 17
2. D (CH19 sec 1.2.B and 1.3) pg. 1
3. A (CH19 sec 1.3.C, 2.1.A.1, and 1.2.B) pg. 1-2
4. B (CH19 sec 2.1, 2.1.A Note, 2.2) pg. 2
5. A, B, C, D, E (CH19 sec 3.2) pg. 4
6. B (CH19 sec 7.1 thru 7.4) pg. 6
7. B (CH19 sec 4.1) pg. 5
8. A (CH19 sec 8.2 thru 8.4) pg. 7-8
9. A, B (CH19 sec 8.2.A.1, 8.2.B.1, 8.2.B Note, 8.2.C) pg. 7
10. B (CH19 sec 8.3.A, 8.3.E.1 thru 8.3.E.3) pg. 8

## Chapter 7: Handie Talkie Emergencies/Code

1. C (CH7 sec 4.1.A,B,C, E and sec 4.2.A) pg. 4-7, 9
2. A (CH7 sec 4.1.C) pg. 5-6
3. A (CH7 sec 4.1.E.1 and 4.1.E.3) pg. 7-9
4. B (CH7 sec 4.1.E) pg. 7-9
5. B (CH7 sec 4.2.D, 4.1.D, 4.2.C, 4.2.B) pg. 7, 10-11
6. D (CH7 sec 4.2.G) pg. 12
7. D (CH7 sec 6) pg. 14

## Chapter 6: Mask Confidence 3

1. D (CH6 sec 3.2.9) pg. 6
2. A, C (CH6 sec 3.2.10-3.2.14) pg. 6
3. A, B C (CH6 sec 3.3.1 and 3.8.9) pg. 7, 13
4. True (CH6 sec 3.3.2.H) pg. 7
5. True (CH6 sec 3.4.3) pg. 8
6. True (CH6 sec 3.5.1) pg. 9
7. True (CH6 sec 3.5.1) pg. 9

8. False (CH6 sec 3.5.2) pg. 9
9. B (CH6 sec 3.6.1) pg. 9
10. C (CH6 sec 3.6.2) pg. 9
11. D (CH6 sec 3.6.3) pg. 9
12. True (CH6 sec 3.6.Note) pg. 9

**Chapter 9: High Rise Tactics**

1. D (CH9) pg. 53
2. B (CH9) pg. 53-54
3. A (CH9) pg. 53-54
4. C (CH9) pg. 53-54
5. C (CH9) pg. 53-54
6. A (CH9) pg. 53-54
7. B (CH9) pg. 55
8. C (CH9) pg. 55-56
9. True (CH9) pg 55