

EMS Environmental Emergencies Practice Test (Sample)

Study Guide



Everything you need from our exam experts!

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Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

How to Use This Guide

This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:

1. Start with a Diagnostic Review

Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.

2. Study in Short, Focused Sessions

Break your study time into manageable blocks (e.g. 30 - 45 minutes). Review a handful of questions, reflect on the explanations.

3. Learn from the Explanations

After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.

4. Track Your Progress

Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.

5. Simulate the Real Exam

Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.

6. Repeat and Review

Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!

Questions

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- 1. Heat transfer by direct contact with a solid object is known as conduction. Which choice best illustrates conduction?**
 - A. Direct skin-to-skin touch**
 - B. Heat transfer through air**
 - C. Heat transfer through water**
 - D. Heat transfer from radiation**

- 2. Most serious injuries in diving are related to which type of emergency?**
 - A. Ascent emergencies**
 - B. Hypothermia emergencies**
 - C. Respiratory emergencies**
 - D. Electrical hazards**

- 3. A dysbarism injury refers to signs and symptoms related to changes in what?**
 - A. Barometric pressure**
 - B. Ambient temperature**
 - C. Humidity**
 - D. Altitude**

- 4. Which symptom is characteristic of heat stroke?**
 - A. Cold, clammy skin**
 - B. Flushed, hot, moist skin**
 - C. Pale, cool skin**
 - D. Shivering with nausea**

- 5. A 13-year-old girl is found face down in a pool after diving. After you enter the water safely, what is the recommended method to move her?**
 - A. Rotate the entire upper half of her body as a unit, supporting her head and neck.**
 - B. Lift the legs first to surface the body.**
 - C. Push the chest to the surface to resuscitate.**
 - D. Grab the arms and drag the person sideways.**

- 6. Suspecting hypothermia in an elderly patient with lethargy, BP 90/60, pulse 48, and shallow respirations, estimate the core body temperature range.**
- A. 85 to 88 F**
 - B. 89 to 92 F**
 - C. 93 to 96 F**
 - D. 97 to 100 F**
- 7. Heat emergencies commonly occur at athletic events and practices. If the patient is in a cold-water immersion bath upon your arrival, do NOT remove the patient unless the temperature has normalized to between:**
- A. 101 F and 102 F**
 - B. 98 F and 100 F**
 - C. 104 F and 106 F**
 - D. 95 F and 97 F**
- 8. A 33-year-old patient presents with severe abdominal pain and a rigid abdomen after a bite on the back of the hand. Which envenomation is most likely?**
- A. Black widow spider bite**
 - B. Scorpion sting**
 - C. Brown recluse bite**
 - D. Bee sting**
- 9. A core body temperature of 95°F (35°C) will most likely cause which of the following?**
- A. Rapid breathing**
 - B. Severe shivering**
 - C. Hyperactivity**
 - D. Fever**
- 10. A frostbitten foot is most commonly identified by which sign?**
- A. mottling and blisters**
 - B. redness only**
 - C. warmth and swelling**
 - D. numbness with pink coloration**

Answers

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1. A
2. A
3. A
4. B
5. A
6. B
7. A
8. A
9. A
10. A

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Explanations

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1. Heat transfer by direct contact with a solid object is known as conduction. Which choice best illustrates conduction?

- A. Direct skin-to-skin touch**
- B. Heat transfer through air**
- C. Heat transfer through water**
- D. Heat transfer from radiation**

Conduction is heat transfer through direct contact between substances, with energy moving from the hotter to the cooler surface via molecular interactions at the contact point. Direct skin-to-skin touch shows this clearly: two solid bodies in intimate contact allow energy to flow from the warmer skin to the cooler skin through the solid surfaces until temperatures even out. Heat transfer through air is mainly convection (movement of the gas carrying energy) with some conduction, but the presence of a gap means there isn't direct solid contact. Heat transfer through water can occur by conduction in the fluid, but it involves a medium other than direct solid contact. Heat transfer by radiation happens without contact, through electromagnetic waves.

2. Most serious injuries in diving are related to which type of emergency?

- A. Ascent emergencies**
- B. Hypothermia emergencies**
- C. Respiratory emergencies**
- D. Electrical hazards**

In diving, the most serious injuries arise from changes in pressure as you ascend. When you rise quickly, the reduced surrounding pressure lets dissolved nitrogen come out of solution and form bubbles in your blood and tissues. These bubbles can block vessels and damage organs, leading to decompression sickness or even arterial gas embolism, which are life-threatening conditions. Additionally, if a diver holds their breath while ascending, the air in the lungs expands and can cause pulmonary barotrauma or rupture, another dangerous ascent-related problem. Because these issues are directly tied to the ascent phase, they represent the primary danger in diving emergencies. Hypothermia can be serious in cold-water dives, but it's not the most common or immediate life-threatening risk. Respiratory emergencies can occur, but they're typically related to other factors like drowning or airway problems, not the core ascent risk. Electrical hazards are not a primary concern in most diving contexts.

3. A dysbarism injury refers to signs and symptoms related to changes in what?

- A. Barometric pressure**
- B. Ambient temperature**
- C. Humidity**
- D. Altitude**

Dysbarism injuries occur because of changes in the surrounding air pressure, known as barometric pressure. When pressure changes—such as during diving and ascent, or rapid changes in altitude—the gases dissolved in our tissues and blood (mainly nitrogen) can come out of solution and form bubbles. Those bubbles can disrupt tissues and vessels, leading to symptoms in the joints, skin, lungs, or nervous system. Barotrauma is also part of this, where pressure shifts damage air-filled spaces like the ears, sinuses, or lungs. Temperature, humidity, or altitude alone don't directly cause dysbarism; altitude is just a context that involves lower pressure, but the key driver is the change in barometric pressure itself.

4. Which symptom is characteristic of heat stroke?

- A. Cold, clammy skin**
- B. Flushed, hot, moist skin**
- C. Pale, cool skin**
- D. Shivering with nausea**

Heat stroke is a life-threatening heat illness where the body's cooling system fails and core temperature rises rapidly. A defining sign is skin that is very hot and flushed; sweating may still be present, so the skin can feel moist in some cases. This combination—flushed, hot skin with moisture from sweating—fits the described symptom. Other options reflect different conditions: cold, clammy or pale cool skin suggests shock or hypothermia, and shivering with nausea is more typical of cold exposure. Because heat stroke can cause rapid organ damage, act quickly to cool the person and seek emergency care.

5. A 13-year-old girl is found face down in a pool after diving. After you enter the water safely, what is the recommended method to move her?

A. Rotate the entire upper half of her body as a unit, supporting her head and neck.

B. Lift the legs first to surface the body.

C. Push the chest to the surface to resuscitate.

D. Grab the arms and drag the person sideways.

When someone is face-down in water, the priority is to protect the airway and keep the spine in neutral alignment. The best approach is to turn the person as a single unit, keeping the head and neck supported throughout the movement. This controlled roll brings the airway to the surface quickly and allows you to assess breathing or start rescue care while minimizing movement of the cervical spine. Lifting the legs first can cause instability and rotation of the head, not helping airway protection or spinal safety. Pushing the chest to the surface isn't a valid rescue maneuver and could force water into the lungs. Grabbing the arms and dragging sideways can produce jerky movements and risk further injury. The goal is a smooth, unitary rotation to a face-up position with the airway exposed and ready for evaluation.

6. Suspecting hypothermia in an elderly patient with lethargy, BP 90/60, pulse 48, and shallow respirations, estimate the core body temperature range.

A. 85 to 88 F

B. 89 to 92 F

C. 93 to 96 F

D. 97 to 100 F

When hypothermia is suspected, the core temperature helps determine how cold the patient is and guides treatment. In elderly patients, lethargy, low blood pressure, bradycardia, and shallow respirations are classic signs that can accompany hypothermia, and the core temperature is typically below normal. Mild hypothermia runs roughly from 32 to 35°C (about 89 to 95°F). The range around 89-92°F translates to about 32-33°C, which sits squarely in the hypothermic zone and aligns with a clinical picture of cooling without necessarily indicating the deepest levels of cold. That makes it the best estimate here. Warmer ranges would be near normal and wouldn't explain the signs, while far colder ranges would imply more severe instability than is described.

7. Heat emergencies commonly occur at athletic events and practices. If the patient is in a cold-water immersion bath upon your arrival, do NOT remove the patient unless the temperature has normalized to between:

A. 101 F and 102 F

B. 98 F and 100 F

C. 104 F and 106 F

D. 95 F and 97 F

The key idea is rapid cooling of exertional heat stroke and stopping cooling only when the patient's core temperature has nearly normalized. Cold-water immersion is the fastest way to reduce core temperature, and you should continue cooling until the core temperature is about 38°C (roughly 101-102°F). That range indicates the body has reached a safe, near-normal temperature, reducing the risk of ongoing hyperthermia while avoiding overcooling that could lead to hypothermia or shivering-driven rewarming once you remove them. If you stop earlier, the person may remain heat-stressed (temperatures still well above normal); if you wait longer, you risk overshooting and cooling too much. The other ranges shown would either still be too hot or already too cool.

8. A 33-year-old patient presents with severe abdominal pain and a rigid abdomen after a bite on the back of the hand. Which envenomation is most likely?

A. Black widow spider bite

B. Scorpion sting

C. Brown recluse bite

D. Bee sting

The main idea is recognizing a toxin that causes painful, sustained muscle contractions, especially in the abdominal wall. Black widow venom contains latrotoxin, which provokes a massive release of neurotransmitters at nerve endings, leading to severe muscle cramping and rigidity. When this toxin affects the abdominal muscles, it can produce a rigid, severely painful abdomen after a bite on the hand. The other envenomations have different patterns: brown recluse bites typically cause local tissue necrosis with little systemic muscle cramping; scorpion stings can cause pain and autonomic symptoms but abdominal rigidity is not as characteristic; bee stings mostly cause local pain and swelling and can trigger anaphylaxis rather than sustained abdominal muscle rigidity. So this presentation best fits a black widow spider bite.

9. A core body temperature of 95°F (35°C) will most likely cause which of the following?

- A. Rapid breathing**
- B. Severe shivering**
- C. Hyperactivity**
- D. Fever**

When core temperature is around 35°C (95°F), the body is in mild hypothermia and starts trying to generate heat. The rapid breathing you'd expect comes from the body's need to supply more oxygen for increased metabolic activity as heat is produced, plus a sympathetic drive that boosts respiratory rate in cold stress. Shivering is common in this state, but the breathing change is a particularly likely and noticeable early response. Fever doesn't occur from cold exposure—fever is a rise in body temperature set by infection. Hyperactivity is not typical here, as cold exposure often leads to fatigue or confusion rather than increased activity. So the most likely immediate sign is rapid breathing.

10. A frostbitten foot is most commonly identified by which sign?

- A. mottling and blisters**
- B. redness only**
- C. warmth and swelling**
- D. numbness with pink coloration**

Frostbite damages tissue by freezing, so the skin often becomes pale, cold, and numb as blood flow is restricted. The most identifying signs are patchy mottling of the skin along with blistering as the tissue thaws and injury becomes more evident. Mottling reflects uneven freezing and impaired circulation, while blisters indicate tissue damage from the freezing process and subsequent rewarming. Redness alone isn't typical for frostbite, as the skin is usually pale or waxy. Warmth and swelling can occur with inflammation or after warming, but they don't define frostbite. Numbness is common, but pink coloration suggests some return of blood flow, which is not the hallmark feature of frostbite.

Next Steps

Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.

As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.

If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at hello@examzify.com.

Or visit your dedicated course page for more study tools and resources:

<https://emsenemergencies.examzify.com>

We wish you the very best on your exam journey. You've got this!

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