Import Settings:

Base Settings: Brownstone Default

Information Field: Complexity

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Highest Answer Letter: D

Multiple Keywords in Same Paragraph: No

**Chapter: Hazardous Materials - Hazardous Materials - TBNK**

**Multiple Choice**

1. If you are trained in hazardous materials at the awareness level, you should be able to:

A) recognize potential hazards and the need for additional resources.

B) perform patient care activities in the command and support center.

C) coordinate activities at the scene of a hazardous materials incident.

D) care for patients who may present a risk of secondary contamination.

Ans: A

Complexity: Moderate

Ahead: Regulations and Standards

Subject: Hazardous Materials

Page: 2399

Feedback: Regulations and Standards, page 2399

2. An individual trained at the hazardous materials operations level is trained to:

A) make direct, intentional contact with a hazardous material.

B) perform patient care activities outside of the hot zone.

C) care for patients contaminated with a hazardous material.

D) recognize a hazardous materials incident, but provide no patient care.

Ans: B

Complexity: Moderate

Ahead: Regulations and Standards

Subject: Hazardous Materials

Page: 2399

Feedback: Regulations and Standards, page 2399

3. At the scene of a hazardous materials incident, the paramedic would MOST likely be called upon to:

A) provide initial decontamination in the warm zone.

B) support hazardous materials teams through medical monitoring.

C) don a breathing apparatus and rescue contaminated patients.

D) provide emergency medical care in the incident's hot zone.

Ans: B

Complexity: Moderate

Ahead: Paramedics and Hazardous Materials Incidents

Subject: Hazardous Materials

Pages: 2399–2400

Feedback: Paramedics and Hazardous Materials Incidents, pages 2399–2400

4. After ensuring your own safety, which of the following is your next priority at the scene of a hazardous materials incident?

A) Identify the hazardous material involved.

B) Immediately move patients to a safe place.

C) Evacuate residents within a 3-mile radius.

D) Begin decontaminating all involved patients.

Ans: A

Complexity: Moderate

Ahead: Scene Size-up

Subject: Hazardous Materials

Page: 2400

Feedback: Scene Size-up, page 2400

5. When approaching an overturned tanker truck that is not displaying a warning placard, it is MOST important for the paramedic to maintain a high index of suspicion because:

A) all tanker trucks carry some type of hazardous material, regardless of whether a placard is displayed.

B) many companies that transport hazardous materials do not abide by federal law and do not display warning placards.

C) tankers carrying small amounts of a hazardous material may not be required by law to display a warning placard.

D) warning placards are only displayed on one side of tanker trucks, and that side may not be visible due to the crash.

Ans: C

Complexity: Moderate

Ahead: Scene Size-up

Subject: Hazardous Materials

Page: 2403

Feedback: Scene Size-up, page 2403

6. Which of the following statements regarding the transport of a hazardous material is correct?

A) Federal law requires a truck to display a placard if it contains small amounts of several materials that become highly toxic when combined.

B) Even if the law does not require a truck to display a placard, the driver of the truck is required to carry documentation of the chemical being transported.

C) A tanker truck that displays a “Please drive carefully” placard is likely not carrying a hazardous material and should be considered safe to approach.

D) Any tanker truck or train that carries a hazardous material is required by federal law to display a warning placard, regardless of the quantity it is carrying.

Ans: B

Complexity: Moderate

Ahead: Scene Size-up

Subject: Hazardous Materials

Page: 2403

Feedback: Scene Size-up, page 2403

7. Upon arriving at the scene of an overturned tanker truck or train derailment, you should be MOST suspicious that a hazardous material is involved if:

A) any type of fluid is leaking from the overturned tanker or railroad car.

B) the truck driver or train conductor is unconscious and still in the vehicle.

C) a visible cloud or dark smoke is escaping from the tanker or railroad car.

D) multiple patients are unconscious or are experiencing respiratory distress.

Ans: D

Complexity: Moderate

Ahead: Scene Size-up

Subject: Hazardous Materials

Pages: 2400–2401

Feedback: Scene Size-up, pages 2400–2401

8. If you are the first unit to arrive at a scene and observe any signs suggesting that a hazardous materials incident has occurred, you should:

A) place yellow or red police tape around the danger zone and begin moving bystanders away from the scene.

B) remain upwind from the scene if possible and immediately call the hazardous materials response team.

C) don gloves, a mask, and a gown and begin moving injured patients away from the area surrounding the incident.

D) immediately move any patients to a designated area and begin decontaminating them by dousing them with water.

Ans: B

Complexity: Moderate

Ahead: Scene Size-up

Subject: Hazardous Materials

Pages: 2400–2401

Feedback: Scene Size-up, pages 2400–2401

9. When assessing a potential hazardous materials incident from a distance:

A) your unit should be positioned such that you can feel a breeze on your face.

B) the entire scene should be covered by your hand held out at arm's length.

C) you should use binoculars to obtain a clearer picture of the entire incident.

D) the unit should be in a low-lying area since most hazardous materials rise.

Ans: C

Complexity: Moderate

Ahead: Scene Size-up

Subject: Hazardous Materials

Pages: 2400–-2401

Feedback: Scene Size-up, pages 2400–2401

10. Knowledge of the specific hazardous material involved in an incident is MOST important because:

A) this information will determine how many hazardous materials vehicles will be required.

B) knowledge of the material involved dictates the square mileage of evacuation.

C) you will have an understanding of how the material will affect a patient's health.

D) many hazardous material exposures require treatment at a hyperbaric chamber.

Ans: C

Complexity: Moderate

Ahead: Scene Size-up

Subject: Hazardous Materials

Pages: 2400–2401

Feedback: Scene Size-up, pages 2400–2401

11. Where would you MOST likely find a safety data sheet that provides information about a hazardous material?

A) At a tanker truck's destination location

B) At a permanent manufacturing or storage facility

C) Affixed to the roof of a commercial tanker truck

D) In a steel box in the conductor's cabin of a train

Ans: B

Complexity: Easy

Ahead: Scene Size-up

Subject: Hazardous Materials

Page: 2403

Feedback: Scene Size-up, page 2403

12. Which of the following would be of LEAST value when trying to determine the type of hazardous material a commercial tanker truck is carrying?

A) Waybill

B) CHEMTREC

C) Bill of lading

D) *Emergency Response Guidebook*

Ans: A

Complexity: Moderate

Ahead: Scene Size-up

Subject: Hazardous Materials

Page: 2403

Feedback: Scene Size-up, page 2403

13. When staging at an appropriate distance from the scene until the hazardous materials team arrives to investigate the chemical leaking from an overturned tanker, you should:

A) be able to read the vehicle's safety placard with the naked eye.

B) stay in a location that is upwind and downhill from the incident.

C) notify area hospitals and tell them to prepare for mass casualties.

D) check the wind direction periodically and be prepared to relocate.

Ans: D

Complexity: Moderate

Ahead: Scene Size-up

Subject: Hazardous Materials

Pages: 2410–2411

Feedback: Scene Size-up, pages 2410–2411

14. A Computer-Aided Management of Emergency Operations (CAMEO) device is used by hazardous materials teams to:

A) determine a hazardous material's explosive limits by monitoring wind speed and environmental temperature.

B) monitor the levels of hydrogen sulfide and carbon monoxide contained in a wide variety of hazardous materials.

C) determine the pH of the hazardous material, which will assist in identifying the most appropriate neutralizing agent to use.

D) help predict downwind concentrations of hazardous materials based on the input of environmental factors into a computer model.

Ans: D

Complexity: Moderate

Ahead: Scene Size-up

Subject: Hazardous Materials

Page: 2411

Feedback: Scene Size-up, page 2411

15. Department of Transportation (DOT) Class 1 chemicals are:

A) corrosive.

B) explosive.

C) combustible.

D) radioactive.

Ans: B

Complexity: Easy

Ahead: Scene Size-up

Subject: Hazardous Materials

Page: 2401

Feedback: Scene Size-up, page 2401

16. Department of Transportation (DOT) Class 8 chemicals are:

A) explosive.

B) flammable.

C) corrosive.

D) radioactive.

Ans: C

Complexity: Easy

Ahead: Scene Size-up

Subject: Hazardous Materials

Page: 2402

Feedback: Scene Size-up, page 2402

17. A blue placard specifically indicates that a chemical is a \_\_\_\_\_\_\_\_\_ hazard.

A) fire

B) health

C) reactivity

D) explosive

Ans: B

Complexity: Easy

Ahead: Scene Size-up

Subject: Hazardous Materials

Page: 2404

Feedback: Scene Size-up, page 2404

18. If you discover that a seemingly ordinary EMS call is actually a hazardous materials incident, you should:

A) immediately notify the dispatcher and request the appropriate resources.

B) isolate the incident as much as possible to avoid the risk of harm to others.

C) immediately establish a hot zone and cordon it off with red or yellow tape.

D) size up the scene, assessing factors such as wind direction and terrain features.

Ans: A

Complexity: Moderate

Ahead: Scene Size-up

Subject: Hazardous Materials

Pages: 2400–2401

Feedback: Scene Size-up, pages 2400–2401

19. Which of the following statements regarding the warm zone at a hazardous materials incident is correct?

A) Patients who are brought to the warm zone by trained rescuers should already have been decontaminated.

B) A standard-size warm zone is generally 50 feet in all directions, but may be smaller depending on the incident.

C) The warm zone is also known as the contamination zone and is only accessible by properly trained rescuers.

D) It may be necessary to perform urgent lifesaving care in the warm zone before a patient is fully decontaminated.

Ans: D

Complexity: Moderate

Ahead: Scene Size-up

Subject: Hazardous Materials

Page: 2410

Feedback: Scene Size-up, page 2410

20. Triage and emergency medical treatment should be performed:

A) in the hot zone.

B) in the cold zone.

C) in the warm zone.

D) at least 100 feet from the incident.

Ans: B

Complexity: Easy

Ahead: Scene Size-up

Subject: Hazardous Materials

Page: 2410

Feedback: Scene Size-up, page 2410

21. Level A personal protective equipment:

A) is designed to protect the rescuer against a known agent and is worn with an air-purifying respirator.

B) fully encapsulates the hazardous materials technician, including his or her self-contained breathing apparatus.

C) is required when a technician needs protection from splashes and inhaled toxins but does not need to be fully encapsulated.

D) provides the same degree of protection as a fire fighter's turnout gear, and is typically worn in the cold zone.

Ans: B

Complexity: Moderate

Ahead: Scene Size-up

Subject: Hazardous Materials

Pages: 2413–2414

Feedback: Scene Size-up, pages 2413–2414

22. What level of personal protective equipment is typically worn by the hazardous materials decontamination team in the warm zone?

A) Level A

B) Level B

C) Level C

D) Level D

Ans: B

Complexity: Moderate

Ahead: Scene Size-up

Subject: Hazardous Materials

Page: 2414

Feedback: Scene Size-up, page 2414

23. Level \_\_\_ personal protective equipment would MOST likely be worn during transport of patients with the potential of secondary contamination.

A) A

B) B

C) C

D) D

Ans: C

Complexity: Moderate

Ahead: Scene Size-up

Subject: Hazardous Materials

Page: 2414

Feedback: Scene Size-up, page 2414

24. The severity with which a hazardous material interferes with the body's internal processes is LEAST affected by the:

A) part of the body exposed.

B) route of chemical exposure.

C) presence of an underlying illness.

D) chemical's dose and concentration.

Ans: A

Complexity: Moderate

Ahead: Contamination and Toxicology

Subject: Hazardous Materials

Page: 2414

Feedback: Contamination and Toxicology, page 2414

25. The direct exposure of a patient to a hazardous material is called:

A) acute infection.

B) chemical transference.

C) systemic intoxication.

D) primary contamination.

Ans: D

Complexity: Easy

Ahead: Contamination and Toxicology

Subject: Hazardous Materials

Page: 2415

Feedback: Contamination and Toxicology, page 2415

26. Secondary contamination with a hazardous material occurs when:

A) toxic gases diffuse from one person to another person.

B) systemic effects of the hazardous material are observed.

C) an acutely contaminated person coughs near another person.

D) toxins are transferred to another person by contaminated objects.

Ans: D

Complexity: Easy

Ahead: Contamination and Toxicology

Subject: Hazardous Materials

Page: 2415

Feedback: Contamination and Toxicology, page 2415

27. The local effects of a hazardous material may present with:

A) restlessness.

B) blister formation.

C) nausea and vomiting.

D) blood in the urine.

Ans: B

Complexity: Easy

Ahead: Contamination and Toxicology

Subject: Hazardous Materials

Page: 2415

Feedback: Contamination and Toxicology, page 2415

28. Systemic effects following exposure to a hazardous material:

A) primarily affect the hepatic system.

B) may be delayed for hours or even years.

C) are typically seen immediately in the field.

D) are characterized by erythema and blisters.

Ans: B

Complexity: Moderate

Ahead: Contamination and Toxicology

Subject: Hazardous Materials

Page: 2415

Feedback: Contamination and Toxicology, page 2415

29. According to the dose effect principle:

A) the greater the length of time or the greater the concentration of the material, the greater the effect will be on the body.

B) biotransformation and elimination of a chemical is not possible if the exposure involved a large or concentrated dose.

C) the effects of a hazardous material will be more severe if it is ingested rather than inhaled or absorbed through the skin.

D) an extremely toxic hazardous material will have the same effect on the body, regardless of the length of the exposure.

Ans: A

Complexity: Moderate

Ahead: Contamination and Toxicology

Subject: Hazardous Materials

Page: 2415

Feedback: Contamination and Toxicology, page 2415

30. For the purposes of hazardous materials, vapor pressure pertains to:

A) any liquids held inside any type of enclosed container.

B) any liquid that evaporates quickly when not contained.

C) where a vapor might go once released from a container.

D) the speed at which a liquid evaporates when not contained.

Ans: A

Complexity: Moderate

Ahead: Contamination and Toxicology

Subject: Hazardous Materials

Page: 2415

Feedback: Contamination and Toxicology, page 2415

31. The temperature at which a liquid fuel gives off sufficient vapors to cause a fire when an ignition source is present is called the:

A) flash point.

B) vapor density.

C) flammable range.

D) ignition temperature.

Ans: A

Complexity: Easy

Ahead: Contamination and Toxicology

Subject: Hazardous Materials

Pages: 2415–2416

Feedback: Contamination and Toxicology, pages 2415–2416

32. When a base substance is placed on a burn caused by an acid:

A) the burn will be confined to the epidermis.

B) an exothermic reaction is less likely to occur.

C) the toxicity of the acid is effectively neutralized.

D) heat is generated as a by-product of the reaction.

Ans: D

Complexity: Moderate

Ahead: Decontamination and Treatment

Subject: Hazardous Materials

Page: 2418

Feedback: Contamination and Toxicology, page 2418

33. The threshold limit value/ceiling of a chemical is the concentration that:

A) a person can be exposed to for 1 hour.

B) a person should never be exposed to.

C) is only toxic if inhaled into the lungs.

D) is nontoxic during short-term exposure.

Ans: B

Complexity: Easy

Ahead: Contamination and Toxicology

Subject: Hazardous Materials

Page: 2417

Feedback: Contamination and Toxicology, page 2417

34. It is MOST important to park your ambulance upwind and uphill from a hazardous materials incident scene because:

A) if the chemical ignites and explodes, the fallout from the blast will most likely sink into valleys and ditches instead of rising.

B) the risk of being contaminated is minimal if the chemical travels, and you will have greater visibility of the entire incident scene.

C) hazardous chemicals that turn to gas rarely have a vapor density that is heavier than the air, regardless of the amount of chemical.

D) the vapor density of many chemicals is less than that of the air, causing the vapor to rise and dissipate as it travels with the wind.

Ans: D

Complexity: Moderate

Ahead: Contamination and Toxicology

Subject: Hazardous Materials

Page: 2415

Feedback: Contamination and Toxicology, page 2415

35. If a sufficient concentration of a hazardous material mixes with air and reaches its lower flammable limit:

A) the material can burn in the air or explode.

B) the vapors will begin to burn, but will not explode.

C) the chemical is said to have reached its flash point.

D) there will not be enough oxygen to support combustion.

Ans: A

Complexity: Moderate

Ahead: Contamination and Toxicology

Subject: Hazardous Materials

Pages: 2414–2416

Feedback: Contamination and Toxicology, pages 2414–2416

36. In contrast to the lethal concentration of a chemical, the lethal dose is:

A) a single dose that causes death when exposure occurs exclusively via the inhalation route.

B) the dose expected to cause death when administered over a specified period of time.

C) a single dose that causes death when exposure occurs by any route other than inhalation.

D) the dose expected to cause death when administered by any route other than absorption.

Ans: C

Complexity: Moderate

Ahead: Contamination and Toxicology

Subject: Hazardous Materials

Page: 2417

Feedback: Contamination and Toxicology, page 2417

37. Decontaminating a patient with copious amounts of water:

A) should not include the eyes, as this often causes further injury.

B) should involve the use of a brush to maximize decontamination.

C) decreases the dose effect of the hazardous material on the patient.

D) is generally discouraged, as this may cause runoff of the material.

Ans: C

Complexity: Moderate

Ahead: Decontamination and Treatment

Subject: Hazardous Materials

Pages: 2417–2418

Feedback: Decontamination and Treatment, pages 2417–2418

38. \_\_\_\_\_\_\_\_\_ can reduce the level of contamination of a person by as much as 90%.

A) Removing the patient's clothing

B) Using large pads to absorb the chemical

C) Using an agent to neutralize the chemical

D) Flushing with copious amounts of water

Ans: A

Complexity: Easy

Ahead: Decontamination and Treatment

Subject: Hazardous Materials

Page: 2418

Feedback: Decontamination and Treatment, page 2418

39. Patients showing signs of pulmonary edema secondary to inhalation exposure to a corrosive chemical may need to be treated with:

A) glucagon.

B) a diuretic.

C) an inotrope.

D) sodium bicarbonate.

Ans: B

Complexity: Moderate

Ahead: Decontamination and Treatment

Subject: Hazardous Materials

Page: 2420

Feedback: Decontamination and Treatment, page 2420

40. Cyanide is a chemical asphyxiant, which means that it:

A) interferes with the utilization of oxygen at the cellular level.

B) impairs pulmonary respiration by causing pulmonary edema.

C) destroys red blood cells and prevents red blood cell production.

D) binds to hemoglobin and prevents oxygen transport to the cells.

Ans: A

Complexity: Moderate

Ahead: Decontamination and Treatment

Subject: Hazardous Materials

Page: 2421

Feedback: Decontamination and Treatment, page 2421

41. Prior to accepting a patient who has been decontaminated by the hazardous materials team, the paramedic must:

A) make contact with the receiving medical facility.

B) be informed about the degree of decontamination.

C) receive a verbal report about the material involved.

D) don the appropriate personal protective equipment.

Ans: D

Complexity: Moderate

Ahead: Decontamination and Treatment

Subject: Hazardous Materials

Page: 2422

Feedback: Decontamination and Treatment, page 2422

42. Medical monitoring and rehabilitation of rescuers at the scene of a hazardous materials incident should routinely include all of the following, EXCEPT:

A) assessment of the person's hydration status.

B) a complete set of vital signs and ECG monitoring.

C) prophylactic IV boluses of an isotonic crystalloid.

D) documentation of the hazardous material involved.

Ans: C

Complexity: Moderate

Ahead: Medical Monitoring and Rehabilitation

Subject: Hazardous Materials

Pages: 2422–2423

Feedback: Medical Monitoring and Rehabilitation, pages 2422–2423

43. While en route to a motor vehicle accident, the dispatcher advises you that law enforcement is at the scene and is reporting that numerous bystanders are suddenly becoming ill. After receiving this information, you should:

A) ascertain approximately how many patients are involved.

B) keep a safe distance from the scene and view it with binoculars.

C) advise all law enforcement personnel to evacuate immediately.

D) alert area hospitals to prepare them to care for numerous patients.

Ans: B

Complexity: Moderate

Ahead: Scene Size-up

Subject: Hazardous Materials

Pages: 2400–2401

Feedback: Scene Size-up, pages 2400–2401

44. Following exposure to an industrial pesticide, a patient is responsive to pain only, is coughing up copious secretions, and has a heart rate of 40 beats/min. Priority treatment for this patient includes:

A) pralidoxime.

B) oral suctioning.

C) atropine sulfate.

D) tracheal intubation.

Ans: B

Complexity: Moderate

Ahead: Decontamination and Treatment

Subject: Hazardous Materials

Page: 2421

Feedback: Decontamination and Treatment, page 2421

45. A commercial truck was involved in a wreck and is spilling anhydrous ammonia on the roadway. The incident commander has already established the hot, warm, and cold zones as dictated by the chemical involved. As one of the paramedics at the scene, you should anticipate that your role will MOST likely involve:

A) performing triage and treatment in the cold zone.

B) assisting with decontamination in the warm zone.

C) removing only critical patients from the hot zone.

D) evacuating residents who live near the incident.

Ans: A

Complexity: Moderate

Ahead: Scene Size-up

Subject: Hazardous Materials

Page: 2410

Feedback: Scene Size-up, page 2410

46. While preparing to receive patients at the scene of a hazardous material spill, you see a middle-aged man approaching your ambulance. He is covered with a green liquid, is dyspneic, and states that he “barely got out of there alive!” You should:

A) advise the man to proceed back to the incident site so that he can be properly decontaminated.

B) quickly don standard precautions, assist the patient to the ambulance, and apply high-flow oxygen.

C) get close enough to the man so that you can visually triage him, and decontaminate him if he is stable.

D) tell him to stop immediately and inform the incident commander that the patient has not been decontaminated.

Ans: D

Complexity: Moderate

Ahead: Decontamination and Treatment

Subject: Hazardous Materials

Pages: 2417–2418

Feedback: Decontamination and Treatment, pages 2417–2418

47. You and another paramedic are transporting an unresponsive, apneic patient from a hazardous materials incident to the hospital. Because of her condition, she was only partially decontaminated at the scene. You will arrive at the hospital in approximately 10 minutes. The MOST appropriate treatment for this patient involves:

A) flushing the patient's entire body with copious amounts of water while your partner intubates her.

B) hyperventilating the patient with a bag-mask device and 100% oxygen at 20 breaths per minute.

C) avoiding intubation if possible, as this may expose the patient's airway to contamination.

D) establishing vascular access in case emergency drug therapy is required before you arrive at the hospital.

Ans: C

Complexity: Moderate

Ahead: Decontamination and Treatment

Subject: Hazardous Materials

Page: 2420

Feedback: Decontamination and Treatment, page 2420

48. You are one of the paramedics staffing the rehabilitation section at a hazardous materials incident when a hazardous materials technician brings you one of his coworkers, whose mental status is altered. According to the technician, his coworker was appropriately decontaminated in the warm zone. The patient's skin is hot and moist, and he is confused and nauseated. You should:

A) administer oxygen via nasal cannula, take his blood pressure, and offer him cold water to drink.

B) administer oxygen, start an IV line, administer 2 L of cold normal saline rapidly, and prepare for transport.

C) first contact the incident commander and confirm that the patient has indeed been decontaminated.

D) suspect that he is suffering from heatstroke, administer high-flow oxygen, and begin rapid cooling measures.

Ans: D

Complexity: Difficult

Ahead: Medical Monitoring and Rehabilitation

Subject: Hazardous Materials

Pages: 2422–2423

Feedback: Medical Monitoring and Rehabilitation, pages 2422–2423

49. Following decontamination, a patient is presented to you by rescue personnel for transport. The patient is conscious and alert, and is in no obvious respiratory distress. The patient is emitting a pungent odor and has an orange chemical on her clothing. You should:

A) apply standard precautions and douse the patient with sterile water or saline.

B) isolate the patient by wrapping her with a plastic blanket and then transport.

C) document the time that you received the patient and begin your assessment.

D) advise the rescuers that the patient has not been adequately decontaminated.

Ans: D

Complexity: Moderate

Ahead: Decontamination and Treatment

Subject: Hazardous Materials

Page: 2422

Feedback: Decontamination and Treatment, page 2422

50. The threshold limit value (TLV) is the:

A) maximum concentration of a toxin that someone can be exposed to in a 24-hour period.

B) maximum concentration of a toxin that someone can be exposed to for a 40-hour workweek over a typical 30-year career.

C) minimum concentration of a toxin that will cause permanent health problems, up and to including death.

D) maximum concentration of a toxin that someone can be exposed to for a total of 20 hours over his or her lifetime.

Ans: B

Complexity: Moderate

Ahead: Contamination and Toxicology

Subject: Hazardous Materials

Page: 2416

Feedback: Contamination and Toxicology, page 2416