

GAS TECHNICIAN 1 (G1) CERTIFICATION PRACTICE TEST (SAMPLE)

STUDY GUIDE



Prepare with structure. Pass with confidence



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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

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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. What does the Gas Technician 1 (G1) certification primarily focus on?**
 - A. The safe installation of electric appliances
 - B. The safe installation, maintenance, and repair of gas appliances and systems
 - C. Designing new gas systems from scratch
 - D. Installing renewable energy systems
- 2. A low water cut off is required on a steam boiler not under continuous attendance by a certified operator when the rated input is?**
 - A. Less than 250,000 BTU
 - B. Any value
 - C. More than 300,000 BTU
 - D. Exactly 200,000 BTU
- 3. Which term best describes the operational principle of a heat anticipator?**
 - A. Temperature regulation
 - B. Load management
 - C. Current draw monitoring
 - D. Energy conservation
- 4. What happens when the resistance of an NTC thermistor decreases?**
 - A. Temperature increases
 - B. Gas flow decreases
 - C. Air circulation improves
 - D. Heat output stabilizes
- 5. To ensure that the main burner cannot operate unless the door switch is closed, what must be done to the door switch?**
 - A. It must be interlocked with the burner control system
 - B. It must be manually controlled
 - C. It must be connected to the power supply
 - D. It must be regularly maintained

- 6. What must be adhered to in order to ensure compliance with local gas codes?**
- A. Follow all regulations regarding installation and repair work
 - B. Conduct regular aesthetic upgrades
 - C. Limit the number of inspections required
 - D. Notify authorities before any change
- 7. An "infinity" or OL ohmmeter reading taken across the disconnected wires to a solenoid or relay coil indicates what?**
- A. The solenoid has lost power
 - B. The coil wire is broken
 - C. The relay is functioning correctly
 - D. The solenoid is short-circuited
- 8. What does the acronym CSA stand for in relation to gas appliances?**
- A. Canadian Standards Association
 - B. Consumer Safety Act
 - C. Certified Safety Administration
 - D. Civil Safety Authority
- 9. Differential air pressure switches detect which of the following?**
- A. Only positive pressure
 - B. Only negative pressure
 - C. Positive and negative pressure simultaneously
 - D. Pressure leakage
- 10. Which control is intended to prevent an unsafe condition of temperature, pressure, or liquid level?**
- A. Operating control
 - B. Safety limit control
 - C. Modulating control
 - D. Emergency control

Answers

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

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Explanations

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1. What does the Gas Technician 1 (G1) certification primarily focus on?

- A. The safe installation of electric appliances
- B. The safe installation, maintenance, and repair of gas appliances and systems**
- C. Designing new gas systems from scratch
- D. Installing renewable energy systems

The Gas Technician 1 (G1) certification primarily focuses on the safe installation, maintenance, and repair of gas appliances and systems. This certification equips technicians with the necessary knowledge and skills to work with various types of gas appliances, including furnaces, water heaters, and outdoor cooking appliances, ensuring they adhere to safety codes and regulations. The emphasis is on understanding the principles of gas safety, such as recognizing gas leaks, proper ventilation, and safe handling practices, which are crucial for preventing accidents and ensuring user safety. The training also includes troubleshooting techniques and performance assessments to guarantee that gas systems are functioning efficiently and safely. Other options, while they reference important concepts in related fields, do not align with the core focus of the G1 certification. The certification does not encompass electric appliances or renewable energy systems, which fall under different categories of training and expertise. Additionally, while knowledge of designing gas systems can be beneficial, the G1 certification specifically concentrates on the installation and servicing of existing systems rather than the creation of new designs from the ground up.

2. A low water cut off is required on a steam boiler not under continuous attendance by a certified operator when the rated input is?

- A. Less than 250,000 BTU
- B. Any value**
- C. More than 300,000 BTU
- D. Exactly 200,000 BTU

A low water cut-off on a steam boiler serves a crucial safety function by ensuring that the water level in the boiler stays above a certain threshold, preventing the boiler from operating dry and potentially suffering catastrophic failure. The requirement for a low water cut-off is necessary when a steam boiler is not continuously monitored by a certified operator, regardless of the rated input of the boiler. The rationale behind the necessity of a low water cut-off in relation to the rated input is that the potential for unsafe conditions, such as overheating and boiler damage, exists with all steam boilers when unattended. Therefore, a low water cut-off becomes a critical safety device for any steam boiler not under continuous supervision, illustrating the broader safety guidelines in place for steam boiler operation, regardless of specific input ratings. This requirement, which applies broadly, emphasizes the importance of safety standards across various boiler capacities, addressing situations where unattended boilers could lead to dangerous conditions without necessary protective measures like low water cut-offs. Hence, it is required for any steam boiler rated above 0 BTU, leading to the conclusion that the appropriate response is that a low water cut-off is required at any rated input value.

3. Which term best describes the operational principle of a heat anticipator?

- A. Temperature regulation
- B. Load management
- C. Current draw monitoring**
- D. Energy conservation

The term that best describes the operational principle of a heat anticipator is centered around its function in temperature regulation within a heating system. A heat anticipator is essentially a mechanism that enables a thermostat to predict the temperature change before it happens. By doing so, it helps to maintain a more consistent and comfortable room temperature. The anticipator adjusts the heating cycle based on the current conditions, ensuring that the heat output is in sync with the desired temperature setting. This precise function highlights how the anticipator improves temperature regulation by allowing the system to "anticipate" when the temperature is about to reach the set point and adjust accordingly, thus preventing overshooting or undershooting of the target temperature. This proactive adjustment is crucial for providing efficient heating and enhancing comfort. While the other choices may involve important concepts, they do not capture the specific role of a heat anticipator as effectively as temperature regulation does.

4. What happens when the resistance of an NTC thermistor decreases?

- A. Temperature increases**
- B. Gas flow decreases
- C. Air circulation improves
- D. Heat output stabilizes

When the resistance of a negative temperature coefficient (NTC) thermistor decreases, it indicates an increase in temperature. NTC thermistors are specifically designed to have a resistance that inversely correlates with temperature; as the temperature rises, their resistance drops. This principle allows them to function effectively as temperature sensors in various applications, including heating systems. In practical use, as the temperature of the surrounding environment increases, the thermistor reacts to this change by lowering its resistance. This decrease in resistance can lead to increased current flow in a circuit, which might trigger a response in a control system, such as turning on a heating element or adjusting energy consumption for efficiency. Thus, it is accurate to state that a decrease in resistance correlates with an increase in temperature, making the assertion valid. The other choices do not directly relate to the behavior of an NTC thermistor under temperature changes. Gas flow and air circulation are not inherently dependent on the thermistor's resistance, and heat output stabilization is a different concept that involves more factors than just the thermistor's function.

5. To ensure that the main burner cannot operate unless the door switch is closed, what must be done to the door switch?

- A. It must be interlocked with the burner control system**
- B. It must be manually controlled
- C. It must be connected to the power supply
- D. It must be regularly maintained

The requirement that the main burner cannot operate unless the door switch is closed is fundamentally about safety and proper interlocking within the system. By interlocking the door switch with the burner control system, you create a mechanism that prevents the burner from igniting when the door is open. This is important because it minimizes the risk of injury or damage that could occur if the burner were to operate while maintenance or servicing is being performed. This interlock functions as a safety feature, ensuring that operators and technicians are protected from the hazards associated with the burner's operation during maintenance activities. Thus, the door switch serves a critical purpose in the overall safety protocol of gas appliances. Other options may involve aspects of the door switch's function, but they do not specifically address the requirement that the burner should not operate without the door being safely closed. Manual control does not inherently promote safety, connecting to the power supply does not inherently limit burner operation based on the door's status, and maintenance, while necessary for any system, does not directly influence the operational condition tied to the door switch.

6. What must be adhered to in order to ensure compliance with local gas codes?

- A. Follow all regulations regarding installation and repair work**
- B. Conduct regular aesthetic upgrades
- C. Limit the number of inspections required
- D. Notify authorities before any change

To ensure compliance with local gas codes, it is essential to follow all regulations regarding installation and repair work. Local gas codes are established to maintain safety, performance, and efficiency standards for gas systems. These regulations cover various aspects, including the materials used, installation methods, required clearances, adherence to safety protocols, and permissible equipment types. By following these regulations, gas technicians contribute to minimizing the risk of accidents, ensuring that systems function correctly and safely. Compliance not only protects the technician's reputation and license but also assures the safety of the end-users. Regular audits or inspections may occur as part of compliance, highlighting the importance of understanding and adhering to these established codes in all gas-related tasks. This aspect of local gas codes is pivotal as it directly impacts the safety and reliability of gas installations and repairs, ensuring that all work meets the required legal and safety standards.

7. An "infinity" or OL ohmmeter reading taken across the disconnected wires to a solenoid or relay coil indicates what?

- A. The solenoid has lost power
- B. The coil wire is broken**
- C. The relay is functioning correctly
- D. The solenoid is short-circuited

A reading of "infinity" or an open-loop (OL) on an ohmmeter indicates that there is no continuity in the circuit being tested. When this reading is taken across the disconnected wires to a solenoid or relay coil, it implies that there is a break in the coil wire, preventing electrical current from flowing through. In the context of a solenoid or relay, the coil consists of wire wound in such a way to create a magnetic field when powered. If the reading is infinite, it means that the circuit is open somewhere in that coil, confirming that the coil wire is indeed broken. This is crucial for troubleshooting since it indicates a failure in the coil that needs repair or replacement for the solenoid or relay to function. The other options do not accurately describe the situation when observing an infinity reading. A solenoid losing power would not specifically lead to an open circuit indication on an ohmmeter. A functioning relay would show continuity across the coil when tested, whereas a short circuit would typically reflect a low resistance reading, not infinity.

8. What does the acronym CSA stand for in relation to gas appliances?

- A. Canadian Standards Association**
- B. Consumer Safety Act
- C. Certified Safety Administration
- D. Civil Safety Authority

The acronym CSA stands for Canadian Standards Association. This organization is critical in setting safety and performance standards for various products, including gas appliances, in Canada. CSA is recognized for establishing guidelines that ensure the safety and reliability of gas systems, appliances, and related components. Their standards help to ensure that appliances are tested for safety and efficiency, ultimately protecting consumers and ensuring compliance with local regulations. While the other options may seem plausible, they do not relate specifically to the standards and safety regulations required for gas appliances in Canada. The Consumer Safety Act is a broader piece of legislation that addresses consumer product safety but does not focus specifically on gas appliances. Certified Safety Administration and Civil Safety Authority are not recognized organizations or standards in the context of gas appliances. Therefore, understanding the role of the Canadian Standards Association is essential for anyone working with gas appliances to ensure compliance with safety standards and regulations.

9. Differential air pressure switches detect which of the following?

- A. Only positive pressure
- B. Only negative pressure
- C. Positive and negative pressure simultaneously**
- D. Pressure leakage

Differential air pressure switches are designed to monitor and respond to differences in pressure within a system. These devices can detect both positive and negative pressures because they are equipped with mechanisms to sense and compare two separate pressure points. This dual functionality allows them to effectively monitor a variety of conditions in processes such as HVAC systems or gas-fired appliances. For instance, in applications like the safe operation of a furnace, a differential pressure switch can determine if there is adequate airflow, detecting when the pressure increases (positive pressure) or decreases (negative pressure) in the venting system. By being able to detect both types of pressure, these switches ensure the system operates safely and efficiently, making the correct answer the recognition of their simultaneous ability to handle both conditions. The other options focus on restricting the functionality to only one type of pressure or to leakage, which does not fully encompass the capabilities of these switches.

10. Which control is intended to prevent an unsafe condition of temperature, pressure, or liquid level?

- A. Operating control
- B. Safety limit control**
- C. Modulating control
- D. Emergency control

The safety limit control is designed specifically to prevent unsafe conditions related to temperature, pressure, or liquid levels. This control acts as a safeguard by monitoring these parameters and can shut down the equipment or initiate other safety mechanisms when predetermined thresholds are exceeded. Its primary function is to ensure that the system operates within safe parameters, thereby protecting both equipment and personnel from potential hazards. While operating controls manage the normal operational conditions of a system, safety limit controls are critical for scenarios where those conditions may reach dangerous levels. Modulating controls adjust variables within a system to maintain desired operating conditions, but they do not provide a fail-safe mechanism against extreme situations. Emergency controls are typically the last line of defense, activated in critical situations, but the safety limit control is the proactive measure ensuring safety during standard operations.

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://gastechnician1.examzify.com>

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

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