

PTS Publications

A Division of Performance Training Systems, Inc.

Hazardous Material Awareness

Exam Prep II-2

Sixth Edition - 2019

Please read instructions on next page!

Exam II-2: 75 Exam Items – Adding Difficulty and Depth

The reading list for Exam II-2 is as follows:

1. IFSTA, Hazardous Materials for First Responders, 4th Edition, Chapters 1 through 11.
2. Jones and Bartlett Learning, Hazardous Materials Awareness and Operations, 1st Edition, Chapters 1 through 5, 10, and 11.
3. IFSTA, Essentials of Firefighting, 7th Edition, Chapters, 24, 25, 26.

Directions: Remove Examination II-2 from the manual. The reason for removing the exam from the book is to make it easier to score and conduct the research for those guessed and missed exam items. Another advantage is the portability of the exam so research and scoring can be accomplished at any time or place.

First, take a careful look at the test. There should be 75 exam items. In Appendix C you will find an Answer Form for Hazardous Material Operations II-2 Examination. It can be removed from the book for ease of marking. Fill in the appropriate bubble answer (A-D) **in ink**. Remember the rule about changing the answer. Our research has shown that changed answers are often incorrect, and often, the answer that is chosen first is the correct one.

If you **guess** the answer to a question, place an “X” or a checkmark by your answer. This step is vitally important as you gain and master knowledge. We will explain how we treat the “guessed” items later in SAEP®.

Next, take the examination. Once you complete it, go to Appendix B and score your test. Once the test is scored, carefully follow the directions for feedback on the missed and guessed exam items.

1. Which is a characteristic of a compressed gas tube trailer?
 - A. The manifold or valve control box is enclosed at the rear.
 - B. It has temporary markings for the material or ownership.
 - C. It carries liquefied gases.
 - D. It carries only non-flammable gases.

2. A specialized intermodal tank container which transports gases in high-pressure cylinders is:

A. a tube module/trailer.	B. a cryogenic intermodal tank.
C. an IM 101.	D. an IM 102.

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3. A specialized intermodal tank container which transports gases in high-pressure cylinders is:

- A. tube modules.
- B. IM 101.
- C. IM 102.
- D. cryogenic intermodal tanks/IM type 7.

4. Cryogenic liquid intermodal, IMO type 7, containers are:

- A. non-pressure tanks that are highly insulated.
- B. atmospheric pressure non-insulated tanks.
- C. very low-pressure highly insulated tanks.
- D. diverse in pressure ratings as high as 600 psi.

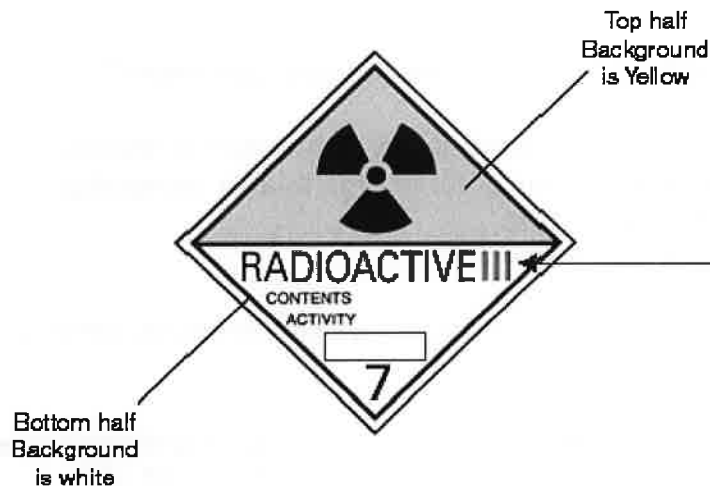
5. You have arrived on the scene of a hazardous materials incident involving pesticides. On one of the pesticide labels, you notice the statement "Keep away from children." This statement is the:

- A. Signal Words.
- B. EPA Statement.
- C. Precautionary Statement.
- D. Danger Statement.

6. The products that IM 102 intermodal portable tanks typically carry are:

- A. nonregulated materials.
- B. flammable gases.
- C. hydrogen.
- D. radioactive materials.

7. The item that is represented by the vertical stripes indicates the:



- A. radioactive levels.
- B. Hazard Class.
- C. maximum radiation levels.
- D. number of radioactive atoms.

8. The design pressure of an IM 101 portable tank is:
- A. 14.5 to 25.4 psi. B. 100 to 500 psi.
 C. 25.4 to 100 psi. D. 6.89 to 14.5 psi.
9. What type of container is used to ship materials of radioactivity by air?
- A. Industrial B. Type A C. Type C D. Extruded
10. Packaging used for transport with extremely low levels of radioactivity that present no risk to the public or environment is:
- A. Type B. B. Excepted. C. Concrete Box. D. Industrial.
11. Which is a type of drum?
- A. Vessicants B. Wood barrels C. Open heads D. Bulk Containers
12. Where would you find valves on a one-ton container?
- A. End B. Top
 C. Bottom D. Middle
13. Emergency centers such as the _____ are principal agencies providing immediate technical assistance to an emergency responder.
- A. Occupational Safety and Health Administration
 B. National Fire Protection Association
 C. National Center for Disease Control
 D. CHEMTREC®
14. Cryogenic liquids are those which exist at:
- A. greater than 32°F. B. minus 0°F.
 C. minus 130°F. D. minus 110°F.
15. A substance that spontaneously releases ionizing radiation would be labeled hazard classification _____.
- A. 7 B. 9 C. 11 D. 13
16. Which value represents an atmosphere that poses an immediate hazard to life or can cause irreversible, debilitating effects on health?
- A. TLV-TWA B. IDLH C. REL D. PEL

17. The CHEMTREC® organization is available _____ hours per day to provide information about:

- A. 24, certain chemicals.
- B. 24, many chemicals.
- C. during normal business, only liquid chemicals.
- D. during normal business, selected chemicals.

18. Alpha particles are:

- A. gas particles.
- B. ionizing radiation like x-rays.
- C. particles with weight and mass.
- D. deadly radiation.

19. When contacting the Chemical Transportation Emergency Center, the caller should be prepared to provide the:

- A. name of the site manager at the facility.
- B. type of container or vehicle.
- C. names of the responders.
- D. number of casualties.

20. The Chemical Transportation Emergency Center can aid responders if:

- A. they have a Safety Data Sheet to fax.
- B. they have received financial authorization for clean-up.
- C. the name of the shipper or manufacturer is known.
- D. they are the approved hazardous materials team.

21. The Chemical Transportation Emergency Center and the Canadian Transport Emergency Centre can usually provide:

- A. authorization for cleanup.
- B. previous incidents and exposures.
- C. technical information.
- D. advice on remediation contractors.

22. What would be the major concern if you were to come upon a leaking tanker of the type pictured below?

- A. Frost bite
- B. Ignition of vapors
- C. Encountering corrosives
- D. Encountering bulk solids



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31. _____ is the ratio of the weight of a volume of liquid to the weight of an equal volume of water.
- A. Flammable/explosive range
B. Flash point
C. Specific gravity
D. Vapor density
32. All biological etiologic agents and toxins are designated as DOT Hazard Class:
- A. 3. B. 6. C. 7. D. 1.
33. Determining whether a vapor will rise, or fall is:
- A. vapor dispersion.
B. vapor density.
C. vaporization.
D. specific gravity.
34. Which is considered a Department of Transportation Hazard Class 4 product?
- A. Flammable gas
B. Flammable solid
C. Oxidizing substances
D. Flammable liquid
35. One type of hazardous material that is classified as Department of Transportation Hazard Class 1.1 is:
- A. spontaneously combustible materials.
B. water reactive substances.
C. oxidizing substances.
D. explosives with a mass explosion hazard.
36. The minimum temperature at which a liquid gives off enough vapors to form an ignitable mixture, with air near the surface, is the:
- A. combustion point
B. ignition point
C. flash point
D. fire point
37. Which DOT Hazard Class covers nerve agents used in chemical warfare?
- A. DOT 6.3 B. DOT 6.1 C. DOT 6.2 D. DOT 5.2
38. Water solubility is the:
- A. degree to which a substance will mix with water.
B. percentage of an acid or base dissolved in water.
C. measure of a substance's tendency to deteriorate another substance.
D. ratio of the weight of a volume of liquid or solid to the weight of an equal volume of water.

39. The UN/DOT hazard class for nerve agents is:
- A. Division 2.2. B. Division 2.3. C. Division 6.2. D. Division 6.1.
40. _____ is the process of taking in materials through the skin or eyes.
- A. Inhalation B. Absorption C. Injection D. Ingestion
41. The route of exposure effecting the respiratory tracts associated with causing ill effects, both acute and chronic, is:
- A. absorption. B. ingestion. C. inhalation. D. injection.
42. Materials such as benzene, asbestos, and arsenic are:
- A. corrosives. B. convulsants. C. irritants. D. carcinogens.
43. One of the most common products of combustion encountered in structure fires is:
- A. Benzene. B. carbon monoxide.
C. Hydrogen Chloride. D. Sulfur Dioxide.
44. A poison that can be harmful if inhaled, swallowed, absorbed or introduced into the body is:
- A. an asphyxiant. B. toxic.
C. corrosive. D. a virus.
45. The resource that would be useful in determining the size of an endangered area during a hazmat incident is the:
- A. International Fire Service Training Association Training Manual.
B. National Fire Protection Association Guidebook.
C. Emergency Response Guidebook.
D. Environmental Protection Agency.
46. Which resources are available for determining the concentrations of a released hazardous material in an endangered area?
- A. Concentrations can be estimated using the Emergency Response Guide.
B. Monitoring equipment should be utilized, keeping in mind that Haz Mat technicians are needed to operate this equipment.
C. It is impossible to determine concentrations of hazardous materials.
D. Concentrations can be estimated by the odor of the leaking product.

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47. A process by which one substance combines with a second substance is:
- A. absorption.
 - B. mixture.
 - C. combination.
 - D. solution.
48. A process by which a hazardous liquid flow is redirected away from an area is:
- A. absorption
 - B. dispersion
 - C. diversion
 - D. retention
49. The term isolate hazard area and deny entry is:
- A. moving everyone from a threatened area to a safer area.
 - B. keeping everyone not directly involved in the emergency operation away from the affected area.
 - C. allowing only first responders into the affected area.
 - D. having people remain inside a building.
50. The term evacuate is:
- A. allowing only first responders into the affected area.
 - B. having people remain inside a building rather than moving them to another area.
 - C. moving everyone from a threatened area to a safer area.
 - D. keeping everyone not directly involved in the emergency operation away from the affected area.
51. The immediate concern with combustible liquid spills is to:
- A. apply aqueous film forming foam to the combustible liquid.
 - B. prevent ignition.
 - C. dike storm drains along collection route.
 - D. ignite fuel to allow the combustible materials to burn off.
52. The _____ zone is the area of highest hazard.
- A. Limited access
 - B. hot/exclusion
 - C. support
 - D. blue
53. One of the factors that can change the evacuation area is:
- A. firefighters entering incidents from the north.
 - B. a change in wind direction.
 - C. the number of firefighters responding to the incident.
 - D. the number of firefighters with self-contained breathing apparatus.

54. Which protective action must be taken during shelter in-place protection?
- A. Close all windows.
 - B. Establish a water curtain.
 - C. Use positive pressure to protect the structure.
 - D. Ensure heating, ventilation, air conditioning system remains operating.
55. At a suspected terrorist incident, evidence collection is primarily the responsibility of:
- A. whoever located the evidence.
 - B. the Haz-Mat group.
 - C. law enforcement.
 - D. the Central Intelligence Agency.
56. Removal of contaminated victims that need medical treatment from the hazard area requires:
- A. that personnel must wait until the full decontamination corridor is in place and operational.
 - B. the emergency decontamination process.
 - C. that victims shall remain in the hot zones indefinitely.
 - D. Decontamination of these victims is not required.
57. The taking of hazardous materials into the body through the undamaged skin and the eyes are:
- A. absorption.
 - B. ingestion.
 - C. inhalation.
 - D. injection.
58. Which statement about emergency decontamination is true?
- A. It can be implemented without a formal decontamination area.
 - B. It provides only fine decontamination.
 - C. The victim does not pose a threat of secondary contamination.
 - D. It removes the threat of secondary decontamination.
59. Heat stroke is associated with:
- A. muscle cramps in legs and abdomen.
 - B. hot, dry, red skin.
 - C. heightened state of unconsciousness.
 - D. cool, moist skin.
60. Penetration is the:
- A. time for the chemical to move through the protective suit.
 - B. physical damage from a chemical.
 - C. occurring on a molecular level.
 - D. movement of material through closures.

61. Heat _____ occurs when the circulatory system begins to fail, resulting in rapid, shallow breathing and cool, clammy skin.

- A. cramps B. exhaustion C. rash D. stroke

62. Cracking, charring, and discoloration are examples of _____ to a chemical garment.

- A. penetration B. degradation C. permeation D. disintegration

63. What type of personal protective equipment is most commonly used when dealing with a chemical liquid incident?

- A. Level C protective clothing
B. Structural firefighting clothing
C. Splash protective clothing
D. High temperature splash protective clothing

64. The decontamination of crew members using water and soap is:

- A. dilution. B. adsorption.
C. absorption. D. neutralization.

65. The elapsed time between initial contact of a chemical with the outside surface of the chemical protective equipment and detection at the inside surface of the material is:

- A. degradation. B. breakthrough time.
C. penetration. D. permeation.

66. The physical destruction or decomposition of chemical protective clothing material due to exposure to chemicals, general use, or ambient conditions is:

- A. degradation. B. penetration. C. permeation. D. diffusion.

67. Standard structural firefighting ensemble including self-contained breathing apparatus is adequate for which chemical, biological, radiological, nuclear, and high yield explosives incidents?

- A. Splash protection B. Beta radiation
C. Gamma radiation D. Incendiaries

68. An air-cooling system consists of small airlines providing _____ cooling of the user by blowing cool air over the body inside a suit or vest.

- A. radiant B. conductive C. recirculating D. convective

69. When using air purifying respirators, which is an operational component that should be considered prior to use?

- A. The supplied airline cannot exceed 300 feet.
- B. The appropriate cartridge/filter.
- C. The filters are only usable for less than 30 minutes.
- D. Ambient air must contain at least 18.5% oxygen.

70. What is an operational consideration when using supplied air respirators?

- A. National Institute of Occupational Safety and Health certification limits the maximum hose length from the source to 300 feet.
- B. Use of airlines in an oxygen deficient atmosphere requires a secondary emergency air supply.
- C. The proper air filtering cartridge for the expected contaminants must be selected.
- D. The Emergency Breathing Supply System is limited to no longer than 30 minutes of use.

71. The Emergency Response Plan should identify:

- A. personal protective equipment and emergency response equipment.
- B. legal liability limitations.
- C. law enforcement responsibilities.
- D. reimbursement procedures.

72. Contaminated evidence requires:

- A. an investigator to retrieve it.
- B. documentation of chain of custody.
- C. a quarantine of at least 24 hours.
- D. it be immediately brought to the cold zone.

73. The remote shut off on a MC/DOT 306/406 will be located at the:

- A. left front corner.
- B. right front corner.
- C. top right corner.
- D. left rear corner.

74. Reusable personal protective equipment requires:

- A. immediate disposal
- B. strict bag and tag procedures.
- C. strict avoidance.
- D. inspection and testing at regular intervals.

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75. When performing product control, which of the following should be documented?

- A. the attorney firm for the accused offender
- B. the age of the responders
- C. the name of law enforcement present
- D. the clean-up process utilized in recovery phase

Did you score 80% or higher on Exam II-2 Feedback? Circle Yes or No in ink. We will return to your Yes or No answer to this question later in SAEP®.

Now that you have finished the Feedback Step for Examination II-2, it is time to repeat the process by taking another comprehensive examination of the NFPA Standard.

PTS Publications

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Hazardous Material Operations

Exam Prep II-2

Feedback and Answers

Sixth Edition - 2019

Please read instructions on next page!

Directions: Follow these steps carefully for completing the Feedback Part of Systematic Approach to Exam Preparation (SAEP®):

1. After entering your scores, look up the answers for the exam items you missed as well as those you guessed, even if you guessed correctly. If you are guessing it means the answer isn't perfectly clear. In this process we are committed to making you as knowledgeable as possible.
2. Enter the number of missed and guessed exam items in the blank on the next page following the end of the examination.
3. Highlight the answer in the reference materials. Once you have highlighted the answer, read the paragraph preceding and the paragraph following the one in which the correct answer is located. This is **essential** to learning the material in context and by association. These learning techniques (context/association) are the very backbone of the SAEP® method.
4. Once you have completed the Feedback part you may proceed to the next examination.

1. 5.2.1 ID POT HAZARD 79

Reference: NFPA 1072, 5.2.1 (A- 2,3) (B- 1).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1115, Figures 24.105, 24.107.

*IFSTA, Hazardous Materials for First Responders, 5th Edition, pages 250-251. Fig. 5.54
Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, pages 79-80. Fig. 4-19*

Answer: A

2. 5.2.1 ID POT HAZARD 80

Reference: NFPA 1072, 5.2.1 (A- 2) (B- 1).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1115.

*IFSTA, Hazardous Materials for First Responders, 5th Edition, pages 250, 266. Table 5.7
Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, pages 79-80. Fig. 4-19*

Answer: A

3. 5.2.1 ID POT HAZARD 81

Reference: NFPA 1072, 5.2.1 (A- 2,8(i)) (B-1).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1126.

*IFSTA, Hazardous Materials for First Responders, 5th Edition, pages 269-270. Fig. 5.88
Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, pages 75-76. Fig. 4-8*

Answer: D

5.2.1 ID POT HAZARD 82

Reference: NFPA 1072, 5.2.1 (A- 2,8(m)) (B-1).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, pages 1126, 1127, Figure 24.128.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 235.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 75. Fig. 4-8

Answer: D

5. 5.2.1 ID POT HAZARD 84

Reference: NFPA 1072, 5.2.1 (A- 3,6(a)) (B- 5).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, pages 1187, 1188.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 96.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 48. Fig. 2-52

Answer: C

6. 5.2.1 ID POT HAZARD 88

Reference: NFPA 1072, 5.2.1 (A- 2,3) (B- 1).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, pages 1107, 1139, Table 24.8.

IFSTA, Hazardous Materials for First Responders, 5th Edition, pages 266-267. Table 5.7 Table 5.8

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 74,76. Fig. 4-5

Answer: A

7. 5.2.1 ID POT HAZARD 89

Reference: NFPA 1072, 5.2.1 (A- 3,8(j)) (B- 1,5).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, Ch. 24, page 1171, Figure 24.197.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 194, 195. Fig. 4.76.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, pages 95,96. Fig. 4-42

Answer: A

8. 5.2.1 ID POT HAZARD 90

Reference: NFPA 1072, 5.2.1 (A- 2) (B- 1).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, pages 1107, 1139, Table 24.8.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 267. Table 5.8

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 73,74,76. Fig. 4-5

Answer: C

9. 5.2.1 ID POT HAZARD 93

Reference: NFPA 1072, 5.2.1 (A- 2,3,8(j)) (B- 1).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, pages 1144.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 96.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 97. Fig. 4-45

Answer: C

10. 5.2.1 ID POT HAZARD 94

Reference: NFPA 1072, 5.2.1 (A- 2,3,8(j)) (B- 1).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, pages 1143.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 273.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 97.

Answer: B

11. 5.2.1 ID POT HAZARD 99

Reference: NFPA 1072, 5.2.1 (A- 2) (B- 1).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1151.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 281.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 22. Fig. 2-7

Answer: C

12. 5.2.1 ID POT HAZARD 102

Reference: NFPA 1072, 5.2.1 (A- 2) (B- 1).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1118.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 272. Fig. 5.93

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, pages 73- 74. Fig. 4-1E

Answer: A

13. 5.2.1 ID POT HAZARD 104

Reference: NFPA 1072, 5.2.1 (A- 6(a)) (B- 5), 5.3.1 (A- 1,7,10), 4.3.1 (A- 1), 4.4.1 (A- 2) (B- 2).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, Ch. 24, page 1222.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 204.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 82.

Answer: D

14. 5.2.1 ID POT HAZARD 105

Reference: NFPA 1072, 5.2.1 (A- 8(f)).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, pages 1220, 1125.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 44.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 255.

Answer: C

15. 5.2.1 ID POT HAZARD 106

Reference: NFPA 1072, 5.2.1 (A- 1,3,8(j)) (B- 2)

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, pages 1151, 1159.

IFSTA, Hazardous Materials for First Responders, 5th Edition, pages 76, 78, 85. Fig. 2.37 Fig. 2.40 Table 2.5

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, pages 34-35,38. Fig. 2-25

Answer: A

16. 5.2.1 ID POT HAZARD 107

Reference: NFPA 1072, 5.2.1 (A- 12) (B- 8).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, pages 1307, 1334.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, pages 107, 166.

IFSTA, Hazardous Materials for First Responders, 5th Edition, pages 423, 534. Table 11.1

Answer: B

17. 5.2.1 ID POT HAZARD 111

Reference: NFPA 1072, 5.2.1 (A- 6(a)) (B- 5), 5.3.1 (A-1,7,10)..

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1222.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 204.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 82.

Answer: B

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18. 5.2.1 ID POT HAZARD 113

Reference: NFPA 1072, 5.2.1 (A- 8(j)).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1071.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 163.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 61.

Answer: C

19. 5.2.1 ID POT HAZARD 116

Reference: NFPA 1072, 5.2.1 (A- 4,6(a)) (B-5), 5.3.1 (A- 1,10), 4.4.1 (A- 1) (B- 2).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1223.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 204.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 82.

Answer: B

20. 5.2.1 ID POT HAZARD 117

Reference: NFPA 1072, 5.2.1 (A- 4,6(a)) (B-5), 5.3.1 (A- 1,10).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1223.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 204.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 82.

Answer: C

21. 5.2.1 ID POT HAZARD 118

Reference: NFPA 1072, 5.2.1 (A- 4,6(a)) (B-5), 5.3.1 (A- 1,10).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1222.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 205.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 82.

Answer: C

22. 5.2.1 ID POT HAZARD 120

Reference: NFPA 1072, 5.2.1 (A- 2) (B- 1).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, pages 1132, 1133 Figure 24.134.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 249. Fig. 5.5

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 78. Fig. 4-16

Answer: C

23. 5.2.1 ID POT HAZARD 121

Reference: NFPA 1072, 5.2.1 (A-8(j))

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, pages 1071,1072 Figure 24.38.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 64.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition,

page 61. Fig. 3-17

Answer: A

24. 5.2.1 ID POT HAZARD 123

Reference: NFPA 1072, 5.2.1 (A-8(j)).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1071.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 165.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 62.

Answer: D

25. 5.2.1 ID POT HAZARD 126

Reference: NFPA 1072, 5.2.1 (A- 8(m))

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1060.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 148.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 57.

Answer: B

26. 5.2.1 ID POT HAZARD 129

Reference: NFPA 1072, 5.2.1 (A- 8(d),12)..

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1108, Figure 24.94.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 147.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 51.

Answer: B

27. 5.2.1 ID POT HAZARD 130

Reference: NFPA 1072, 5.2.1 (A- 5,6(b,c,d),7) (B- 5). 5.3.1 (A- 1,8).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1200.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 99.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, pages 29-30.

Fig. 2-18

Answer: C

28. 5.2.1 ID POT HAZARD 133

Reference: NFPA 1072, 5.2.1 (A- 8(c),12).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1051.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 112.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 27.

Answer: A

29. 5.2.1 ID POT HAZARD 135

Reference: NFPA 1072, 5.2.1 (A- 8(m,n))

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1078.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 395.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 182.

Answer: C

30. 5.2.1 ID POT HAZARD 137

Reference: NFPA 1072, 5.2.1 (A- 8(m,n)).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1077.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 172.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 42.

Answer: D

31. 5.2.1 ID POT HAZARD 141

Reference: NFPA 1072, 5.2.1 (A- 8(k)).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1062.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 151.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 57.

Answer: C

32. 5.2.1 ID POT HAZARD 144

Reference: NFPA 1072, 5.2.1 (A- 1).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1151.

IFSTA, Hazardous Materials for First Responders, 5th Edition, pages 76,78,84. Fig. 2.37 Fig.2.40, Table 2.5

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 35. Fig. 2-25

Answer: B

33. 5.2.1 ID POT HAZARD 145

Reference: NFPA 1072, 5.2.1 (A- 8(m)).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1060.

IFSTA, Hazardous Materials for First Responders, 5th Edition, pages 148-149.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 56.

Answer: B

34. 5.2.1 ID POT HAZARD 149

Reference: NFPA 1072, 5.2.1 (A- 1).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, pages 1151, 1166, 1159.

IFSTA, Hazardous Materials for First Responders, 5th Edition, pages 76, 78, 83. Fig. 2.37 Fig. 2.40 Table 2.5

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 37.

Answer: B

35. 5.2.1 ID POT HAZARD 150

Reference: NFPA 1072, 5.2.1 (A- 1)..

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1161, Table 24.15.

IFSTA, Hazardous Materials for First Responders, 5th Edition, pages 76, 78, 83. Fig. 2.37 Fig. 2.40 Table 2.5

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 37.

Answer: D

36. 5.2.1 ID POT HAZARD 151

Reference: NFPA 1072, 5.2.1 (A- 8(e)).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1064, Figure 24.29.

IFSTA, Hazardous Materials for First Responders, 5th Edition, pages 154-155. Fig. 4.29

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 53.

Answer: C

37. 5.2.1 ID POT HAZARD 153

Reference: NFPA 1072, 5.2.1 (A- 1,10(a,b))

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1275, Table 25.4.

IFSTA, Hazardous Materials for First Responders, 5th Edition, pages 76, 78, 83. Fig. 2.37 Fig. 2.40 Table 2.5

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 37.

Answer: B

38. 5.2.1 ID POT HAZARD 156

Reference: NFPA 1072, 5.2.1 (A- 8(m)).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1061.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 149.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 58.

Answer: A

39. 5.2.1 ID POT HAZARD 159

Reference: NFPA 1072, 5.2.1 (A- 1).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1275, Table 25.4.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 390. Table 8.3

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 37.

Answer: D

40. 5.3.1 ID ACTION OPT 1

Reference: NFPA 1072, 5.3.1 (A- 15,17).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1050.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 23.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 42.

Answer: B

41. 5.3.1 ID ACTION OPT 2

Reference: NFPA 1072, 5.3.1 (A- 15,17).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1050.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 23.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 40.

Answer: C

42. 5.3.1 ID ACTION OPT 10

Reference: NFPA 1072, 5.3.1 (A- 15,17).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1077.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 173.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, pages 159,59.

Answer: D

43. 5.3.1 ID ACTION OPT 13

Reference: NFPA 1072, 5.3.1 (A- 15).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1078.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 174.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 160.

Answer: B

44. 5.3.1 ID ACTION OPT 15

Reference: NFPA 1072, 5.3.1 (A- 15,17)

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, pages 1051, 1075.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 36. Table 1.3

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 66.

Answer: B

45. 5.3.1 ID ACTION OPT 22

Reference: NFPA 1072, 5.3.1 (A- 6).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1190.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 114.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 32.

Answer: C

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46. 5.3.1 ID ACTION OPT 23

Reference: NFPA 1072, 5.3.1 (A- 9), 6.2.1 (A- 2).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1055.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 539. Fig. 11.5

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 330. Fig. 15-1

Answer: B

47. 5.3.1 ID ACTION OPT 31

Reference: NFPA 1072, 5.3.1 (A- 15,17)

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, pages 1050, 1343.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 489.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 212.

Answer: A

48. 5.3.1 ID ACTION OPT 32

Reference: NFPA 1072, 5.3.1 (A- 3) (B- 1,2), 5.4.1 (A- 1) (B-1,2)

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1345.

IFSTA, Hazardous Materials for First Responders, 5th Edition, pages 614-615. Fig. 13.10.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, pages 272, 275.

Skill Drill 12-6

Answer: C

49. 5.4.1 ACT PLAN IMPL 1

Reference: NFPA 1072, 5.4.1 (A- 1,3) (B- 1,2), 4.3.1 (A- 3) (B- 4)

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1194.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 128.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 19.

Answer: B

50. 5.4.1 ACT PLAN IMPL 6

Reference: NFPA 1072, 5.4.1 (A- 2) (B- 1,2), 4.3.1 (A- 2-3) (B- 4,5)

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1194.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 122.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 110.

Answer: C

51. 5.4.1 ACT PLAN IMPL 8

Reference: NFPA 1072, 5.4.1 (A- 1,9) (B- 1,2)

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1227.

IFSTA, Hazardous Materials for First Responders, 5th Edition, pages 123, 616.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 135.

Answer: B

52. 5.4.1 ACT PLAN IMPL 16

Reference: NFPA 1072, 5.4.1 (A- 1) (B- 1,2).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1242,

page 1075, Figure 24.43.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 335. Fig. 7.13.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, pages 137,136,153.

Fig. 6-5

Answer: B

53. 5.4.1 ACT PLAN IMPL 17

Reference: NFPA 1072, 5.4.1 (A- 1) (B- 1,2), 4.3.1 (A- 1-3) (B- 1,2,3,5)..
IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1195, Figure 24.220.
IFSTA, Hazardous Materials for First Responders, 5th Edition, page 335. Fig. 7.13.
Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 138.
Answer: B

54. 5.4.1 ACT PLAN IMPL 18

Reference: NFPA 1072, 5.4.1 (A- 3), 4.3.1 (A- 1-3) (B- 1,2,3,5).
IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1250.
IFSTA, Hazardous Materials for First Responders, 5th Edition, page 346.
Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 139.
Answer: A

55. 5.4.1 ACT PLAN IMPL 33

Reference: NFPA 1072, 5.4.1 (A- 1).
IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1252.
IFSTA, Hazardous Materials for First Responders, 5th Edition, page 322.
Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 246
Answer: C

56. 5.5.1 EMERG DECON 4

Reference: NFPA 1072, 5.5.1 (A- 5) (B- 1,2,3).
IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1359.
IFSTA, Hazardous Materials for First Responders, 5th Edition, page 314.
Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, pages 124,210.
Answer: B

57. 5.5.1 EMERG DECON 5

Reference: NFPA 1072, 5.5.1 (A- 3), 5.3.1 (A- 15,17).
IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1343.
IFSTA, Hazardous Materials for First Responders, 5th Edition, page 23.
Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 42.
Answer: A

58. 5.5.1 EMERG DECON 6

Reference: NFPA 1072, 5.5.1 (A- 4,5) (B- 1,3).
IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1238.
IFSTA, Hazardous Materials for First Responders, 5th Edition, pages 314, 480.
Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, pages 124,210.
Answer: A

59. 6.2.1 PERS PROT EQUI 23

Reference: NFPA 1072, 6.2.1 (A- 3)
IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1329.
IFSTA, Hazardous Materials for First Responders, 5th Edition, page 455.
Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 142.
Answer: B

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60. 6.2.1 PERS PROT EQUI 24

Reference: NFPA 1072, 6.2.1 (A- 3).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1320.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 442. Fig. 9.26.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, pages 117, 180.

Answer: D

61. 6.2.1 PERS PROT EQUI 25

Reference: NFPA 1072, 6.2.1 (A- 3)

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1365.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 455.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 142.

Answer: B

62. 6.2.1 PERS PROT EQUI 30

Reference: NFPA 1072, 6.2.1 (A- 3).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1321.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 442. Fig. 9.25.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, pages 118, 181.

Answer: B

63. 6.2.1 PERS PROT EQUI 31

Reference: NFPA 1072, 6.2.1 (A- 3) (B- 1)

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1317.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 438.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, pages 118, 182.

Answer: C

64. 6.2.1 PERS PROT EQUI 32

Reference: NFPA 1072, 6.2.1 (A- 5) (B- 1,3).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1347, Figure 26.45.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 492.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, pages 214, 232.

Answer: A

65. 6.2.1 PERS PROT EQUI 40

Reference: NFPA 1072, 6.2.1 (A- 2,3).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1320.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 441.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 181. Fig. 8-6

Answer: B

66. 6.2.1 PERS PROT EQUI 46

Reference: NFPA 1072, 6.2.1 (A- 3).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1321.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 442.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, pages 118, 181.

Answer: A

67. 6.2.1 PERS PROT EQUI 47

Reference: NFPA 1072, 6.2.1 (A- 1,3)(B- 1).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1072, Figure 24.38.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 453. Table 9.2.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 62.

Answer: B

68. 6.2.1 PERS PROT EQUI 56

Reference: NFPA 1072, 6.2.1 (A- 1,2,3) (B- 1,2).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1330.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 457. Table 9-4

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 202.

Answer: D

69. 6.2.1 PERS PROT EQUI 57

Reference: NFPA 1072, 6.2.1 (A- 1,2,3) (B- 1,2).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1308.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 427.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 123.

Answer: B

70. 6.2.1 PERS PROT EQUI 58

Reference: NFPA 1072, 6.2.1 (A- 1,2,3) (B- 1,2).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, pages 1308, 1310, 1312.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 427.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 123.

Answer: C

71. 6.2.1 PERS PROT EQUI 64

Reference: NFPA 1072, 6.2.1 (A- 4).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, pages 1231-1232.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 291.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 177.

Answer: A

72. 6.4.1 TECH DECON 2

Reference: NFPA 1072, 6.4.1 (A-7-8) (B-5)

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1361.

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 514. Fig. 10.38

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 251.

Answer: B

73. 6.6.1 PRODUCT CTRL 16

Reference: NFPA 1072, 6.6.1 (A- 7) (B- 4).

IFSTA, Essentials, 7th Edition, Hazmat Awareness and Ops, page 1356, Figure 26.61.

IFSTA, Hazardous Materials for First Responders, 5th Edition, pages 619-620. Fig. 3.20.

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 276. Fig. 12-9

Answer: A

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74. 6.6.1 PRODUCT CTRL 22

Reference: NFPA 1072, 6.6.1.1 (A- 1,4,5,6) (B- 1).

Jones and Bartlett, Hazardous Materials Awareness and Operations, 3rd Edition, page 177.

Answer: D

75. 6.6.1 PRODUCT CTRL 25

Reference: NFPA 1072, 6.6.1 (A- 10).

IFSTA, Hazardous Materials for First Responders, 5th Edition, page 352.

Answer: D

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