

CFD Academy HAZMAT Practice Exam (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. Disintegration?**
 - A. A major chemical reaction occurs inside the container.**
 - B. A minor leak forms due to surface fatigue.**
 - C. Total loss of the container integrity caused by internal or external energy.**
 - D. The container returns to full integrity after energy input.**

- 2. Which statement about TLV/STEL is true?**
 - A. It is a ceiling limit**
 - B. It represents the maximum exposure for 15 minutes, not more than four times per day with 60 minutes rest between exposures**
 - C. It represents the 8-hour TWA**
 - D. It equals the OSHA PEL**

- 3. The term used for packaging that is allowed to be shipped with no special packaging requirements due to very low radioactivity is:**
 - A. Limited**
 - B. Excepted**
 - C. General**
 - D. Restricted**

- 4. Dewars used for cryogenic storage are vacuum-insulated to accomplish what?**
 - A. Increase heat input**
 - B. Reduce heat transfer**
 - C. Allow rapid heat absorption**
 - D. Reduce pressure**

- 5. Consumer commodities are materials that are packaged as what?**
 - A. Large industrial shipments.**
 - B. Materials packaged in small quantity containers for household or small scale use.**
 - C. Hazardous waste products.**
 - D. Radioactive materials in bulk.**

- 6. Which pH range is corrosive?**
- A. 0-14**
 - B. 7**
 - C. 7-14**
 - D. 1-7**
- 7. Which category includes materials that burn due to friction or metal powders that can ignite?**
- A. Ignition only by electric spark.**
 - B. Cryogenic temperatures.**
 - C. Friction, rapid burning (over 2.2 mm per second), or ignition of metal powders.**
 - D. Ignition only when in contact with water.**
- 8. Which statement about remote shutoffs is NOT a proper characteristic?**
- A. They require a specialized permit to operate**
 - B. They are well marked and in easy to find locations**
 - C. They are near the entrance in fixed facilities**
 - D. They are at the valve controls or behind the driver's door in vehicles**
- 9. Which manifest is used for Marine shipments?**
- A. Way Bill**
 - B. Dangerous Cargo Manifest**
 - C. Bill of Lading**
 - D. Air Bill**
- 10. What is the STCC number?**
- A. A code used exclusively for air shipments**
 - B. A code used exclusively for maritime shipments**
 - C. Standard Transportation Commodity Code numbers assigned by the Association of American Railroads / Bureau of Explosives**
 - D. A code used by OSHA**

Answers

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

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Explanations

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1. Disintegration?

- A. A major chemical reaction occurs inside the container.
- B. A minor leak forms due to surface fatigue.
- C. Total loss of the container integrity caused by internal or external energy.**
- D. The container returns to full integrity after energy input.

Disintegration means a total loss of the container's structural integrity caused by energy entering or acting on it, from inside or outside. When a container disintegrates, it can no longer contain its contents and may break apart or rupture severely, releasing everything. This is different from a minor leak, which is just a small opening while the rest of the container remains intact. It's also not describing a chemical reaction inside the container by itself, which is about the contents rather than the container's strength. And it isn't a situation where the container magically returns to full integrity after energy input—that would be a reversible or healing outcome, not disintegration.

2. Which statement about TLV/STEL is true?

- A. It is a ceiling limit
- B. It represents the maximum exposure for 15 minutes, not more than four times per day with 60 minutes rest between exposures**
- C. It represents the 8-hour TWA
- D. It equals the OSHA PEL

TLV/STEL defines a short-term exposure limit to prevent acute effects from brief exposure spikes. It specifies a 15-minute exposure duration, with no more than four such exposures allowed in a day and at least 60 minutes between exposures. This structure helps manage peaks without overly restricting necessary short-term tasks. This is not a ceiling limit, which would be an instantaneous value that should never be exceeded at any moment. It's also not the 8-hour time-weighted average, which is a long-term exposure limit. And TLV/STEL values are guidance from the ACGIH, not OSHA PELs, which are enforceable limits that may differ. So the statement that the TLV/STEL represents the maximum exposure for 15 minutes, not more than four times per day with 60 minutes rest between exposures, is the accurate description.

3. The term used for packaging that is allowed to be shipped with no special packaging requirements due to very low radioactivity is:

- A. Limited**
- B. Excepted**
- C. General**
- D. Restricted**

When shipping radioactive materials, the level of radioactivity determines how strict the packaging rules must be. For materials with very low radioactivity, the packing can be handled with no special packaging requirements beyond normal safety practices. This is called excepted packaging. It means the material meets exemption limits, so there's no need for the additional containment, performance testing, or labeling that stricter categories require. You still follow basic safety and regulatory obligations, but the packaging itself doesn't have to meet the extra, specific requirements imposed for more active materials. Limited packaging would still require some packaging controls due to its small but non-negligible activity. General packaging refers to standard packaging without special exemptions. Restricted packaging is used for higher activity and enforces stricter containment and handling. The key idea for excepted is: very low activity, no special packaging beyond ordinary safety measures.

4. Dewars used for cryogenic storage are vacuum-insulated to accomplish what?

- A. Increase heat input**
- B. Reduce heat transfer**
- C. Allow rapid heat absorption**
- D. Reduce pressure**

Vacuum insulation focuses on blocking heat from the surroundings from reaching the cryogenic contents. The space between the inner vessel and the outer shell is a vacuum, so there's no air or gas to carry heat by conduction or to move heat via convection. That leaves only a small amount of heat that can arrive through radiation, which is minimized by reflective inner surfaces. The result is a much lower heat input into the stored cryogenic liquid, so boil-off is slower and the contents stay cold longer. This isn't about increasing heat input or allowing rapid heat absorption, and insulation isn't what sets the pressure by itself (that's managed by venting of boil-off gas).

5. Consumer commodities are materials that are packaged as what?

A. Large industrial shipments.

B. Materials packaged in small quantity containers for household or small scale use.

C. Hazardous waste products.

D. Radioactive materials in bulk.

Consumer commodities are items designed for everyday use by individuals and households, packaged in small quantity containers so they can be purchased and used at home or in small-scale settings. This packaging and intended use distinguish them from bulk industrial shipments, hazardous waste products, or radioactive materials shipped in bulk, which are not intended for consumer handling. So, materials packaged in small quantity containers for household or small-scale use best describe consumer commodities.

6. Which pH range is corrosive?

A. 0-14

B. 7

C. 7-14

D. 1-7

Corrosivity relates to how acidic or basic a liquid is and its potential to cause chemical burns or damage materials. On the pH scale, acids have a pH below 7, and stronger acids are more corrosive. The range from 1 to 7 includes all acidic solutions, from very strong acids toward weaker ones, which is why it's treated as the corrosive range in this context. Neutral substances at pH 7 aren't corrosive, and bases (pH above 7) can be corrosive too, but this item focuses on acidity as the corrosive factor. The other options either describe the entire scale, the neutral point, or the basic (alkaline) side, none of which align with the corrosive characterization used here.

7. Which category includes materials that burn due to friction or metal powders that can ignite?

A. Ignition only by electric spark.

B. Cryogenic temperatures.

C. Friction, rapid burning (over 2.2 mm per second), or ignition of metal powders.

D. Ignition only when in contact with water.

The idea being tested is how certain flammable solids ignite. Some materials can catch fire from friction or from the presence of metal powders, which can ignite because powders have a large surface area that oxidizes rapidly. The best category explicitly describes these modes: friction, rapid burning (a defined rate), or ignition of metal powders. It directly covers both friction-induced ignition and metal-powder ignition, which is exactly what the question asks about. The other options describe ignition scenarios that don't match this specific group: ignition only by electric spark, or ignition related to cryogenic temperatures, or ignition only when in contact with water. Those describe different hazards and do not capture the friction- or metal-powder ignition scenario.

8. Which statement about remote shutoffs is NOT a proper characteristic?

- A. They require a specialized permit to operate**
- B. They are well marked and in easy to find locations**
- C. They are near the entrance in fixed facilities**
- D. They are at the valve controls or behind the driver's door in vehicles**

During an emergency, remote shutoffs must be immediately accessible and unmistakable so they can be activated without delay. They're placed and marked for quick identification: near facility entrances in fixed installations, at the valve controls, or behind the driver's door in vehicles. They are not tied to a permit requirement; no special permit is needed to operate them, since the goal is rapid shutdown to minimize danger.

9. Which manifest is used for Marine shipments?

- A. Way Bill**
- B. Dangerous Cargo Manifest**
- C. Bill of Lading**
- D. Air Bill**

Documenting hazardous materials on a vessel is about safety and regulatory compliance. The dangerous cargo manifest is the list that details every hazardous material on board, including its classification, UN number, quantity, packaging, and the required stowage and separation from other cargo. Having this manifest on hand helps the crew, stevedores, port authorities, and emergency responders understand the potential risks and respond appropriately. It's required by international rules such as the IMDG Code, which govern how dangerous goods are packaged, labeled, loaded, and declared at sea. In contrast, a way bill mainly covers road/rail movement; a bill of lading is the general maritime contract and title document rather than a hazardous cargo list; and an air bill applies to air transport. Therefore, for marine shipments involving hazardous materials, the dangerous cargo manifest is the relevant document.

10. What is the STCC number?

- A. A code used exclusively for air shipments**
- B. A code used exclusively for maritime shipments**
- C. Standard Transportation Commodity Code numbers assigned by the Association of American Railroads / Bureau of Explosives**
- D. A code used by OSHA**

STCC numbers are Standard Transportation Commodity Codes used to categorize freight for transportation and reporting. They are assigned by the Association of American Railroads, with involvement from the Bureau of Explosives, to provide a consistent way to identify commodities across carriers. This system is not limited to air shipments or maritime shipments, and it isn't related to OSHA codes, which explains why the STCC designation points to the AAR/Bureau of Explosives as the source.

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://cfdacademyhazmat.examzify.com>

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

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