Hazardous Materials for First Responders

Questions and Answers

From IFSTA Hazmat for First Responders 4th Edition

Terrorist Attacks, Criminal Activities and Disasters

1. After which type of disaster can massive quantities of abandoned household waste be present?
p. 371

*A.) Hurricane
B.) Earthquake
C.) Tornado
D.) Flood

2. What is often used to assist with catalyzing the constituents in urea nitrate?
p. 328

A.) Hydrogen peroxide
B.) Ethylene glycol
C.) Nitric acid
*D.) Sulfuric acid

3. Which type of aid may be needed after a natural disaster to deal with the haz mat incidents that will follow?
p. 373

A.) City
B.) State
*C.) Federal
D.) County

4. What odor is experienced with phosgene gas?
p. 348

*A.) Hay
B.) Garlic
C.) Almonds
D.) Flowers

5. Which type of agent generally has a slow onset of symptoms and an unusual pattern of illness during the incident?
p. 358

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

6. Under which UN/DOT class do radiological materials fall?
p. 367

A.) Class 6
B.) Class 9
*C.) Class 7
D.) Class 8

7. What acronym has the FBI created as indicators of a possible suicide bomber?
p. 336

*A.) ALERT
B.) BOMBS
C.) ENDED
D.) HANDS

8. Which statement about evidence is NOT correct?
p. 369

A.) Evidence can include bodily fluids
*B.) Evidence should be collected at the command post
C.) Residue can tell what explosive materials were used
D.) Jewelry and clothing taken from victims is evidence

9. What odor can be associated with arsine?
p. 344

*A.) Garlic
B.) Mustard
C.) Onion
D.) Almonds

10. Which explosive category decompose rapidly but do not produce an explosion unless confined?
p. 322

A.) Primary explosives
*B.) Low explosives
C.) High explosives
D.) Secondary explosives

11. Which riot control agent's smoke smells like apple blossoms?
p. 351

A.) Dibenzoxazepine
*B.) Chloroacetophenone
C.) Clorobenzylidene
D.) Oleoresin capsicum

12. From which location would the threat of mass produced WMD come?
p. 317

A.) Isolated terrorist groups with the necessary finances
*B.) Nations with infrastructure, finances and scientific knowledge
C.) Nations with an agenda against your country
D.) Nations with the infrastructure but limited resources

13. Which is NOT a description of chloropicrin?
p. 351

A.) Oily, colorless liquid
*B.) Poorly soluble in water
C.) Intense odor
D.) Violent decomposition when exposed to heat

14. What may the initial symptoms of inhalation anthrax resemble?
p. 355

A.) Flu
B.) Asthma
*C.) Common cold
D.) Gastroenteritis

15. What is cyanogen chloride soluble in?
p. 344

*A.) Water
B.) Oil
C.) Acid
D.) Blood

16. What should fire service first responders NOT do when the incident is determined to be a crime?
p. 368

A.) Notify law enforcement
B.) Preserve evidence
C.) Notify incident commander
*D.) Collect evidence

17. Which blood agent causes frostbite when the eyes contact the liquid form?
p. 347

A.) Hydrogen cyanide
B.) Phosgene oxime
*C.) Cyanogen chloride
D.) Arsine

18. Within what time period can pulmonary edema be seen with chlorine exposure?
p. 349

A.) 4 to 6 hours
*B.) 2 to 4 hours
C.) 8 to 10 hours
D.) 6 to 8 hours

19. What can be used to decontaminate dispersed agent during an exterior bioterrorism attack?
p. 362

*A.) Bleach and water
B.) Ammonia and water
C.) Phosphorus and water
D.) Foam and water

20. Which type of command structure will most likely exist at a nuclear attack incident?
p. 365

A.) Mutual aid
B.) ICS
C.) NIMS
*D.) Unified command

21. Which are constructed of cardboard tubes (usually red), filled with flash powder and sealed at both ends?
p. 333

A.) Pipe bombs
B.) Plastic bottle bombs
*C.) M-devices
D.) Crickets

22. Which blister agent causes brain changes such as tremors and incoordination?
p. 345

A.) Lewisite
B.) Phosgene oxime
C.) Sulfur mustard
*D.) Nitrogen mustard

23. Which of the following is considered a delayed effect of exposure to phosgene?
p. 350

A.) Coughing
*B.) Low blood pressure
C.) Blurred vision
D.) Shortness of breath

24. Which are key factors in how a response is managed?
p. 314

A.) Type and location
*B.) Size and type
C.) Size, type and location
D.) Size and location

25. What color is chlorine gas usually?
p. 348

A.) White-pink
B.) Green-blue
*C.) Yellow-green
D.) Gray-orange

26. Which of the following is NOT a tactic for radiological incidents?
p. 366

A.) Be alert to the possibility of small explosive devices designed to disseminate an agent
B.) Detain or isolate uninjured people or equipment
*C.) Position apparatus in a lateral location
D.) Secure the area and prevent entry of unprotected personnel

27. Which statement is NOT correct?
p. 370

A.) Take photographs of an object before you move it
B.) Minimize the number of people working in the area if possible
C.) Document observations as quickly as possible
*D.) Once something has been moved, you should put it back into place

28. Where is the muscle pain especially located in a patient who has been exposed to viral encephalitis?
p. 357

*A.) Legs
B.) Arms
C.) Neck
D.) Trunk

29. Which is a powerful gamma-emitting radiation source that can be placed in a high-profile location?
p. 363

A.) Radiological-dispersal weapon
*B.) Radiation-emitting device
C.) Radiation-emitting weapon
D.) Radiological-dispersal device

30. Which choking agent was used by insurgents in Iraq in 2007?
p. 347

A.) Ammonia
B.) Phosphine
*C.) Chlorine
D.) Hydrogen chloride

31. Which material is used in weed killer and possesses about 83% of the power of TNT?
p. 328

A.) Dichromate
B.) Urea nitrate
C.) Hydrogen peroxide
*D.) Potassium chlorate

32. Which type of biological agent is tularemia?
p. 355

A.) Toxin
*B.) Bacteria
C.) Rickettsias
D.) Virus

33. Which form of food-safety threat sometimes causes nonbloody diarrhea or no symptoms?
p. 358

*A.) E. coli
B.) Botulism
C.) Shingellosis
D.) Salmonellosis

34. Which have a small range but can produce deadly shrapnel?
p. 333

*A.) Carbon dioxide grenades
B.) Tennis ball bombs
C.) Plastic bottle bombs
D.) M-devices

35. Which nerve agent is mainly inhaled?
p. 342

*A.) Sarin
B.) Cyclohexl sarin
C.) Soman
D.) Tabun

36. When is decon usually needed with phosgene?
p. 348

*A.) In cold climates
B.) In hot climates
C.) In hilly terrain
D.) In flat terrain

37. Which of the following actions is NOT appropriate when faced with an interior bioterrorism attack?
p. 361

*A.) Open windows in the building
B.) Turn off elevators
C.) Seal ducts and doors with tape or plastic
D.) Turn off ventilation systems

38. Which are chemical asphyxiants that interfere with the body's ability to use oxygen?
p. 344

*A.) Blood agents
B.) Choking agents
C.) Blister agents
D.) Riot control agents

39. Which is the only sure way to confirm the presence of a radiological hazard?
p. 362

A.) Placards
*B.) Monitoring equipment
C.) Personnel contact
D.) Shipping papers

40. In what pattern does the blast-pressure wave move during an explosion?
p. 320

A.) Upward from the point of detonation in a circle
B.) Downward from the point of detonation in a circle
*C.) Outward from the point of detonation in a circle
D.) Swirling from the point of detonation in a circle

41. Which are the simplest types of microorganisms and can only replicate in the living cells of their hosts?
p. 352

A.) Bacterial agents
B.) Rickettsias
C.) Biological toxins
*D.) Viral agents

42. What is described as a very compact and portable nuclear weapon?
p. 364

*A.) Suitcase bomb
B.) Person-borne devices
C.) IED
D.) Vehicle bombs

43. Which material is a common precursor used to make explosives?
p. 326

A.) Iodate
*B.) Acetone
C.) Magnesium
D.) Sulfur

44. What is the expected yield of a suitcase bomb?
p. 364

A.) 1.5 to 3 kilotons
B.) 3 to 5.5 kilotons
*C.) 0.5 to 2 kilotons
D.) 1 to 2.5 kilotons

45. Up to what distance can a pipe bomb throw shrapnel with lethal force?
p. 329-330

A.) 500 feet (151 m)
B.) 400 feet (121 m)
*C.) 300 feet (91 m)
D.) 600 feet (181 m)

46. What percent of Q fever patients with a symptomatic infection will develop pneumonia?
p. 357

A.) Forty to sixty percent
B.) Twenty to forty percent
C.) Fifty to seventy percent
*D.) Thirty to fifty percent

47. What is the design and implementation of IEDs limited by?
p. 334

A.) Materials that can be obtained
B.) Desired target
C.) Area to place the item
*D.) Imagination of the bomber

48. Up to how many days may the blindness from exposure to sulfur mustard last when it does occur?
p. 345

A.) 14 days
*B.) 10 days
C.) 18 days
D.) 22 days

49. What is mixed with a fuel in improvised explosive materials?
p. 323

*A.) Oxidizer
B.) Corrosive
C.) Acid
D.) Heat

50. Which of the following is NOT an initial symptom of psittacosis?
p. 356

A.) Muscle aches
B.) Chills
*C.) Abdominal pain
D.) Fever

51. Where are the explosives often located with a vehicle bomb?
p. 329

A.) Roof
B.) Undercarriage
C.) Passenger compartment
*D.) Trunk

52. Which type of explosive device are nonmilitary first responders more likely to encounter?
p. 319

*A.) IED
B.) TNT
C.) Rocket
D.) Plastic explosives

53. In which method of transmission do most sexually transmitted diseases fall?
p. 360

*A.) Direct contact
B.) Airborne transmission
C.) Indirect contact
D.) Contact with infected droplets

54. Which type of WMD are nerve agents?
p. 318

*A.) Military-grade chemical weapons
B.) Biological toxins
C.) Biological pathogens
D.) Radiological materials

55. What appearance of the vehicle's tires would raise suspicion of a VBIED?
p. 337

A.) Tires look over inflated
B.) Tires look low
C.) Tires look strained
*D.) Tires look solid

56. Who will have jurisdiction over all incidents involving terrorism?
p. 315

*A.) Law enforcement
B.) City officers
C.) State representatives
D.) Fire department

57. At what fraction of a second are the rapidly expanding gases of an explosion formed?
p. 319

A.) 1/100,000
*B.) 1/10,000
C.) 1/1,000
D.) 1/1,000,000

58. What is the most important factor in medical management of individuals who have been exposed to nerve agents?
p. 342

A.) Remaining calm
B.) Medication
*C.) Speedy treatment
D.) Decontamination

59. Which of the following is NOT considered a traditional tactic of terrorism?
p. 316

A.) Armed assault
*B.) Cyber attack
C.) Assassination
D.) Bombings

60. Which of the following is NOT considered a part of the terrorist act?
p. 313

*A.) Action for personal gain
B.) Intend to intimidate
C.) Action supports political objectives
D.) Involve the use of force

61. Which type of biological toxin is easily made from the castor bean?
p. 318

*A.) Ricin
B.) Sarin
C.) Botulism
D.) Anthrax

62. How many infected with Q fever show signs of clinical illness?
p. 357

A.) One-fourth
B.) One-eighth
C.) One-third
*D.) One-half

63. How many phases are there to the blast-pressure wave of an explosion?
p. 320

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

64. Which of the following is NOT a vomiting agent?
p. 350

*A.) DX
B.) DC
C.) DM
D.) DA

65. Which is the most common type of IED found in the United States?
p. 329

*A.) Pipe bomb
B.) Backpack bomb
C.) Vehicle bomb
D.) Suitcase bomb

66. Which element makes an act of terrorism different from normal emergencies?
p. 314

*A.) Intent
B.) Severity
C.) Command structure
D.) Complexity

67. What rule applies to the "time" factor at a radiological incident?
p. 367

A.) Rule of 5
B.) Rule of 3
*C.) Rule of 7
D.) Rule of 9

68. How many pairs of gloves should the responder use total when treating six patients at a possible bioterrorism incident?
p. 361

A.) Two
*B.) Six
C.) Seven
D.) Five

69. What was used in the two notable vehicle bombs in the United States?
p. 336

A.) Personal vehicle
*B.) Rental truck
C.) 18-wheeler truck
D.) Recreational vehicle

70. Which is a typically a white crystalline powder with a distinctive acrid smell?
p. 326

A.) HMTD
B.) MEKP
C.) EGDN
*D.) TATP

71. After seven hours, what percentage of the initial radiation dose rate remains?
p. 368

*A.) 10 percent
B.) 1.0 percent
C.) 0.1 percent
D.) 100 percent

72. Which are considered the most toxic of the known chemical warfare agents?
p. 340

A.) Blood agents
B.) Choking agents
C.) Blister agents
*D.) Nerve agents

73. Which of the following is NOT a chronic effect of arsine exposure?
p. 346

A.) Kidney damage
B.) Memory loss and confusion
*C.) Seizure disorder
D.) Numbness and pain in the extremities

74. How long will respiratory tract symptoms present after a severe exposure to sulfur mustard?
p. 345

A.) 4 to 6 hours
*B.) 2 to 4 hours
C.) 8 to 10 hours
D.) 6 to 8 hours

75. Which of the following is NOT listed as an indicator of a possible VBIED?
p. 337

A.) Unusually large battery or extra battery found under the hood
B.) Blackened windows or covered windows
C.) The appearance or character of the vehicle does not match the type of vehicle
*D.) Large number of vehicles parked at one time and location

76. How is the nerve agent dispersed?
p. 341

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

77. How many injections are needed to deliver the atropine and pralidoxmine chloride with the Mark-1 kit?
p. 342

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

78. With which Category A biological agent are the common signs acute respiratory distress, fever, weakness and headache?
p. 355

A.) Smallpox
*B.) Plague
C.) Anthrax
D.) Botulism

79. Which is a key issue for fire and EMS departments to become familiar with when they will be working with a bomb squad?
p. 338

A.) Diffusion equipment
B.) Type of bombs they can respond to
C.) SOPs of the responders
*D.) Operations and entry suits

80. What causes the blister agent to change in color?
p. 343

A.) Form of agent
B.) Degree of concentration
*C.) Level of purity
D.) Time of exposure

81. What is the probable dispersion method of the common blister agents?
p. 345-346

A.) Oily-textured liquid
B.) Solid
*C.) Aerosolized liquid
D.) Viscous liquid

82. Which operations should NOT be completed at a radiological incident scene?
p. 367

A.) Search and rescue
B.) Size-up
C.) Fire fighting
*D.) Overhaul

83. What method of transfer is most effective for a nerve agent?
p. 340

*A.) Absorption
B.) Ingestion
C.) Adsorption
D.) Injection

84. Which of the following is NOT an indicator that an individual may be a suicide bomber?
p. 335

*A.) Being conversational with others
B.) Slow-paced walking which constantly shifting eyes to the left and right
C.) Keeping one's hands in one's pockets
D.) Profuse sweating

85. What does an RDD typically use to scatter radioactive material?
p. 363

A.) Nuclear power
B.) Force of the winds
C.) Ventilation systems
*D.) Conventional explosives

86. Which level of hazard is sulfuric acid?
p. 353

A.) Medium
B.) Low
*C.) High
D.) Medium-high

87. Which statement is NOT correct?
p. 360-361

A.) Universal precautions should be adhered to when contact with moist or broken skin occurs
B.) The incidents will most likely cross jurisdictional lines
C.) Hands should be washed immediately after removing disposable gloves
*D.) Most agents of bioterrorism are spread from person to person

88. Approximately how much longer than the positive pressure phase of an explosion last than the negative pressure phase?
p. 320

A.) Two times
B.) Four times
C.) Five times
*D.) Three times

89. Which nerve agent is the least persistent?
p. 342

A.) V-agents
B.) T-agents
*C.) G-agents
D.) M-agents

90. Which has proven to be the most successful way to penetrate a target and create injuries and havoc?
p. 335

A.) Carbon dioxide bombings
*B.) Suicide bombings
C.) Mail or package bombings
D.) Vehicle bombings

91. Which are spread through the bite of an infected arthropod?
p. 354

A.) Biological toxins
B.) Bacterial agents
C.) Viral agents
*D.) Rickettsias

92. Which method of transmission occurs due to contact with infected fecal matter?
p. 360

A.) Vectors such as mosquitoes
B.) Indirect contact
*C.) Ingestion of contaminated food
D.) Contact with infected droplets

93. What is the appearance of nerve agents in their pure states?
p. 342

A.) Almond-scented vapor
B.) White crystal powder
*C.) Colorless liquid
D.) Odorless gas

94. Which of the following is considered the greatest WMD threat today?
p. 318

A.) Biological pathogens
B.) Biological toxins
*C.) Explosives
D.) Nuclear weapons

95. Which type of explosive device do terrorists continue to use extensively?
p. 330

A.) Vehicle bomb
B.) Mail bomb
*C.) Backpack bomb
D.) Pipe bomb

96. Which level of law enforcement should be notified when an incident is identified as an act of terrorism?
p. 315

*A.) Federal
B.) Local
C.) State
D.) City

97. What leads the positive-pressure wave during an explosion?
p. 320

A.) Blast pressure
B.) Thermal front
C.) Fragmentation pressure
*D.) Shock front

98. What is the fissile material in an improvised nuclear device?
p. 364

A.) Bromine
*B.) Plutonium
C.) Phosgene
D.) Acrolein

99. Which of the following factors help determine if an illegal dump is emergency situation?
p. 368

A.) Other events occurring
B.) Amount of chemicals
*C.) Chemicals involved
D.) Time of day

100. What do a majority of IEDs use?
p. 328

A.) Projectile ordnances
B.) TNT
C.) Military munitions
*D.) Conventional explosives

101. How is the nerve agent dispersed?
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p. 348

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D.) In flat terrain

104. What may decon consist of when dealing with hydrogen cyanide?
p. 344

A.) Applying a neutralizing agent
B.) Removing the victim's clothing
C.) Using copious amounts of water
*D.) Allowing the agent to evaporate

105. Which are the simplest types of microorganisms and can only replicate in the living cells of their hosts?
p. 352

A.) Bacterial agents
B.) Rickettsias
C.) Biological toxins
*D.) Viral agents

106. Which is NOT correct when responding to an incident involving an explosive or IED?
p. 338

*A.) Wait until another responder has handled the device before you do
B.) Always proceed with caution
C.) Limit the risk of exposure of personnel until the risk of secondary devices is eliminated
D.) Request bomb squads, haz mat teams and other specialized personnel as needed

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