# HVAC D-2 license Practice Test (Sample)

## Study Guide


**Everything you need from our exam experts!**

# Table of Contents

# 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

1. **For high-temperature suction line filter driers, what is the maximum allowable pressure drop in psig?**

   **A. 1**

   **B. 2**

   **C. 4**

   **D. 6**

2. **Refrigerant leaks may be detected with a _____ leak detector**

   **A. Halide**

   **B. Infrared**

   **C. Electronic**

   **D. Smoke**

3. **By how many degrees below the evaporator outside surface temperature should the condenser fan cutout temperature be set?**

   **A. Five degrees**

   **B. Fifteen degrees**

   **C. Ten degrees**

   **D. Twenty degrees**

4. **Which statement about a liquid receiver in a refrigeration system is true?**

   **A. It heats refrigerant before entering the condenser.**

   **B. It compresses refrigerant.**

   **C. It stores liquid refrigerant and is permanently connected to the system by inlet and outlet pipes.**

   **D. It filters refrigerant.**

5. **Which component monitors refrigerant liquid level in a system?**

   **A. Pressure switch**

   **B. Capillary tube**

   **C. Thermostat**

   **D. Float switch**

**6. The minimum flash point of #2 fuel oil is 100 F. This statement is:**

**A. True**

**B. Not enough information**

**C. False**

**D. Depends on grade**

**7. What is the maximum misalignment that is not considered a miter?**

**A. 3 degrees**

**B. 1 degree**

**C. 5 degrees**

**D. 10 degrees**

**8. The net free air area factor for a 12x12 louvers opening is 75%. Which option represents this factor in decimal form?**

**A. 0.50**

**B. 0.75**

**C. 0.90**

**D. 1.00**

**9. The condenser in the refrigeration cycle removes the _____ heat from the refrigerant vapor.**

**A. Condensation**

**B. Latent**

**C. Sensible**

**D. Electrical**

**10. What is the best way to ground a circuit?**

**A. Grounding with a copper plate**

**B. Grounding to metal conduit**

**C. 8 foot stake driven into the ground**

**D. Grounding to a water pipe**

# Answers

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

# Explanations

## 1. For high-temperature suction line filter driers, what is the maximum allowable pressure drop in psig?

**A. 1**

**B. 2**

**C. 4**

**D. 6**

**The key idea is that a suction-line filter drier must remove moisture and contaminants without creating too much flow resistance. For high-temperature suction-line driers, the allowable resistance is limited to six psi gauge. This keeps enough suction pressure at the compressor inlet so the refrigerant can flow properly, maintaining the required superheat, ensuring good oil return, and avoiding compressor inefficiency or instability. If the pressure drop across the drier approaches or exceeds six psi, the drier is restricting flow too much, which can lead to reduced capacity, higher energy use, or potential slugging. In that case, inspect for clogging or moisture, replace the drier as needed, and verify the system is within expected operating conditions so the drop remains under the limit.**

## 2. Refrigerant leaks may be detected with a _____ leak detector

**A. Halide**

**B. Infrared**

**C. Electronic**

**D. Smoke**

**Refrigerant leaks are detected most effectively with a device that specifically senses halogenated gases. A halide leak detector is designed to respond to halogen elements like chlorine and fluorine found in common refrigerants, so as you move the detector around the system it quickly signals when refrigerant fumes are present. This targeted sensitivity makes it the quickest and most reliable way to locate leaks in typical HVAC systems. Infrared detectors rely on infrared absorption by the gas and can work, but they aren't as universally responsive to all halogenated refrigerants and may require knowledge of the exact gas. Electronic detectors are a broad category and can vary in what they sense, so they aren't as specific as a halide detector for standard refrigerants. Smoke detectors don't detect refrigerants at all.**

**3. By how many degrees below the evaporator outside surface temperature should the condenser fan cutout temperature be set?**

**A. Five degrees**

**B. Fifteen degrees**

**C. Ten degrees**

**D. Twenty degrees**

**A temperature differential is used to decide when the condenser fan should stop running, so you're not wasting power while the load is already low. Setting the condenser fan cutout to occur a small amount below the evaporator outside surface temperature gives the system a comfortable margin to cease fan operation once heat rejection requirements drop, while still staying stable and avoiding rapid cycling. Ten degrees is a balanced choice because it provides enough headroom to prevent short cycling if outdoor conditions fluctuate, yet isn't so large that the fan stays on longer than necessary and wastes energy. If the differential were smaller, the system would cycle more often with minor temperature changes. If it were larger, the fan could stay on longer than needed, increasing energy use and potentially stressing the components. So, ten degrees below the evaporator outside surface temperature is the best compromise to keep operation efficient and reliable.**

**4. Which statement about a liquid receiver in a refrigeration system is true?**

**A. It heats refrigerant before entering the condenser.**

**B. It compresses refrigerant.**

**C. It stores liquid refrigerant and is permanently connected to the system by inlet and outlet pipes.**

**D. It filters refrigerant.**

**A liquid receiver is a storage vessel on the high-pressure side of a refrigeration system. Its main job is to hold liquid refrigerant and remain permanently connected to the system via inlet and outlet pipes. By providing a reserve, it helps ensure a steady supply to the metering device and smooths out changes in demand or charge, especially in systems with varying loads or multiple compressors. It isn't involved in heating the refrigerant before it reaches the condenser, nor does it compress the refrigerant. Filtration is handled by separate components (like a filter-drier) rather than the receiver itself. So the statement that it stores liquid refrigerant and is permanently connected to the system by inlet and outlet pipes best describes its function.**

## 5. Which component monitors refrigerant liquid level in a system?

**A. Pressure switch**

**B. Capillary tube**

**C. Thermostat**

**D. Float switch**

**The device that monitors refrigerant liquid level uses a buoyant float that rises and falls with the liquid. As the level changes, the float moves a switch, signaling when the level is too high or too low. This allows the system to maintain the proper liquid level in components like the receiver or sump and to prevent both overfill and starvation of the refrigeration circuit. Pressure switches respond to pressure changes, not liquid level. A capillary tube is part of an expansion or sensing path and relates to temperature or pressure drop, not direct level monitoring. A thermostat senses temperature for control purposes, not liquid height.**

## 6. The minimum flash point of #2 fuel oil is 100 F. This statement is:

**A. True**

**B. Not enough information**

**C. False**

**D. Depends on grade**

**Flash point is the lowest temperature at which a liquid's vapors can ignition-source-ignite with air. The line between flammable and combustible liquids is drawn at 100 F: below 100 F is flammable, at or above 100 F is combustible. No. 2 fuel oil is a heating oil/diesel-type fuel and, by safety classifications, has a flash point at least 100 F (usually higher). So saying its minimum flash point is 100 F matches that classification, making the statement true. The exact flash point can vary by batch or grade, but the threshold used for safety labeling is 100 F, which is why this statement is considered correct.**

## 7. What is the maximum misalignment that is not considered a miter?

**A. 3 degrees**

**B. 1 degree**

**C. 5 degrees**

**D. 10 degrees**

**In ductwork, there's a tolerance for how much misalignment you can have before the joint is treated as a miter. A misalignment up to three degrees is considered acceptable and not counted as a miter, because small angle differences can often be accommodated with standard fittings and still preserve airflow and a good seal. If the misalignment exceeds three degrees, it would be treated as a mitered condition, meaning the ends are cut or joined in a way that creates a deliberate angled joint to fit around the corner, which can affect airflow and require adjustment or additional fittings. So the maximum misalignment not considered a miter is three degrees; larger deviations would be classified differently.**

## 8. The net free air area factor for a 12x12 louvers opening is 75%. Which option represents this factor in decimal form?

**A. 0.50**

**B. 0.75**

**C. 0.90**

**D. 1.00**

**Net free air area factor is the fraction of the opening that actually allows air to flow, expressed as a decimal between 0 and 1. To convert a percentage to a decimal, divide by 100. So 75% becomes 0.75. Therefore, the decimal form of this factor is 0.75. If you wanted the actual free area, multiply the opening area by that factor: for a 12x12 opening (144 in²), 144 × 0.75 = 108 in². The other options represent different fractions: 0.50 = 50%, 0.90 = 90%, and 1.00 = 100%.**

## 9. The condenser in the refrigeration cycle removes the _____ heat from the refrigerant vapor.

**A. Condensation**

**B. Latent**

**C. Sensible**

**D. Electrical**

**During operation, the condenser rejects heat to the surroundings while the refrigerant vapor is forced to change phase into a liquid at high pressure. The heat being removed is the energy released when the vapor condenses, i.e., the condensation heat (the latent heat of condensation). While some sensible cooling may occur to reach the condensation temperature, the key point is that the condenser removes the heat associated with the condensation process. That's why condensation heat is the best description of what the condenser removes from the refrigerant vapor.**

## 10. What is the best way to ground a circuit?

**A. Grounding with a copper plate**

**B. Grounding to metal conduit**

**C. 8 foot stake driven into the ground**

**D. Grounding to a water pipe**

**Grounding a circuit means creating a low-impedance path to the earth so fault currents can flow away and voltage levels are stabilized during faults. The most reliable and purpose-built method is to install a dedicated grounding electrode, typically an 8-foot ground rod driven into the ground and bonded to the service equipment grounding conductor. This provides a solid, real connection to the earth and meets standard electrical codes for a grounding electrode system. Other options are less ideal as the sole grounding method. Grounding to metal conduit can serve as an equipment grounding path within a raceway, but it isn't the primary earth reference and can be disrupted if the conduit isn't continuous or properly bonded. Grounding to a water pipe can work in some cases but is unreliable due to coatings, corrosion, interruptions, and variability in effectiveness. A copper plate as a grounding electrode is uncommon and generally not as dependable as a proper ground rod in typical soil conditions. So, the 8-foot ground rod driven into the earth provides the best, most consistent grounding 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://hvacd2license.examzify.com**

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