

FDNY COF FOR FLAMMABLE-REFRIGERANT REFRIGERATION SYSTEMS (B28) PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE**

<https://fdnycofb28.examzify.com>



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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. Which of the following is NOT listed as a fire suppression system used in ESS installations?**
 - A. Dry chemical powders
 - B. Foam systems
 - C. Gas-based suppression
 - D. Water sprinklers
- 2. Which energy storage technology is described as robust and reliable?**
 - A. Nickel Cadmium
 - B. Lithium-ion
 - C. Flow
 - D. Nickel Metal Hydride
- 3. Which refrigerant classifications are typically regulated under B28?**
 - A. Mildly flammable only.
 - B. All refrigerants regardless of flammability.
 - C. Highly flammable refrigerants (A3), such as propane (R-290) and isobutane (R-600a).
 - D. Non-flammable refrigerants only.
- 4. How should the presence of a hydrocarbon refrigerant in the building affect the fire department's response?**
 - A. Fire responders should follow hazMat/occup safety protocols, use appropriate extinguishing agents, and ensure venting of the area
 - B. Treat as standard fire without special precautions
 - C. Only ventilate the space
 - D. Evacuate and do not attempt suppression
- 5. How does the FDNY COF B28 exam ensure understanding of the interplay between ventilation and detectors?**
 - A. By testing scenarios where detectors trigger ventilation or shutdown and requiring a correct sequence of actions
 - B. By asking only theoretical questions about detectors
 - C. By focusing solely on calibration procedures
 - D. By evaluating labeling of detector screens

- 6. What is the role of aggressive maintenance scheduling in B28 compliance?**
- A. To prevent leaks and failures by routine checks, cleaning, and replacement of seals, valves, and detectors
 - B. To reduce costs by skipping minor maintenance
 - C. To shorten inspection time
 - D. To automate reporting only
- 7. Which statement describes Decommissioning?**
- A. The ongoing operation of a system under routine conditions.
 - B. The process of removing an asset or facility from service or operation, often involving environmental cleanup and/or returning the site to its original state.
 - C. A temporary shutdown for maintenance.
 - D. A process of upgrading equipment.
- 8. Which of the following is NOT a step in the emergency response procedures for an ESS?**
- A. Post-incident review
 - B. Documenting the incident
 - C. Identifying the emergency
 - D. Ensuring safety
- 9. Which term is defined as a set of step-by-step instructions compiled by an organization to help workers carry out routine operations?**
- A. System Integration
 - B. Ventilation
 - C. Standard Operating Procedure (SOP)
 - D. Troubleshooting
- 10. Which professionals should be involved in B28 compliance?**
- A. Licensed refrigeration technicians, fire code inspectors, building management, and safety officers
 - B. Licensed refrigeration technicians only
 - C. Fire code inspectors and safety officers
 - D. Building management only

Answers

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

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Explanations

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1. Which of the following is NOT listed as a fire suppression system used in ESS installations?

- A. Dry chemical powders**
- B. Foam systems
- C. Gas-based suppression
- D. Water sprinklers

In ESS installations, choosing a fire suppression method hinges on protecting flammable refrigerants and sensitive equipment while minimizing collateral damage and cleanup. Foam systems are suitable for fires involving flammable liquids because they blanket the fuel, cooling it and separating it from the air. Gas-based suppression provides rapid fire knockdown without water damage, which is especially important around electrical equipment and enclosed spaces. Water sprinklers can also be used, but their design must control heat absorption while avoiding spreading refrigerants or causing collateral damage. Dry chemical powders aren't typically listed for ESS installations because they leave hard-to-clean residue, can contaminate or damage electrical and refrigeration components, and are not ideal for enclosed mechanical spaces. That's why the option not listed is the dry chemical powders.

2. Which energy storage technology is described as robust and reliable?

- A. Nickel Cadmium**
- B. Lithium-ion
- C. Flow
- D. Nickel Metal Hydride

In demanding applications, robustness and reliability come from a chemistry that can endure wide temperature ranges, heavy use, and rough handling while delivering consistent performance. Nickel cadmium cells have a long track record in critical equipment because they tolerate harsh conditions, handle rapid charging and discharging, and maintain usable performance across a broad operating envelope with straightforward charging needs. This combination makes them particularly dependable when you need steady, predictable power in tough environments, which is why they're described as robust and reliable. Lithium-ion offers high energy density but is more sensitive to temperature and safety considerations, requiring protective management systems. Flow batteries are well-suited for large-scale stationary storage but are heavier and more complex for typical equipment use. Nickel metal hydride provides better energy density than NiCd but doesn't match NiCd's ruggedness and reliability under extreme conditions.

3. Which refrigerant classifications are typically regulated under B28?

- A. Mildly flammable only.
- B. All refrigerants regardless of flammability.
- C. Highly flammable refrigerants (A3), such as propane (R-290) and isobutane (R-600a).**
- D. Non-flammable refrigerants only.

B28 targets the safety risks associated with highly flammable refrigerants. When a refrigerant is classified as A3, it presents a significant ignition and explosion hazard, so codes require strict controls around the design, installation, and operation of systems using these fluids. Propane (R-290) and isobutane (R-600a) are classic examples of A3 refrigerants, which is why they're described as typically regulated under B28. The emphasis is on managing potential leaks, ensuring adequate ventilation, using explosion-proof electrical components, proper leak detection, and adherence to ignition-source controls. Nonflammable refrigerants (A1) or mildly flammable ones (A2L) generally fall under broader fire and safety or HVAC codes rather than the specific, heightened protections of B28, so they aren't the primary focus of this regulation.

4. How should the presence of a hydrocarbon refrigerant in the building affect the fire department's response?

- A. Fire responders should follow hazMat/occup safety protocols, use appropriate extinguishing agents, and ensure venting of the area**
- B. Treat as standard fire without special precautions
- C. Only ventilate the space
- D. Evacuate and do not attempt suppression

Hydrocarbon refrigerants introduce both a flammable vapor hazard and potential pressurized containers, so responders must treat the incident as a hazardous materials/occupational safety situation. That means establishing appropriate protection for responders, using procedures and PPE suited to hazmat incidents, and working to control ignition sources while assessing the specific refrigerant involved. The best approach is to follow hazMat/occup safety protocols, choose extinguishing agents that are effective for hydrocarbon fires (to cool and smother the release without spreading the flame), and ventilate the area to remove and dilute flammable vapors. Venting helps prevent vapor buildup that could ignite and also creates safer conditions for suppression activities and for any occupants or responders near the scene. Coordination with hazmat teams and careful monitoring are essential during venting and suppression. Treating it as a standard fire ignores the added flammable refrigerant hazard. Ventilating alone doesn't address suppression or containment of the potential ignition sources. Evacuating without attempting suppression leaves the fire and vapor release uncontained, increasing risk to people and exposures.

5. How does the FDNY COF B28 exam ensure understanding of the interplay between ventilation and detectors?

- A. By testing scenarios where detectors trigger ventilation or shutdown and requiring a correct sequence of actions**
- B. By asking only theoretical questions about detectors
- C. By focusing solely on calibration procedures
- D. By evaluating labeling of detector screens

Understanding how detectors and ventilation work together is essential because detectors signal when gas is present and the ventilation system must respond in a coordinated way to keep concentrations safe. The exam tests this interplay by presenting scenarios where a detector triggers ventilation or initiates a shutdown, and you're asked to choose the correct sequence of actions. This shows you can connect the alert to a concrete response: activate ventilation to dilute the gas, verify readings, isolate the leak if possible, and follow shutdown or isolation procedures when thresholds are exceeded. It's not enough to know what detectors do in theory; you must demonstrate the practical ability to act in the right order to control a hazardous situation. The other options miss that dynamic requirement: questions about theory alone don't prove you can implement the response; focusing only on calibration covers maintenance steps without showing how to manage the system during a release; and labeling detector screens is about information display rather than the actual safety response.

6. What is the role of aggressive maintenance scheduling in B28 compliance?

- A. To prevent leaks and failures by routine checks, cleaning, and replacement of seals, valves, and detectors**
- B. To reduce costs by skipping minor maintenance
- C. To shorten inspection time
- D. To automate reporting only

Aggressive maintenance scheduling is about proactive, frequent preventive care for the system to keep it safe and reliable. By routinely inspecting, cleaning, and replacing critical components—seals, valves, and detectors—you catch wear or deteriorated parts before they fail. This directly reduces the chance of leaks or equipment failures that could create flammable or hazardous conditions, and it helps ensure safety devices function when needed. In terms of compliance, this approach aligns with the goal of maintaining system integrity and minimizing risk through ongoing upkeep rather than waiting for problems to appear. Skipping minor maintenance increases risk, shortening inspection time can miss important signs of wear, and automated reporting alone doesn't address the physical upkeep required to prevent leaks.

7. Which statement describes Decommissioning?

- A. The ongoing operation of a system under routine conditions.
- B. The process of removing an asset or facility from service or operation, often involving environmental cleanup and/or returning the site to its original state.**
- C. A temporary shutdown for maintenance.
- D. A process of upgrading equipment.

Decommissioning is the act of retiring an asset or facility from service, typically involving environmental cleanup and returning the site to its original state or a safe condition. This means you're removing the system from operation rather than just shutting it down temporarily or upgrading it. In practice, decommissioning may require safely removing equipment, reclaiming or disposing of hazardous materials, and restoring the site to comply with regulations. It differs from ongoing operation, which keeps the system active; a temporary shutdown for maintenance, which is reversible and for repairs; and upgrading, which adds or replaces components to improve performance rather than removing the asset from service.

8. Which of the following is NOT a step in the emergency response procedures for an ESS?

- A. Post-incident review
- B. Documenting the incident**
- C. Identifying the emergency
- D. Ensuring safety

When an ESS emergency occurs, the focus is on fast recognition and immediate actions to protect people and limit hazards. You first identify that an emergency is happening, then take steps to ensure safety by isolating or shutting down the affected equipment if you can do so safely, and you control the hazard while keeping others away or evacuating as needed. Notifying the right responders and securing the area are also part of the urgent response. Documenting what happened is essential for after-action purposes, but it belongs after the scene is stabilized. Trying to record details during the active response can distract from critical safety and containment tasks, so it is not part of the immediate emergency response activities. Post-incident review and formal documentation typically occur once the situation is under control and everyone is safe.

9. Which term is defined as a set of step-by-step instructions compiled by an organization to help workers carry out routine operations?

- A. System Integration
- B. Ventilation
- C. Standard Operating Procedure (SOP)**
- D. Troubleshooting

A set of step-by-step instructions compiled by an organization to help workers carry out routine operations is called a Standard Operating Procedure. SOPs lay out the exact sequence of actions, needed tools, safety notes, and acceptance criteria so that anyone trained can perform tasks the same way every time. This consistency helps prevent mistakes, speeds training, and supports safety and regulatory compliance. In flammable-refrigerant refrigeration systems, SOPs would cover how to start and shut down equipment, conduct leak checks, handle refrigerants and flammable materials safely, operate detection devices, manage ventilation, and respond to emergencies, ensuring routine tasks are performed correctly even under stress. System Integration is about combining subsystems into a larger functioning system, not about providing routine task instructions. Ventilation focuses on moving air for air quality or contaminant control, not on documenting standard procedures. Troubleshooting centers on diagnosing and fixing problems, which is reactive rather than describing standard operations.

10. Which professionals should be involved in B28 compliance?

- A. Licensed refrigeration technicians, fire code inspectors, building management, and safety officers**
- B. Licensed refrigeration technicians only
- C. Fire code inspectors and safety officers
- D. Building management only

Compliance with B28 requires a team approach that covers technical, regulatory, operational, and safety aspects. Licensed refrigeration technicians bring the expertise to install, calibrate, and maintain a system that uses flammable refrigerants, ensuring proper materials, leak prevention, and correct controls. Fire code inspectors check that the installation and ongoing operation meet fire protection requirements such as ventilation, detection, emergency shutoff, and clearance rules. Building management is essential to coordinate access, schedule maintenance, manage permits and documentation, and keep the facility's overall compliance program up to date. Safety officers oversee on-site safety practices, risk assessments, and permit-to-work processes, ensuring workers follow safe procedures during installation and maintenance. Together, these roles ensure the system is technically sound, fire-safe, properly managed, and safely operated. Relying on only one or two of these groups leaves gaps in either the technical integrity, fire protection, facility coordination, or on-site safety.

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://fdnycofb28.examzify.com>

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

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