

ARIZONA R-39/CR-39 RESIDENTIAL AND COMMERCIAL AIR CONDITIONING AND REFRIGERATION HVAC CONTRACTOR PRACTICE EXAM (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE

<https://azr39cr39hvaccontractor.examzify.com>



Copyright © 2026 by Examzify - A Kaluba Technologies Inc. product.

ALL RIGHTS RESERVED.

No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.

Notice: Examzify makes every reasonable effort to obtain accurate, complete, and timely information about this product from reliable sources.

SAMPLE

Table of Contents

Copyright	1
Table of Contents	2
Introduction	3
How to Use This Guide	4
Questions	5
Answers	8
Explanations	10
Next Steps	16

SAMPLE

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

SAMPLE

- 1. In terms of energy efficiency, why is it beneficial for boilers to operate at higher efficiencies?**
 - A. It increases wear and tear on components
 - B. It results in higher fuel costs
 - C. It leads to lower fuel consumption and reduced energy costs
 - D. It leads to more waste in energy production
- 2. Should mechanical ventilation be provided for areas with flammable vapors?**
 - A. Yes
 - B. No
 - C. Only if local codes require it
 - D. Only in commercial applications
- 3. Why is Indoor Air Quality (IAQ) considered important?**
 - A. It primarily affects the building's energy efficiency
 - B. IAQ impacts health, comfort, and productivity of occupants
 - C. It is only important for sensitive populations
 - D. IAQ is mainly a concern during renovations
- 4. True or False: A ground fault circuit interrupter is used to prevent electrical shock by interrupting current flow.**
 - A. True
 - B. False
 - C. Depends on the installation
 - D. True only when devices are wet
- 5. Double-indirect open-spray systems are classified as what probability?**
 - A. High probability
 - B. Medium probability
 - C. Low probability
 - D. No probability

- 6. How does radiant heating primarily transfer heat?**
- A. Through convection
 - B. Through conduction
 - C. Through radiation
 - D. Through ventilation
- 7. When installing semi-rigid metallic tubing for a gas furnace, what is the maximum length of the links?**
- A. 4 feet
 - B. 5 feet
 - C. 6 feet
 - D. 7 feet
- 8. True or False: Units using R-22 need to be replaced as of 2020?**
- A. True
 - B. False
 - C. Only in specific states
 - D. Only for commercial units
- 9. Flex duct should be supported at least every how many feet?**
- A. 3 feet
 - B. 5 feet
 - C. 7 feet
 - D. 10 feet
- 10. What must be true about mechanical intakes in relation to hazardous sources?**
- A. They must be within 5 feet
 - B. They must be 10 feet horizontally away
 - C. They must be 20 feet away
 - D. They can be adjacent with proper filtration

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. In terms of energy efficiency, why is it beneficial for boilers to operate at higher efficiencies?

- A. It increases wear and tear on components
- B. It results in higher fuel costs
- C. It leads to lower fuel consumption and reduced energy costs**
- D. It leads to more waste in energy production

Boilers that operate at higher efficiencies utilize fuel more effectively, translating directly into lower fuel consumption. When a boiler operates efficiently, it means that a greater portion of the energy in the fuel is converted into useful work—such as heating water or air—rather than being lost as waste heat. This results in significant reductions in energy costs, as less fuel is required to achieve the same heating output. Moreover, operating at higher efficiencies not only saves money on fuel but also contributes to environmental sustainability by decreasing the overall demand for fuel resources and reducing greenhouse gas emissions. Therefore, the operation of boilers at higher efficiencies is advantageous both economically and environmentally, making this choice the most appropriate in the context of energy efficiency benefits.

2. Should mechanical ventilation be provided for areas with flammable vapors?

- A. Yes**
- B. No
- C. Only if local codes require it
- D. Only in commercial applications

Providing mechanical ventilation in areas with flammable vapors is critical for ensuring safety and minimizing the risk of fire or explosion. Flammable vapors can accumulate in enclosed spaces, creating hazardous conditions that pose a significant danger to personnel and infrastructure. Mechanical ventilation systems are designed to effectively disperse these vapors, thereby reducing concentrations to safe levels and ensuring a more controlled environment. Additionally, proper ventilation helps eliminate stagnant air and maintain adequate airflow, promoting not only safety but also the comfort of individuals working in or near these areas. This is particularly important in both residential and industrial settings where flammable materials are stored or used. While local codes and regulations may offer guidance on the minimum safety requirements, relying solely on these codes can sometimes leave gaps in safety measures. It is best practice to implement mechanical ventilation as a standard precaution whenever flammable vapors are present, rather than limiting it to specific situations or applications.

3. Why is Indoor Air Quality (IAQ) considered important?

- A. It primarily affects the building's energy efficiency
- B. IAQ impacts health, comfort, and productivity of occupants**
- C. It is only important for sensitive populations
- D. IAQ is mainly a concern during renovations

Indoor Air Quality (IAQ) is considered important because it significantly impacts the health, comfort, and productivity of occupants within a building. Poor IAQ can lead to a variety of health issues, including respiratory problems, headaches, and allergic reactions, which can detract from the well-being of individuals. Furthermore, the comfort level of occupants is associated with their perception of air quality, including temperature, humidity, and levels of pollutants. Enhanced IAQ can lead to improved concentration and productivity, making it a key factor in both residential and commercial environments. While building energy efficiency is relevant, it is not the primary concern when discussing IAQ. It's also important to highlight that while sensitive populations may be more affected by poor air quality, the impact of IAQ extends to all occupants, not just those with existing health conditions. Additionally, while renovation activities can introduce temporary air quality issues, indoor air quality needs to be prioritized year-round, not just during specific periods of construction or renovation.

4. True or False: A ground fault circuit interrupter is used to prevent electrical shock by interrupting current flow.

- A. True**
- B. False
- C. Depends on the installation
- D. True only when devices are wet

A ground fault circuit interrupter (GFCI) is indeed designed to prevent electrical shock by quickly interrupting the flow of current when it detects an imbalance between the incoming and outgoing current in a circuit. This can occur when current leaks from the circuit, such as through a person who has come into contact with a live electrical component. When a GFCI detects this imbalance, it acts within milliseconds to cut off the electrical supply, reducing the risk of serious injury or fatality due to electric shock. This is particularly crucial in areas where the risk of electrical shock is heightened, such as in wet or damp locations, making the use of GFCIs a standard safety measure in such installations. The statement is true because the primary purpose of a GFCI is indeed to prevent electrical shocks by interrupting the flow of current when necessary, making it an essential safety device in residential and commercial electrical systems.

5. Double-indirect open-spray systems are classified as what probability?

- A. High probability
- B. Medium probability
- C. Low probability**
- D. No probability

Double-indirect open-spray systems are considered to have a low probability classification mainly because of their design and operation characteristics. In HVAC systems, probability classifications generally refer to the potential for system components to fail or for leaks to occur, which can impact safety and efficiency. In a double-indirect system, the refrigerant is processed through a secondary refrigerant (such as antifreeze) that circulates through the coils, which are then sprayed with the actual product that requires cooling. This setup minimizes direct exposure of cooling substances to the product, thus reducing the chances of cross-contamination and leaks. Additionally, since the refrigerant is in a closed system, the likelihood of it escaping into the environment is lower compared to direct systems where refrigerants and products interact more intimately. The classification reflects the overall reliability and safety of this type of cooling methodology, with the design aimed at enhancing food safety or the integrity of sensitive products being cooled. Thus, the low probability classification accurately represents the inherent risk associated with double-indirect open-spray systems, highlighting their advantages in reducing potential hazards related to refrigerant leaks.

6. How does radiant heating primarily transfer heat?

- A. Through convection
- B. Through conduction
- C. Through radiation**
- D. Through ventilation

Radiant heating primarily transfers heat through radiation, which is the correct choice. This method relies on the emission of infrared radiation from a hot surface, such as radiant floor heating systems or ceiling panels, directly to the objects and people in the room. Unlike convection, which requires a medium (like air) to transfer heat through movement, or conduction, which requires direct contact between materials for heat transfer, radiation allows heat to travel through space without the need for a physical medium. Consequently, this kind of heating can efficiently warm up a room by directly affecting the occupants and objects within it, enhancing comfort levels without needing to heat the air first. In contrast, ventilation involves moving air to distribute heat but does not inherently raise the temperature of surfaces through direct heating. Thus, while convection and ventilation are important concepts in HVAC systems, they do not accurately describe the primary method of heat transfer involved in radiant heating.

7. When installing semi-rigid metallic tubing for a gas furnace, what is the maximum length of the links?

- A. 4 feet
- B. 5 feet
- C. 6 feet**
- D. 7 feet

The maximum length for semi-rigid metallic tubing used in gas furnace installations is specified as 6 feet. This limit is established to ensure both safety and performance. Longer lengths can lead to increased resistance and potential pressure drops within the system, which may negatively affect the gas supply to the furnace. Additionally, longer runs could make installation more complex and may introduce concerns regarding proper support and alignment of the tubing. Adhering to the 6-foot maximum helps maintain the efficiency of the appliance and ensures that it operates safely, preventing potential hazards that can arise from improper gas line runs. Familiarity with these requirements is essential for compliance with local codes and regulations, thus enhancing the overall safety and reliability of HVAC installations.

8. True or False: Units using R-22 need to be replaced as of 2020?

- A. True
- B. False**
- C. Only in specific states
- D. Only for commercial units

Although R-22, also known as HCFC-22, has been phased out due to its ozone-depleting properties, the statement that units using R-22 need to be replaced as of 2020 is not entirely accurate. The production and import of R-22 were banned starting in 2020, which means that while new units cannot be manufactured using R-22, existing units that utilize this refrigerant can still operate as long as they are properly maintained and can obtain reclaimed R-22 for repairs. Furthermore, many older systems still in operation can continue to use R-22 until they become inoperative, at which point replacements may be necessary. It's also important to note that in some areas or among certain users, there may be additional regulations or incentives that encourage replacement of R-22 systems with more environmentally-friendly alternatives. In summary, while there are restrictions on new production, existing units do not have to be replaced immediately, making the statement false.

9. Flex duct should be supported at least every how many feet?

- A. 3 feet
- B. 5 feet**
- C. 7 feet
- D. 10 feet

Flex duct should be supported at least every 5 feet to ensure proper airflow and prevent sagging or bending, which can restrict the passage of air and reduce the system's efficiency. Adequate support helps maintain the integrity of the duct system, preventing kinks that could lead to pressure drops and decreased performance. In addition to mechanical stability, this support requirement also contributes to longevity by reducing wear and tear on the duct material. Properly supported ducts are less prone to damage from environmental factors and are easier to maintain. This standard is essential for both residential and commercial installations, where efficient airflow is crucial for comfort and energy savings.

10. What must be true about mechanical intakes in relation to hazardous sources?

- A. They must be within 5 feet
- B. They must be 10 feet horizontally away**
- C. They must be 20 feet away
- D. They can be adjacent with proper filtration

For mechanical intakes, maintaining a safe distance from hazardous sources is crucial to ensure air quality and prevent contamination. The regulation that specifies a horizontal distance of 10 feet from hazardous sources helps to minimize the risk of drawing in pollutants, odors, or any harmful substances that could compromise indoor air quality. This distance is based on safety guidelines designed to protect occupants and ensure that the air being introduced into the HVAC system is clean and suitable for circulation. By adhering to this distance, the likelihood of ingesting exhaust gases or airborne contaminants emitted from vehicles, industrial activities, or even nearby equipment is significantly reduced. Consequently, positioning mechanical intakes at least 10 feet away serves as a preventive measure in designing HVAC systems, aligning with safety standards and ensuring optimal performance.

SAMPLE

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://azr39cr39hvaccontractor.examzify.com>

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

SAMPLE