Hazardous Materials - PPE, Scene Safety and Scene Control

1. Which cooling systems are commonly used during a hazardous materials incident? p. 952

*A.) Passive systems
B.) Fluid-chilled systems
C.) Battery-operated systems
D.) Pumped systems

2. What should be done with the arms when doffing a Level B encapsulated chemical-protective clothing ensemble? p. 942

A.) Cross the arms behind you outside of the suit
B.) Cross the arms behind you inside the suit
C.) Cross the arms in front of you outside of the suit
*D.) Cross the arms in front of you inside the suit

3. How much water should fire fighters be required to consume in rehabilitation for every SCBA tank used or consumed? p. 952

*A.) 16 ounces (473 milliliters)
B.) 8 ounces (237 milliliters)
C.) 24 ounces (710 milliliters)
D.) 12 ounces (355 milliliters)

4. Which factor in particular influences the development of cold-related injuries? p. 952

A.) Temperature
B.) Time
C.) Humidity
*D.) Wind speed

5. What is the maximum concentration of material to which a worker can be exposed for 8 hours a day, 40 hours a week with no ill effects? p. 936

*A.) Threshold limit value/time-weighted average
B.) Threshold limit value/ceiling level average
C.) Threshold limit value/short-term exposure limit
D.) Threshold limit value/skin exposure limit

6. What should the minimum rest period be between 15-minute exposures under the threshold limit value/short-term exposure limit? p. 936

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

7. Which is **NOT** sufficient when operating in a team at a hazardous materials incident? p. 955

A.) Sight
*B.) Radio contact
C.) Touch
D.) Sound

8. Which is considered optional PPE for Level A protection? p. 941

A.) Hard hat
B.) Two-way radio
*C.) Disposable gloves and boot covers
D.) SCBA or SAR

9. Within what amount of time before the fire fighter enters the hazardous environment should pre-entrance medical monitoring be performed? p. 953

A.) Two hours
B.) One-half hour
*C.) One hour
D.) One and one-half hours

10. Who has the ultimate authority and responsibility to approve the level of PPE at a hazmat incident for a given activity? p. 937

A.) Company officer
*B.) Incident commander
C.) Safety officer
D.) Hazmat team leader

11. What method of passage of chemicals are chemical protective clothing tested for? p. 941

A.) Degradation
B.) Absorption
C.) Penetration
*D.) Permeation

12. Which level of protection should be used when the type and atmospheric concentration of identified substances require a high level of respiratory protection but less skin protection? p. 941

A.) Level C
*B.) Level B
C.) Level A
D.) Level D

13. What is one of the fastest means of exposure by absorption? p. 950

*A.) Eyes
B.) Legs
C.) Forearm
D.) Ears

14. What should be donned immediately after the assistant closes the chemical splash suit by closing the zipper and sealing the splash flap? p. 946

A.) Outer gloves
B.) Helmet
*C.) Inner gloves
D.) PAPR

15. Which level of protective clothing should be used for nuisance contamination only? p. 948

A.) Level B
B.) Level C
*C.) Level D
D.) Level A

16. To what approximate temperature is the material in the vests of phase change cooling technology chilled? p. 952

A.) 55°F (13°C)
B.) 65°F (18°C)
*C.) 60°F (16°C)
D.) 50°F (10°C)

17. What is the first step that a first responder should take to isolate the hazard and create control zones? p. 955

A.) Post personnel at all access points
B.) Cordon off the area with cones or fire-line barrier-tape

C.) Divert traffic with the help of the police department
*D.) Identify the area verbally over the radio

18. What is a mild form of shock that occurs when the circulatory system begins to fail because the body cannot dissipate excessive heat and begins to overheat? p. 950

*A.) Heat exhaustion
B.) Heat cramps
C.) Heat rash
D.) Heat stroke

19. When is the safe handling of the hazardous material incident often determined? p. 936

A.) With the company officer's arrival
B.) During pre-incident planning
*C.) Within first 5 to 15 minutes
D.) While en route to the scene

20. Which level of protection is appropriate when the type of airborne substance is known, its concentration is measured, the criteria for using APRs are met, and skin and eye exposure is unlikely? p. 945-946

A.) Level D
*B.) Level C
C.) Level B
D.) Level A

21. From which zone must all personnel be decontaminated when exiting? p. 954

A.) Warm zone
B.) Cold zone
C.) Cool zone
*D.) Hot zone

22. What is the cornerstone of an effective health and safety management system for responders? p. 953

A.) Nutritionist on staff
*B.) Medical surveillance program
C.) Mandatory exercise program
D.) Health educational program

23. What is an early symptom of heat stroke? p. 952

A.) Temperature of 105°F (40.5°C) or higher
B.) Rapid pulse
C.) Confusion
*D.) Reduction of sweating

24. Which is **NOT** a sign of heat exhaustion? p. 950

A.) Cold, clammy skin
B.) Weak pulse
C.) Blurred vision
*D.) Lack of sweating

25. Which is considered optional PPE for Level D protection? p. 948

*A.) Face shield
B.) Gloves
C.) Coveralls
D.) Safety glasses

26. Up to how many times faster does wet clothing extract heat from the body than dry clothing? p. 952

*A.) 240 times
B.) 100 times
C.) 360 times
D.) 300 times

27. Which of the following would **NOT** be part of Level C respiratory protection? p. 946

*A.) SCBA
B.) Filter mask
C.) Cartridge mask
D.) APR

28. During which cooling process is perspiration generated? p. 952

A.) Convective
B.) Radiating
*C.) Evaporative
D.) Conducting

29. Where are personnel and equipment staged at the hazardous materials incident before and after leaving the area immediately around the incident? p. 954

A.) Cold zone
B.) Hot zone
C.) Cool zone
*D.) Warm zone

30. Where should the Level B encapsulated chemical-protective suit be pulled up to while seating during donning procedures? p. 942

A.) Knees
B.) Thighs
*C.) Waist
D.) Chest

31. Which of the following should Operations-level personnel **NOT** be using? p. 939

A.) High temperature-protective equipment
B.) Work uniform
C.) Liquid splash-protective clothing
*D.) Encapsulating suits

32. What must the minimum oxygen level be for an air-purifying respirator and/or powered air-purifying respirator for it to be considered usable? p. 940

A.) 21 percent
*B.) 19.5 percent
C.) 20.5 percent
D.) 23 percent

33. Which level of protection is effective against vapors, gases, mists, and even dusts? p. 941

A.) Level D
*B.) Level A
C.) Level C
D.) Level B

34. Within what amount of time after leaving the hazardous environment should normal baseline vital signs be attained by each fire fighter? p. 953

A.) 30 to 45 minutes
B.) 45 to 60 minutes
*C.) 15 to 20 minutes
D.) 10 to 15 minutes

35. Below what level should the Level B nonencapsulating chemical-protective clothing ensemble be rolled down initially when doffing the suit? p. 945

A.) Thighs
B.) Feet
*C.) Waist
D.) Knees

36. Which should be put on last when donning a Level D chemical-protective clothing ensemble? p. 948-949

A.) Chemical goggles
*B.) Gloves
C.) Hard hat
D.) Boots

37. What is a limiting factor of the supplied-air respirator? p. 940

A.) Air supply time
*B.) Length of air hose
C.) Bulkiness of the unit
D.) Weight of the unit

38. Which of the following does standard firefighting turnout gear offer protection from? p. 938

*A.) Abrasions
B.) Gases
C.) Chemicals
D.) Product absorption

39. Which is caused by an electrolyte imbalance due to excessive sweating? p. 950

*A.) Heat cramps
B.) Heat rash
C.) Heat stroke
D.) Heat exhaustion

40. What is the flow or movement of a hazardous chemical through closures? p. 938

A.) Degradation
B.) Permeation
C.) Absorption
*D.) Penetration