

CITY & GUILDS LEVEL 2 AWARD IN F-GAS AND ODS REGULATIONS (2079) PRACTICE TEST (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE**

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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. At a vacuum of 2000 Microns, what is the boiling point of water?
 - A. 0°C
 - B. -9.66°C
 - C. 25°C
 - D. 100°C
2. What is the freezing point of water on the Celsius scale?
 - A. -273°C
 - B. 0°C
 - C. 100°C
 - D. 32°F
3. When did the first mechanical refrigeration systems that produced ice appear?
 - A. 1850
 - B. 1860
 - C. 1870
 - D. 1880
4. What unit is commonly used to measure force in the International System (SI)?
 - A. Newton
 - B. Pound
 - C. Joule
 - D. Pascal
5. What happens when the solenoid valve is in its energized state?
 - A. The refrigerant is blocked
 - B. The refrigerant flows to the condenser
 - C. The refrigerant flows to the expansion valve
 - D. The refrigerant is stored in the receiver

- 6. What is referred to by the term 'glide' in refrigeration?**
- A. The rate of heat transfer in a system
 - B. The change in boiling temperatures of refrigerant components
 - C. The overall efficiency of refrigerant use
 - D. The separation of liquids from gases
- 7. What is the role of a Filter Drier in a refrigeration system?**
- A. To regulate superheat levels
 - B. To remove moisture and prevent corrosion
 - C. To cool down the refrigerant
 - D. To control flow of refrigerant
- 8. Which characteristic is indicative of high density in an object?**
- A. It is light and occupies a large space
 - B. It is heavy and compact
 - C. It is irregularly shaped
 - D. It is gaseous
- 9. When is the mid-seated valve position particularly useful?**
- A. During system shutdowns
 - B. While charging the refrigerant
 - C. For recovery processes
 - D. When performing routine maintenance
- 10. What happens to the boiling point of water as the pressure decreases?**
- A. The boiling point increases
 - B. The boiling point remains the same
 - C. The boiling point decreases
 - D. The boiling point fluctuates

Answers

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

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Explanations

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1. At a vacuum of 2000 Microns, what is the boiling point of water?

- A. 0°C
- B. -9.66°C**
- C. 25°C
- D. 100°C

At a vacuum of 2000 microns, the boiling point of water is approximately -9.66°C. This phenomenon occurs due to the relationship between pressure and boiling point: the lower the pressure, the lower the boiling point. Standard atmospheric pressure at sea level allows water to boil at 100°C, but as pressure decreases, water requires less thermal energy to enter its gaseous state. At about 2000 microns of mercury (Hg), which is much lower than the standard pressure, water can boil at temperatures well below freezing. Specifically, around this vacuum pressure, it is around -9.66°C, indicating that water will transition to vapor at this temperature. Understanding this principle is crucial in fields like refrigeration and HVAC, where managing pressure and temperature is vital for effective system operation.

2. What is the freezing point of water on the Celsius scale?

- A. -273°C
- B. 0°C**
- C. 100°C
- D. 32°F

The freezing point of water on the Celsius scale is established at 0°C. This is a fundamental concept in thermodynamics and is part of the metric system, which uses Celsius to quantify temperature. The Celsius scale defines 0°C as the point at which water transitions from a liquid state to a solid state (ice) under standard atmospheric pressure. This relationship is critical in various fields, including environmental science, physics, and even culinary practices, as it influences many natural processes and reactions. Understanding the freezing point being at 0°C is essential for applications in refrigeration, weather forecasting, and studies involving states of matter. This precise mark allows for accurate temperature measurements and standardization in scientific discussions and practical applications. In contrast, the other choices represent different temperature points not directly linked to the freezing of water on this scale. For example, -273°C is absolute zero, the theoretical lowest temperature possible. 100°C indicates the boiling point of water at one atmosphere of pressure, while 32°F is the equivalent temperature in the Fahrenheit scale for the freezing of water but not pertinent to the Celsius measurement.

3. When did the first mechanical refrigeration systems that produced ice appear?

- A. 1850
- B. 1860**
- C. 1870
- D. 1880

The first mechanical refrigeration systems that produced ice appeared around the 1860s. This period marked significant advancements in the technology and understanding of thermodynamics, which allowed for the development of mechanical refrigeration. It was during this time that innovators began to experiment with various methods to create ice artificially, leading to systems that could effectively produce and store ice for food preservation and cooling. The 1860s are particularly notable because this era saw the introduction of the first practical ice-making machines. These machines relied on principles such as vapor-compression and absorption cycles, laying the foundation for modern refrigeration techniques. As a result, the choice indicating the year 1860 aligns with this historical context, making it the correct answer.

4. What unit is commonly used to measure force in the International System (SI)?

- A. Newton
- B. Pound
- C. Joule
- D. Pascal

The Newton is the standard unit of force in the International System of Units (SI). It is defined as the amount of force required to accelerate a one-kilogram mass by one meter per second squared. This definition ties closely to Newton's second law of motion, which states that force is equal to mass times acceleration ($F=ma$). The pound, while a unit of force used primarily in the United States customary system, is not part of the SI system. The joule is a unit of energy, which also relates to force but is not a direct measurement of it. The pascal is a unit of pressure, defined as one newton per square meter, but again does not measure force directly. Thus, the Newton is the appropriate and correct unit to use when measuring force in SI.

5. What happens when the solenoid valve is in its energized state?

- A. The refrigerant is blocked
- B. The refrigerant flows to the condenser
- C. The refrigerant flows to the expansion valve
- D. The refrigerant is stored in the receiver

When the solenoid valve is in its energized state, it opens, allowing refrigerant to flow through the system. Specifically, this means that the refrigerant can move toward the expansion valve, which is a critical component in the refrigeration cycle responsible for reducing the pressure and temperature of the refrigerant before it enters the evaporator. By enabling this flow, the solenoid valve plays a vital role in controlling the refrigeration process and ensuring that the system operates efficiently. This dynamic is essential because when the solenoid valve is not energized, it remains closed, and refrigerant flow is obstructed. Understanding the role of the solenoid valve and its effects on refrigerant movement helps in grasping how various system components interact during the cooling process, thus highlighting its importance in managing the cycle effectively.

6. What is referred to by the term 'glide' in refrigeration?

- A. The rate of heat transfer in a system
- B. The change in boiling temperatures of refrigerant components
- C. The overall efficiency of refrigerant use
- D. The separation of liquids from gases

The term 'glide' in refrigeration specifically relates to the change in boiling temperatures of refrigerant components within a refrigerant blend. When a refrigerant mixture has a glide, it means that the components do not boil at the same temperature; instead, they boil over a range of temperatures. This phenomenon occurs particularly in zeotropic refrigerant blends, where each component has different boiling points. Understanding glide is crucial for refrigeration technicians, as it impacts the efficiency of the system and the design considerations for evaporators and condensers. Proper consideration of glide allows for optimization of cooling performance and equipment selection, ensuring that the refrigeration system performs effectively under varying conditions. The concept is especially important in applications requiring precise temperature control, as the temperature behavior during the phase changes of the refrigerant directly affects the system's overall performance.

7. What is the role of a Filter Drier in a refrigeration system?

- A. To regulate superheat levels
- B. To remove moisture and prevent corrosion**
- C. To cool down the refrigerant
- D. To control flow of refrigerant

The role of a filter drier in a refrigeration system is primarily to remove moisture and prevent corrosion. Moisture accumulation within the refrigerant circuit can lead to ice formation, which can obstruct system flow and lead to operational failures. Additionally, the presence of moisture can cause chemical reactions that produce acids, leading to corrosion of the components within the system. The filter drier effectively absorbs moisture, ensuring the refrigerant is kept dry and maintaining the integrity of the system. This contributes to the overall efficiency and reliability of the refrigeration system by preventing potential damage caused by moisture. While other components may regulate superheat levels, cool down the refrigerant, or control the flow of refrigerant, these functions do not pertain to the primary purpose of a filter drier within a refrigeration system. The filter drier's specific task of moisture removal is critical for the longevity and performance of the system.

8. Which characteristic is indicative of high density in an object?

- A. It is light and occupies a large space
- B. It is heavy and compact**
- C. It is irregularly shaped
- D. It is gaseous

The characteristic indicative of high density in an object is when it is heavy and compact. Density is defined as the mass of an object divided by its volume. Therefore, a high-density object will have a substantial mass while occupying a relatively small volume. This means that the mass is concentrated in a compact space, which results in a high density. When an object feels heavy for its size, it often suggests that there is a significant amount of mass packed tightly together, reinforcing the concept of high density. In contrast, a light object occupying a large space would indicate low density, as it suggests that either the mass is relatively low compared to its volume or that the materials making up the object do not have much weight. Irregular shape and gaseous states do not inherently suggest density but rather how the substance behaves or its physical state. Gases, for example, have low density compared to liquids and solids because their particles are spread out, occupying more space with less mass. Therefore, recognizing that high density correlates with being heavy and compact is crucial in understanding materials and their properties.

9. When is the mid-seated valve position particularly useful?

- A. During system shutdowns
- B. While charging the refrigerant
- C. For recovery processes**
- D. When performing routine maintenance

The mid-seated valve position is particularly useful during recovery processes. This position allows for controlled flow and ensures that refrigerant can be efficiently transferred from the system into a recovery cylinder. By positioning the valve at mid-seat, it helps prevent pressure build-up, which enhances safety and effectiveness in the recovery operation. In recovery processes, it's crucial to manage the flow of refrigerant to optimize recovery time and minimize the potential for refrigerant loss. The mid-seated position strikes a balance that can facilitate both the removal of refrigerant and keep the system pressure stable, reducing the risk of system damage or complications. Other scenarios such as system shutdowns, charging refrigerant, or performing routine maintenance may benefit from different valve positions that are specifically suited to the requirements of those actions, but for recovery processes, the mid-seated position is particularly advantageous for effective refrigerant management.

10. What happens to the boiling point of water as the pressure decreases?

- A. The boiling point increases
- B. The boiling point remains the same
- C. The boiling point decreases**
- D. The boiling point fluctuates

As pressure decreases, the boiling point of water decreases as well. This phenomenon occurs due to the relationship between vapor pressure and boiling point; when the pressure surrounding a liquid is lowered, the vapor pressure needed for the liquid to boil is achieved at a lower temperature. In practical terms, at high altitudes, for instance, where atmospheric pressure is lower, water boils at temperatures below the standard 100 degrees Celsius (at sea level). This is why cooking times may increase or recipes may require adjustments at higher elevations, as boiling water will not reach the same temperature as it does at sea level. Thus, given the principles of thermodynamics and the behavior of liquids under varying pressures, it's clear that the boiling point of water decreases when the pressure is reduced, confirming why this option is the correct choice.

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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://cityandguilds2079.examzify.com>

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

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