

Chapter 26 Test

Name: _____ Date: _____

Directions: Write the correct letter on the blank before each question.

- _____ 1. What organization certifies SCBA? (1306) [1072, 5.3.1, 5.4.1, 6.2.1]
A. Insurance Service Office (ISO)
B. National Fire Protection Association (NFPA)
C. International Association of Fire Fighters (IAFF)
D. National Institute of Occupational Safety and Health (NIOSH)
- _____ 2. When using SCBA, where does the air supply come from? (1306)
[1072, 5.3.1, 5.4.1, 6.2.1]
A. The ambient air
B. The user carries it
C. A stationary air cylinder
D. A large stationary generator
- _____ 3. Only _____ open-circuit or closed-circuit SCBA is allowed in incidents where personnel are exposed to hazardous materials. (1306) [1072, 5.3.1, 5.4.1, 6.2.1]
A. chemical
B. nonpowered
C. positive-pressure
D. pressure-demand
- _____ 4. Why are supplied-air respirators (SARs) not certified for use in fire fighting operations? (1307) [1072, 5.3.1, 5.4.1, 6.2.1]
A. Excessive weight increases physical stress
B. Cannot supply positive pressure to the face
C. Potential damage to the hose from heat, fire, or debris
D. Not enough air to escape from a hazardous environment

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- _____ 5. A supplied-air respirator (SAR) used at a hazmat incident must: (1307) [1072, 5.3.1, 5.4.1, 6.2.1]
- A. carry/supply its own air.
 - B. be certified for firefighting operations.
 - C. provide positive pressure to the facepiece.
 - D. have an airline of longer than 300 feet (90 m).
- _____ 6. APRs must be used only in atmospheres that are NOT oxygen deficient or oxygen enriched and are not IDLH because the: (1308-1309) [1072, 5.3.1, 5.4.1, 6.2.1]
- A. ambient air supplies the oxygen.
 - B. air generator may fail at any moment.
 - C. purifying canister may be expired or damaged.
 - D. responder may not properly use the equipment.
- _____ 7. Which type of filter is MOST likely to be used when biological hazards are known to be present? (1309) [1072, 5.3.1, 5.4.1, 6.2.1]
- A. Powered
 - B. Ambient air
 - C. Vapor reducing
 - D. Particulate removing
- _____ 8. Particulate-removing filters on APRs are used to protect the user from materials such as: (1309) [1072, 5.3.1, 5.4.1, 6.2.1]
- A. asbestos.
 - B. carbon monoxide.
 - C. low oxygen atmospheres.
 - D. fireground gases and smoke.
- _____ 9. What is a common feature of respiratory equipment? (1311) [1072, 5.3.1, 5.4.1, 6.2.1]
- A. Enhanced visibility
 - B. Increased mobility
 - C. May cause shortness of breath
 - D. Decreased ability to communicate

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- _____ 10. The U.S. Department of Homeland Security has adopted NIOSH and _____ standards for protective clothing used at hazmat/WMD incidents. (1313) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. International Firestop Council (IFC)
 - B. National Fire Protection Association (NFPA)
 - C. International Association of Fire Fighters (IAFF)
 - D. Centers for Disease Control and Prevention (CDC)
- _____ 11. Which statement about structural firefighters' protective clothing is accurate? (1313-1314) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. Gases and vapors can penetrate the garments.
 - B. Liquid chemicals cannot penetrate the garments.
 - C. Gaps in structural fire fighting clothing only occur at the wrists and waist.
 - D. Although some hazardous materials can permeate structural fire fighting clothing, the material will quickly dissipate.
- _____ 12. High temperature protective clothing is designed to protect the wearer from: (1315) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. chemical hazards.
 - B. inhalation hazards.
 - C. long-term exposures to high temperatures.
 - D. short-term exposures to high temperatures.
- _____ 13. What type of PPE allows a responder to work in total flame for a short period of time? (1315) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. Body armor
 - B. Type C suit
 - C. Proximity suit
 - D. Fire-entry suit
- _____ 14. CPC can contribute to heat disorders in hot environments because it: (1316) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. can degrade.
 - B. absorbs sunlight.
 - C. is designed to be impermeable to moisture.
 - D. allows penetration of hot fluids from the outside.

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- _____ 15. Which of the following statements about CPC is MOST accurate? (1316) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. CPC protects against all types of chemicals.
 - B. CPC is only made from one type of material.
 - C. It is appropriate for flammable environments.
 - D. No single type of CPC can protect against all hazards.
- _____ 16. Which statement about nonencapsulating liquid splash protective clothing is accurate? (1317) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. It is resistant to heat and flame exposure.
 - B. It often exposes part of the head and neck.
 - C. It protects against chemical vapors and gases.
 - D. It does not impair worker mobility, vision, or communication.
- _____ 17. Vapor protective clothing is usually part of level _____ protection. (1318) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. A
 - B. B
 - C. C
 - D. D
- _____ 18. All emergency response organizations that routinely use CPC must establish a: (1319) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. design procedure for new CPC.
 - B. written CPC management program.
 - C. research program to develop new CPC.
 - D. nationally certified CPC training program.
- _____ 19. When a chemical passes through a fabric on a molecular level, it is called: (1320) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. permeation.
 - B. penetration.
 - C. degradation.
 - D. contamination.

- _____ 20. What is it called when characteristics of a material are altered through contact with chemical substances? (1321) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. Permeation
 - B. Penetration
 - C. Degradation
 - D. Contamination
- _____ 21. Which statement about the service life of CPC is MOST accurate? (1321) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. CPC ensembles have no specific service life.
 - B. Always follow AHJ SOPs and manufacturer's specifications in regards to serviceability.
 - C. If a CPC garment is discolored, it is still perfectly usable as long as the serviceability date has not passed.
 - D. A CPC suit used in the hot zone does not need to be decontaminated unless contamination is verified visually.
- _____ 22. What organization has established a set of chemical-protective PPE ensembles providing certain protection levels that are commonly used by fire and emergency service organizations? (1322) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. Environmental Protection Agency (EPA)
 - B. National Fire Protection Association (NFPA)
 - C. International Association of Fire Fighters (IAFF)
 - D. National Institute of Occupational Safety and Health (NIOSH)
- _____ 23. Which statement describes Level A PPE protection? (1322) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. It does not require special training to use.
 - B. It is composed of a splash-protecting garment and an air-purifying device.
 - C. It provides excellent liquid splash-protection but no protection from chemical vapors or gases.
 - D. It provides the highest level of protection against vapors, gases, mists, and particles, for the respiratory tract and skin.

- _____ 24. Which level of PPE is worn when the highest level of respiratory protection is necessary, but a lesser level of skin protection is needed? (1323) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. Level A
 - B. Level B
 - C. Level C
 - D. Level D
- _____ 25. Which level of PPE is only used when the specific material is known and has been measured, and the atmosphere is not IDLH? (1324) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. Level A
 - B. Level B
 - C. Level C
 - D. Level D
- _____ 26. Level D PPE consists of: (1325) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. typical work uniforms, street clothing, or coveralls.
 - B. hooded chemical resistant clothing and full-face or half-mask APRs.
 - C. typical work uniforms, street clothing, or coveralls with the addition of a half-mask APR.
 - D. hooded chemical resistant clothing and positive-pressure, full facepiece, SCBA, or positive-pressure respirator with escape SCBA.
- _____ 27. In general, the higher the level of PPE, the greater the: (1325) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. associated risks.
 - B. media coverage.
 - C. number of victims.
 - D. amount of hazardous material.

- _____ 28. Which statement about choosing PPE ensembles is accurate? (1325) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. Chemical and physical hazards are less important selection factors when the duration of exposure is expected to be less than 15 minutes.
 - B. Because the IC will select the appropriate level of PPE to be used at an incident, a responder does not need to understand the selection process.
 - C. Overprotection, as well as underprotection, can be hazardous and should be avoided.
 - D. The highest available PPE should always be used in case there are unexpected hazards.
- _____ 29. Which is most likely to NOT be a factor for selecting protective clothing? (1325-1327) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. Size of incident
 - B. Exposure duration
 - C. Ease of decontamination
 - D. Material chemical resistance
- _____ 30. When a hazardous material is a mixture of unknown chemicals, what type of PPE should be selected? (1326) [1072, 5.3.1, 5.4.1, 6.2.1, 6.6.1]
- A. A level D ensemble should be selected.
 - B. None, because the mission should be abandoned.
 - C. If a level A ensemble is available, it should always be selected, no matter what the chemicals involved.
 - D. An ensemble that demonstrates the best chemical resistance against the widest range of chemicals should be selected.
- _____ 31. How does wearing PPE increase the risk of heat-related disorders? (1329) [1072, 5.4.1, 6.2.1]
- A. Most PPE has no effect on body temperature.
 - B. Most PPE provides automatic cooling technology.
 - C. Most PPE increases the body's ability to disperse heat and moisture.
 - D. Most PPE inhibits the body's ability to disperse heat and moisture.

- _____ 32. What is the most serious type of heat disorder? (1329) [1072, 5.4.1, 6.2.1]
- A. Heat stroke
 - B. Heat rashes
 - C. Heat cramps
 - D. Heat exhaustion
- _____ 33. Why should beverages that contain alcohol or caffeine be avoided prior to working? (1330) [1072, 5.4.1, 6.2.1]
- A. These beverages do not need to be avoided.
 - B. These beverages decrease dehydration and heat stress.
 - C. These beverages may increase productivity and awareness.
 - D. These beverages can contribute to dehydration and heat stress.
- _____ 34. Rehabbing in a warm area and avoiding cold beverages can help prevent: (1332) [1072, 5.4.1, 6.2.1]
- A. heat stress.
 - B. claustrophobia.
 - C. cold emergencies.
 - D. psychological issues.
- _____ 35. Using chemical protective clothing can cause psychological stress because: (1332) [1072, 5.4.1, 6.2.1]
- A. increased mobility may worry some users.
 - B. increased oxygen levels can cause cognitive impairment.
 - C. they may cause some users to feel confined or claustrophobic.
 - D. facepieces may cause some users to be over confident and unnecessarily expose themselves to contaminants.
- _____ 36. Which statement regarding medical monitoring of responders wearing PPE is accurate? (1333) [1072, 5.4.1, 6.2.1]
- A. Post-medical monitoring follow-up is also recommended.
 - B. If vital signs are steady pre-entry, then they do not need to be taken again.
 - C. Post-entry monitoring is not necessary if no exposure or contamination has occurred.
 - D. If a facepiece makes a responder feel claustrophobic, they may take it off at their own discretion.

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- _____ 37. You must be proficient in donning your PPE because increased familiarity and comfort will lead to: (1333) *[1072, 5.4.1, 6.2.1]*
- A. reduced stress.
 - B. increased stress.
 - C. increased work time.
 - D. a custom fit ensemble.
- _____ 38. An operation check on PPE, communications equipment, and any equipment taken into the hot zone should be conducted: (1333) *[1072, 5.4.1, 5.5.1, 5.6.1, 6.2.1]*
- A. pre-entry.
 - B. post-entry.
 - C. if a malfunction occurs.
 - D. halfway through the incident.
- _____ 39. Incident status, identified hazards, and tasks to be performed should be communicated during the: (1334) *[1072, 5.4.1, 5.5.1, 5.6.1, 6.2.1]*
- A. size-up.
 - B. safety briefing.
 - C. hazards assessment.
 - D. post-incident briefing.
- _____ 40. Exposure means that: (1335) *[1072, 5.4.1, 5.5.1, 5.6.1, 6.2.1]*
- A. you are radioactive.
 - B. you may have had contact with a foreign substance.
 - C. you must be immediately extracted from the hot zone.
 - D. a hazardous material has entered or potentially entered your body.
- _____ 41. Which statement regarding PPE safety and emergency communication is accurate? (1336) *[1072, 5.4.1, 5.5.1, 5.6.1, 6.2.1]*
- A. Hand signals should be designated for loss of air supply or suit integrity.
 - B. Radio communications should be designated as a backup system only.
 - C. Communication capabilities are only required for responders wearing SARs or APRs.
 - D. Providing direction via a PA system or bullhorn is the universal emergency evacuation signal.

- _____ 42. Where should PPE be donned? (1337) [1072, 5.4.1, 5.5.1, 5.6.1, 6.2.1]
- A. Wherever is convenient
 - B. In a preselected area in the hot zone
 - C. In the apparatus on the way to the incident
 - D. In a preselected area in the cold zone, as close to the entry point as possible
- _____ 43. When should PPE be donned? (1338) [1072, 5.4.1, 5.5.1, 5.6.1, 6.2.1]
- A. Immediately upon arrival
 - B. After the mission briefing
 - C. Before the mission briefing
 - D. Once entry is made into the hot zone
- _____ 44. When doffing PPE, what is the last item that should be removed? (1338) [1072, 5.4.1, 5.5.1, 5.6.1, 6.2.1]
- A. Gloves
 - B. Coverall
 - C. Footwear
 - D. Respirator facepiece
- _____ 45. Operational inspections of respiratory protection equipment: (1340) [1072, 6.2.1]
- A. must occur after each use.
 - B. are subject to review by the NIOSH.
 - C. are only required to be performed on a monthly basis.
 - D. should be completed by the department's health and safety officer.
- _____ 46. After using PPE at an incident, don't forget to: (1340) [1072, 6.2.1]
- A. discard it.
 - B. leave it where the clean-up team can find it.
 - C. fill out any required reports or documentation.
 - D. wipe it down with warm water and then return it to service.

- _____ 47. Spill control tactics attempt to: (1340) [1072, 6.6.1]
- A. spill hazardous materials in a carefully controlled manner.
 - B. remediate spilled hazardous materials from contaminated exposures.
 - C. contain the product in its original container (or another) and prevent it from escaping.
 - D. reduce the amount of contact the product makes with people, property, and the environment.
- _____ 48. Why should an IC consult technical sources before using equipment to confine spilled materials? (1340) [1072, 6.6.1]
- A. To determine how to correctly use a piece of equipment
 - B. To determine if a similar situation has occurred in the past
 - C. To determine if the spilled material will adversely affect the equipment
 - D. To determine if the spilled material is able to be contained by the equipment
- _____ 49. Why must responders treat and dispose of absorbents as hazardous materials? (1343) [1072, 6.6.1]
- A. Absorbents themselves are hazardous materials.
 - B. Absorbents undergo violent chemical reactions after use.
 - C. Absorbents may be toxic if exposed to too much oxygen.
 - D. Absorbents retain the properties of the materials they absorb.
- _____ 50. During the process of adsorption, the molecules of the liquid hazardous material: (1343) [1072, 6.6.1]
- A. physically adhere to the adsorbent material rather than being absorbed into its inner spaces.
 - B. chemically adhere to the adsorbent material rather than being absorbed into its inner spaces.
 - C. chemically adhere to the absorbent material rather than being adsorbed into its inner spaces.
 - D. physically adhere to the absorbent material rather than being adsorbed into its inner spaces.

- _____ 51. Which process might be used for the temporary mitigation of radioactive and biological substances? (1344) [1072, 6.6.1]
- A. Dilution
 - B. Absorption
 - C. Adsorption
 - D. Blanketing/covering
- _____ 52. Diking, damming, diverting, and retention: (1345) [1072, 6.6.1]
- A. reduce the emission of vapors at a hazmat incident.
 - B. control air movement using natural or mechanical means.
 - C. reduce the potential risks of liquid hazardous materials by dilution.
 - D. control the flow of liquid hazardous materials away from the point of discharge.
- _____ 53. To reduce the emission of vapors at a hazmat incident, responders should use: (1346) [1072, 6.6.1]
- A. ventilation.
 - B. adsorption.
 - C. vapor dispersion.
 - D. vapor suppression.
- _____ 54. What must responders do after using water streams for vapor dispersion? (1346) [1072, 6.6.1]
- A. Neutralize the corrosive contaminants in runoff water.
 - B. Confine and analyze runoff water for possible contamination.
 - C. Dispose of equipment as though it were a hazardous material.
 - D. Use chemical vapor suppressants to confine remaining vapors.
- _____ 55. When choosing the type of ventilation to use, remember that: (1347) [1072, 6.6.1]
- A. zero-pressure ventilation removes atmospheric contaminants more effectively than positive-pressure ventilation.
 - B. neutral-pressure ventilation removes atmospheric contaminants more effectively than positive-pressure ventilation.
 - C. positive-pressure ventilation removes atmospheric contaminants more effectively than negative-pressure ventilation.
 - D. negative-pressure ventilation removes atmospheric contaminants more effectively than positive-pressure ventilation.

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- _____ 56. One problem associated with dispersion is that it can: (1347) [1072, 6.6.1]
- A. only control small, shallow liquid spills.
 - B. spread a hazardous material over a wide area.
 - C. only be accomplished by creating a foam blanket.
 - D. not be used on hydrocarbon spills such as oceanic crude oil.
- _____ 57. Responders use dilution more frequently when dealing with: (1347) [1072, 6.6.1]
- A. corrosive vapor.
 - B. terrorist attacks.
 - C. hydrocarbon spills.
 - D. decontamination operations.
- _____ 58. Which method of spill control involves raising or lowering the pH of corrosive materials? (1348) [1072, 6.6.1]
- A. Dilution
 - B. Neutralization
 - C. Vapor suppression
 - D. Blanketing/covering
- _____ 59. Why should responders avoid contact with flammable or combustible products? (1348) [1072, 6.6.1]
- A. Protective clothing is extremely flammable.
 - B. Protective clothing can ignite puddles, streams, or contaminated pools of these products.
 - C. Protective clothing may not be able to withstand the corrosive effects of these products.
 - D. Protective clothing can absorb these products and ignite if exposed to an ignition source.
- _____ 60. Why should responders NOT use water streams in conjunction with the application of foam for vapor suppression? (1351) [1072, 6.6.1]
- A. Most foam concentrates are water reactive.
 - B. Water is more effective than foam concentrates.
 - C. Water destroys and washes away foam blankets.
 - D. Foam concentrates should never come in contact with water.

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- _____ 61. To stop or limit the escape or to contain the release of a product either in its original container or by transferring it to a new one is the goal of: (1354) *[1072, 6.6.1]*
- A. fire control.
 - B. spill control.
 - C. leak control.
 - D. dilution control.
- _____ 62. Provided they have appropriate training, equipment, and PPE, Operations level responders can take offensive actions, like leak control, in situations involving: (1354) *[1072, 6.6.1]*
- A. chlorine.
 - B. anhydrous ammonia.
 - C. radioactive materials.
 - D. gasoline and natural gas fuels.
- _____ 63. Which type of cargo tank truck does NOT typically have emergency shutoff devices? (1356) *[1072, 6.6.1]*
- A. High pressure tanks
 - B. Corrosive liquid tanks
 - C. Nonpressure liquid tanks
 - D. Low-pressure chemical tanks
- _____ 64. At a fixed facility or at a pipeline, responders should NOT shut any valves without direction from: (1357) *[1072, 6.6.1]*
- A. law enforcement.
 - B. federal authorities.
 - C. the owner of the facility.
 - D. facility or pipeline operators.
- _____ 65. Which type of decon may involve using wipes or other decon methods to remove soot from the face, head, and neck? (1361) *[1072, 6.6.1]*
- A. Mass
 - B. Gross
 - C. Technical
 - D. Emergency

- _____ 66. An advantage of gross decontamination is that it: (1362) [1072, 6.6.1]
- A. does not involve water.
 - B. will remove all contaminants.
 - C. does not require follow-up decon.
 - D. is conducted in the field, so the reduction of contaminants is immediate.
- _____ 67. One of the disadvantages of emergency decontamination is that it: (1363) [1072, 6.6.1]
- A. is fast to implement.
 - B. can harm the environment.
 - C. requires minimal equipment.
 - D. requires a formal decon corridor.
- _____ 68. If a first responder becomes contaminated before realizing the situation, they should immediately withdraw and: (1363) [1072, 6.6.1]
- A. set up a decon zone.
 - B. sample themselves to determine the contaminant.
 - C. notify law enforcement.
 - D. follow local procedures for emergency decontamination.
- _____ 69. What is required for all first responders who have been exposed or potentially exposed to hazardous materials? (1363) [1072, 6.6.1]
- A. Exposure records
 - B. A leave of absence
 - C. Exposure justification
 - D. Immediate hospitalization
- _____ 70. The chronology of events, activities that occurred during an incident, and decon procedures must be documented in the: (1363) [1072, 6.6.1]
- A. size-up.
 - B. SOPs.
 - C. activity log.
 - D. preincident plan.