Hazardous Materials for First Responders

Questions and Answers

From IFSTA Hazmat for First Responders 4th Edition

Hazardous Materials Identification

1. What do a majority of terrorist attacks involve?
p. 158

*A.) Explosive materials
B.) Nuclear materials
C.) Biological weapons
D.) Radiological weapons

2. Where are the valves located on the compressed-gas/tube trailer?
p. 90

*A.) Rear
B.) Bottom
C.) Front
D.) Top

3. What color stripes are used on the Canadian miscellaneous placard?
p. 128

*A.) Black and white
B.) Green and white
C.) Red and white
D.) Yellow and white

4. Which type of railcar may carry grain, calcium carbide and cement?
p. 82

A.) Pneumatically unloaded hopper car
B.) Uncovered hopper car
*C.) Covered hopper car
D.) Boxed hopper car

5. With which type of attack are symptoms immediately (seconds to hours after exposure) evident?
p. 154

A.) Biological
*B.) Chemical
C.) Radiological
D.) Explosive

6. Which of the following is NOT considered an indication of a terrorist event?
p. 153

A.) Reported explosion at a movie theater
B.) Emergency at a large gathering location
*C.) Single, tragic medical presentation
D.) Two or more medical emergencies in a public location

7. What must be used for elevated temperature materials in Mexico?
p. 129

A.) Flammable sign
B.) HOT sign
C.) Red placard
*D.) Elevated temperature sign

8. Within what amount of time of being exposed to air can Class 4 Division 4.2 materials ignite?
p. 116

A.) 10 minutes
B.) 20 minutes
*C.) 5 minutes
D.) 15 minutes

9. Which are typically box-shaped, flat-decked vessels used for transporting cargo?
p. 99

A.) Tankers
B.) Roll-on/roll-off vessels
C.) Bulk carriers
*D.) Barges

10. What is a physical description of the cryogen liquid tank?
p. 89

A.) Large hemispherical heads on both ends
B.) Straight tank with rounded ends
C.) Small-diameter round shape
*D.) Round tank with flat ends

11. Which hazardous material can cause burns to the eyes, skin or respiratory system?
p. 136

A.) Toxin
B.) Oxidizing material
C.) Compressed gas
*D.) Corrosive

12. How many compartments are seen in a high-pressure tank?
p. 88

*A.) One
B.) Four
C.) Two
D.) Three

13. With which mode of transportation will more hazardous materials incidents be seen at pumping stations?
p. 69

A.) Airways
B.) Railways
*C.) Pipelines
D.) Roadways

14. Which of the following is NOT listed as part of Class 1 Division 1.2?
p. 113

A.) Rockets (with bursting charge)
B.) Detonation cord
*C.) Dynamite
D.) Flares

15. Which color is used to indicate an explosive material?
p. 111

A.) Blue
B.) Green
C.) Red
*D.) Orange

16. Which requires that employers identify hazards in the workplace and train employees to recognize those hazards?
p. 134

A.) Color Coding Standard
B.) CAS Numbering System
*C.) Hazard Communication Standard
D.) International Safety System

17. What is done on intermodal tanks and containers to indicate that the material will react dangerously with water?
p. 109

A.) Place a "0" at the end of the number
B.) Use a "9" as the second digit
C.) Double the number
*D.) Place an "X" in front of the number

18. What should first responders be able to use at transportation incidents to identify hazardous materials?
p. 144

*A.) Shipping papers
B.) Inventory records
C.) Manufacturer information
D.) Safety data sheets

19. Which division of Class 5 materials includes liquid organic peroxide type B?
p. 117

A.) Division 5.4
B.) Division 5.3
*C.) Division 5.2
D.) Division 5.1

20. Which class is used for Canadian placards to indicate infectious substances?
p. 127

A.) Class 6.4
B.) Class 6.3
*C.) Class 6.2
D.) Class 6.1

21. Which division of Class 6 materials does NOT have a placard?
p. 117

A.) Division 6.1
B.) Division 6.4
C.) Division 6.3
*D.) Division 6.2

22. Which hazard class is used in Canada to indicate a poisonous substance in which one exposure can be fatal?
p. 136

A.) Class F
*B.) Class D Division 1
C.) Class D Division 3
D.) Class A

23. Which type of packaging is used to transport materials that have very limited radioactivity?
p. 104

*A.) Excepted
B.) Type A
C.) Industrial
D.) Type B

24. Which of the following is NOT seen with an explosive/incendiary attack?
p. 158

A.) Reports of an explosion
B.) Unattended packages in public areas
C.) Unusually fast burning fires
*D.) Electromagnetic pulse

25. Which type of marking would be placed on a shipment of copper cyanide?
p. 123

A.) ORM-D
B.) Inhalation hazard
*C.) Marine pollutant
D.) Hot

26. What material is NOT typically used to make a rigid intermediate bulk container?
p. 101

*A.) Copper
B.) Steel
C.) Fiberboard
D.) Aluminum

27. What number is used on the Canadian placard to indicate anhydrous ammonia?
p. 126

A.) 1302
B.) 472
C.) 1571
*D.) 1005

28. Which is often the best resource that the firefighter has access to about a particular material on the scene?
p. 148

*A.) SDSs
B.) Facility documents
C.) ERG
D.) Shipping papers

29. What does DOT require is listed on the subsidiary label?
p. 120

A.) Specification
B.) Hazard level
C.) Content name
*D.) Class number

30. Which of the following is NOT considered a primary hazard of Class 4 materials?
p. 115

A.) Mechanical
B.) Chemical
*C.) Asphyxiation
D.) Thermal

31. Which type of tanks have pressures between 0.5 psi to 15 psi (3.45 kPa to 103 kPa)?
p. 73

A.) Atmospheric pressure storage tanks
B.) High-pressure storage tanks
C.) Nonpressure storage tanks
*D.) Low-pressure storage tanks

32. Which is NOT a symptom of changes in excretion after exposure to a hazardous material?
p. 152

A.) Frequent urination
*B.) Vomiting
C.) Uncontrolled tears
D.) Diarrhea

33. Which organization regulates the manufacture and labeling of pesticides?
p. 141

A.) OSHA
B.) FEMA
C.) CAS
*D.) EPA

34. Which division of the military symbols indicate the greatest hazard?
p. 142

A.) Division 3
B.) Division 2
C.) Division 4
*D.) Division 1

35. What is a terrorist incident scene considered to be?
p. 153

A.) Government problem
B.) Personal issue
C.) Mass destruction
*D.) Crime scene

36. What is placed before the identification number when the material is recognized for international transportation?
p. 108

A.) OC
*B.) UN
C.) NA
D.) IT

37. Who is responsible for providing placards?
p. 110

A.) Owner
B.) Driver
C.) Receiver
*D.) Shipper

38. Which placard is placed on a PCB shipment?
p. 118

A.) ORM-D
B.) Dangerous
C.) Corrosive
*D.) Miscellaneous

39. Where on the placard are special hazards located?
p. 134

A.) 12 o'clock position
B.) 9 o'clock position
C.) 3 o'clock position
*D.) 6 o'clock position

40. Where are the DOT specifications stenciled on the low-pressure tank car?
p. 80

A.) Front-end of the car
*B.) Right-hand side of the car
C.) Back-end of the car
D.) Left-hand side of the car

41. What is nonpersistent chocking agent an example of?
p. 143

A.) Incapacitating nerve agent
B.) VX nerve agent
*C.) Lewisite blister agent
D.) H-type blister agent

42. What does the unit loading device do?
p. 99

A.) Allow smaller crews to be used to move cargo
*B.) Consolidate air cargo into a single transportable unit
C.) Configure cargo into stackable units on the vessel
D.) Move cargo from the dock onto the ship's deck

43. How must packages of radioactive materials be labeled?
p. 122

A.) On all sides
B.) On two adjacent side
*C.) On two opposite sides
D.) On one side

44. Which class is used to indicate materials that emit flammable gases on contact with water under the UN system?
p. 106

A.) Class 9
B.) Class 1
*C.) Class 4
D.) Class 7

45. Which class is used to designate explosives under the UN system?
p. 106

*A.) Class 1
B.) Class 5
C.) Class 4
D.) Class 2

46. Where is a properly designed and maintained atmospheric storage tank more likely to fail?
p. 74

A.) Shell-to-bottom seam
B.) Shell-to-roof seam
*C.) Shell-to-top seam
D.) Shell-to-side seam

47. What do intermodal tanks generally have?
p. 92

A.) Compartmentalized tanks
*B.) Cylinder enclosed at both ends
C.) Cryogenic tanks
D.) Tube modules

48. Which DOT label would be placed on a package containing anthrax or hepatitis B virus?
p. 121

A.) Etiological agent
*B.) Infectious substance
C.) Biohazard
D.) Fissile

49. How many digits are included in the identification number assigned to materials under the UN system?
p. 107

*A.) Four
B.) Three
C.) Five
D.) Six

50. What is a material, other than a gas, that is known to be toxic to humans?
p. 117

A.) Caustic material
*B.) Poisonous material
C.) Inhibitive material
D.) Corrosive material

51. What can be used by firefighters and law enforcement personnel to quickly identify the specific or generic hazards of materials involved in an emergency incident?
p. 149

A.) MSDS
B.) SDS
*C.) ERG
D.) HNI

52. Which of the following is a primary hazard of corrosive materials?
p. 118

*A.) Chemical
B.) Mechanical
C.) Asphyxiation
D.) Genetic

53. Which of the following is an acronym that can be used to identify the symptoms of exposure to chemical warfare agents?
p. 156

A.) DROLENT
*B.) SLUDGEM
C.) GELGADS
D.) IMPACTS

54. Which type of nonbulk packaging is used to transport explosives and fertilizers?
p. 103

*A.) Bags
B.) Cylinders
C.) Jerrycans
D.) Carboys

55. Which is a commonly found content of ton containers?
p. 102

*A.) Chlorine
B.) Freon
C.) Sulfur dioxide
D.) Anhydrous ammonia

56. Where are fittings for loading/unloading visible on low-pressure tank cars?
p. 80

A.) Along the left side
*B.) Top or bottom
C.) Along the right side
D.) Front or back

57. In which type of container would a material such as plutonium be transported?
p. 105

*A.) Type C
B.) Type D
C.) Type A
D.) Type B

58. What is a hazardous material other than hazardous waste, that is carried in a motor vehicle for the purposes listed?
p. 119

*A.) MOT
B.) PCB
C.) DOM
D.) LOD

59. What shape are the unloading compartments on the dry bulk cargo trailer?
p. 91

A.) T-shaped
*B.) V-shaped
C.) U-shaped
D.) O-shaped

60. When do most incidents involving nonbulk packaging occur?
p. 102

*A.) Highway transport
B.) Aircraft transport
C.) Marine vessel transport
D.) Railway transport

61. Up to how many compartments can be found in the low-pressure tank car?
p. 80

A.) Three
*B.) Six
C.) Five
D.) Four

62. What does a number 3 in the red color section of an NFPA 704 placard indicate?
p. 134

*A.) Ignites at ambient temperatures
B.) Must be preheated to burn
C.) Ignites when moderately heated
D.) Will not burn

63. What does the second group on the specification marking indicate?
p. 131

A.) Tank test pressure
B.) Approving authority
C.) Separator letter
*D.) Class number

64. What is an example of a material that would be labeled with the "Flammable" placard?
p. 115

A.) Diesel
B.) Fuel oil
*C.) Gasoline
D.) Pine oil

65. What do secondary devices normally consist of?
p. 161

*A.) Explosive
B.) Radiological material
C.) Gas release
D.) Ambush

66. Which class material is labeled with the infectious substances label?
p. 121

A.) Class 8
*B.) Class 6.2
C.) Class 4.1
D.) Class 5.1

67. What is the maximum size of the drum used in nonbulk packaging?
p. 104

*A.) 100 gallons (379 L)
B.) 75 gallons (284 L)
C.) 125 gallons (474 L)
D.) 55 gallons (208 L)

68. Where will the first responder see the markings on the international intermodal container when facing it from the sides or end?
p. 132

A.) Bottom side
B.) Left-hand side
C.) Top side
*D.) Right-hand side

69. Which type of tank car may or may not be carrying hazardous materials?
p. 79

A.) General service
B.) Cryogenic liquid
*C.) Boxcar
D.) Pressure

70. Which signal word is used to indicate the highest degree of hazard on consumer goods?
p. 137

A.) WARNING
*B.) DANGER
C.) CAUTION
D.) POISON

71. Which color is used to mark safety equipment such as first aid stations and exit routes?
p. 144

*A.) Green
B.) Red
C.) White
D.) Yellow

72. Which type of containers are insulated, vacuum-jacketed tanks with safety-relief valves and rupture disks?
p. 79

A.) Noded spheroid tanks
*B.) Cryogenic-liquid storage tanks
C.) Spheroid tanks
D.) Spherical pressure vessels

73. What must the container be a receptacle for when the maximum capacity is greater than 119 gallons (450 L)?
p. 72

A.) Gas
B.) Solid
*C.) Liquid
D.) Vapor

74. What is the maximum pressure found in the corrosive liquid tank?
p. 87

A.) 100 psi (689 kPa)
B.) 40 psi (172 kPa)
*C.) 75 psi (517 kPa)
D.) 52 psi (152 kPa)

75. In which space on the Emergency Sheet for the Transport of Hazardous Materials and Wastes will the first responder find the PPE needed?
p. 147

*A.) Space 11
B.) Space 5
C.) Space 4
D.) Space 14

76. Which product has no weight limit placed upon it when being shipped in an intermediate bulk container?
p. 100

A.) Gaseous
*B.) Solid
C.) Liquid
D.) Compressed

77. Which of the following is NOT an example of nonbulk packaging?
p. 72

A.) Carboy
B.) Drum
*C.) Railcar
D.) Bag

78. Where are the manway assemblies located on the dry bulk cargo trailer?
p. 91

A.) Bottom
*B.) Top
C.) Front
D.) Rear

79. What material is used to construct the cylinders that are banded together on the compressed-gas/tube trailer?
p. 90

A.) Iron
B.) Aluminum
C.) Copper
*D.) Steel

80. What is a process that does not change the elemental composition of the materials involved?
p. 151

A.) Monitor actions
*B.) Physical actions
C.) Exposure actions
D.) Chemical actions

81. Which type of railcar is used to carry materials such as rolled steel that do not require protection from the weather?
p. 83

A.) Covered hopper car
B.) Open top hopper
C.) Boxcar
*D.) Gondola

82. How many 55-gallon (208 L) drums worth of material can a common-sized supersack hold?
p. 101

*A.) Four to five
B.) Five to six
C.) Six to seven
D.) Three to four

83. What color is used on Canadian placards to indicate flammable gases?
p. 125

A.) Green
B.) Yellow
C.) White
*D.) Red

84. Which of the following should NOT be used to identify the contents of the intermodal container?
p. 92

A.) Shipping papers
B.) Placards
C.) Container markings
*D.) Tank shape

85. Which of the following is assigned to individual chemicals?
p. 138

A.) CCO numbers
B.) NFA numbers
*C.) CAS numbers
D.) GPS numbers

86. Which color placard is used to indicate a nonflammable gas?
p. 111

A.) Yellow
B.) Red
*C.) Green
D.) White

87. Which type of intermodal tank is built to withstand a working pressure of 25.4 to 100 psi (175 kPa to 689 kPa)?
p. 93

A.) IM 103 portable tank
B.) IM 102 portable tank
*C.) IM 101 portable tank
D.) IM 104 portable tank

88. At what level can the first responder begin to use monitoring and detection devices at the hazardous materials incident?
p. 152

A.) Technician-level
B.) Awareness-level
*C.) Operations-level
D.) Specialist-level