

Gas Technician 3 (G3) License Practice Exam (Sample)

Study Guide



Everything you need from our exam experts!

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. Why is sufficient ventilation critical when using gas appliances?
 - A. To maintain the appliance's appearance
 - B. To supply sufficient oxygen for combustion and disperse harmful gases
 - C. To reduce operational costs
 - D. To enhance the gas flame color

2. For residential natural gas piping under 200 ft and less than 2 psig, what is the pressure test time?
 - A. 30 minutes
 - B. 10 minutes
 - C. 15 minutes
 - D. 1 hour

3. On a 120 volt receptacle, the ground connection terminals are?
 - A. Red
 - B. Green
 - C. Black
 - D. White

4. Which device is primarily used for measuring electrical current?
 - A. Voltmeter
 - B. Ammeter
 - C. Ohmmeter
 - D. Multimeter

5. What is the role of a pilot light in a gas appliance?
 - A. To maintain system pressure
 - B. To ignite the main burner gas
 - C. To monitor temperature
 - D. To indicate gas presence

6. If voltage is constant in a resistive circuit, when current increases, resistance?
- A. Increases
 - B. Decreases
 - C. Remains the same
 - D. Is zero
7. When a voltage measurement is being taken on a DC circuit, what does it indicate if the needle on the analogue meter moves to below 0 on the scale?
- A. The meter is not functioning
 - B. The test leads are reversed
 - C. The circuit is open
 - D. The battery is dead
8. Which type of gas burns with a blue flame indicating efficient combustion?
- A. Propane
 - B. Natural gas
 - C. Butane
 - D. Coal gas
9. What is the recommended minimum distance for venting gas appliances from property lines?
- A. 1 foot
 - B. 3 feet
 - C. 5 feet
 - D. 10 feet
10. Why are stainless steel connectors often preferred in gas systems?
- A. They are cheaper
 - B. They are resistant to corrosion and provide durability
 - C. They are lighter
 - D. They are easier to install

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. Why is sufficient ventilation critical when using gas appliances?

- A. To maintain the appliance's appearance
- B. To supply sufficient oxygen for combustion and disperse harmful gases
- C. To reduce operational costs
- D. To enhance the gas flame color

Sufficient ventilation is critical when using gas appliances because it ensures there is an adequate supply of oxygen for the combustion process. Without enough oxygen, gas appliances might not operate efficiently, leading to incomplete combustion. This can produce harmful gases such as carbon monoxide, which can accumulate in the living space and pose serious health risks. Additionally, proper ventilation helps to disperse these harmful gases, preventing them from building up to dangerous levels. Adequate air exchange is essential not only for the efficiency of the appliance but also for the safety of the occupants. This concept underscores the importance of maintaining a balanced environment where gas appliances can function correctly while ensuring that users remain protected from potential hazards associated with gas usage.

2. For residential natural gas piping under 200 ft and less than 2 psig, what is the pressure test time?

- A. 30 minutes
- B. 10 minutes
- C. 15 minutes
- D. 1 hour

For residential natural gas piping that is under 200 feet in length and operates at pressures less than 2 psig, the standard pressure test time specified is 15 minutes. This duration is established to ensure the integrity of the piping system and to detect any potential leaks. During this test, the system is pressurized to a predetermined level, usually around 1.5 times the maximum allowable operating pressure. The 15-minute timeframe is considered adequate for monitoring any drop in pressure, which would indicate a leak. This ensures that the gas distribution system is safe for operation before being put into service. The other timeframes mentioned would not align with the recognized industry standards for such specific conditions, which is why they do not apply to this scenario.

3. On a 120 volt receptacle, the ground connection terminals are?

- A. Red
- B. Green
- C. Black
- D. White

In electrical wiring, the ground connection is essential for safety, providing a path for electrical current to return to the ground in case of a fault. In a standard 120 volt receptacle, the ground terminal is typically represented by a green wire. This color coding is an industry standard that helps ensure consistency and safety across electrical systems. Understanding the importance of the ground connection is crucial for maintaining electrical safety. The ground wire prevents electric shock by diverting any stray or fault currents safely into the earth. Recognizing that green is used for grounding allows technicians and electricians to correctly identify, connect, and troubleshoot electrical systems, enhancing safety during installation and maintenance. Thus, knowing that the ground connection terminal is green assists professionals in adhering to proper wiring standards and practices.

4. Which device is primarily used for measuring electrical current?

- A. Voltmeter
- B. Ammeter
- C. Ohmmeter
- D. Multimeter

The device primarily used for measuring electrical current is the ammeter. This instrument specifically measures the flow of electric charge in a circuit, quantified in amperes. When connected in series with a circuit, it allows for direct measurement of current, enabling technicians to assess the amount of electricity flowing through a particular component or circuit as part of troubleshooting or performance evaluations. While a voltmeter measures voltage (the electrical potential difference), and an ohmmeter measures resistance within a circuit, the ammeter is uniquely designed for current measurement. A multimeter can perform a variety of measurements, including current, voltage, and resistance, but it is not solely dedicated to current measurement. Therefore, for the specific task of measuring electrical current, the ammeter is the most appropriate tool.

5. What is the role of a pilot light in a gas appliance?

- A. To maintain system pressure
- B. To ignite the main burner gas
- C. To monitor temperature
- D. To indicate gas presence

The role of a pilot light in a gas appliance is to ignite the main burner gas. It serves as a continuous flame that provides the necessary heat to start the combustion process when gas is released from the main burner. When the appliance is turned on, the gas flows to the burner, and the pilot light ignites this gas, allowing the appliance to operate efficiently and safely. The pilot light remains lit at all times, creating a reliable ignition source that ensures the main burner can ignite quickly when it is needed. This is particularly important in appliances such as furnaces, water heaters, and stoves. Without the pilot light, the main burner would have no source of ignition, leading to inefficiencies or unsafe conditions. The other options, while relevant to gas systems, do not accurately describe the primary function of a pilot light. For instance, while temperature monitoring plays a crucial role in the operation of gas appliances, it is not a function of the pilot light itself. The same goes for system pressure maintenance and gas presence indication, which involve other components in the gas appliance system.

6. If voltage is constant in a resistive circuit, when current increases, resistance?

- A. Increases
- B. Decreases
- C. Remains the same
- D. Is zero

In a resistive circuit, Ohm's Law, which states that Voltage (V) equals Current (I) multiplied by Resistance (R), can be applied. Mathematically, this is expressed as $V = I \times R$. When the voltage is held constant and the current increases, it means that the product of current and resistance must also maintain that constant value of voltage. In this situation, if current increases while voltage remains unchanged, resistance must compensate. Since an increase in current results in the need for a decrease in resistance to satisfy the equation, resistance actually decreases. Thus, if you observe an increase in current with constant voltage, the resistance in the circuit decreases in order to maintain the relationship dictated by Ohm's Law. This relationship reinforces the concept of how electrical parameters interact with each other in a circuit, highlighting that resistance does not remain static under these circumstances.

7. When a voltage measurement is being taken on a DC circuit, what does it indicate if the needle on the analogue meter moves to below 0 on the scale?

- A. The meter is not functioning
- B. The test leads are reversed
- C. The circuit is open
- D. The battery is dead

When taking a voltage measurement on a DC circuit, if the needle on an analog meter moves to below 0 on the scale, it typically indicates that the test leads are reversed. This occurs because the meter is calibrated to show positive readings when the positive lead is connected to a higher potential and the negative lead is connected to a lower potential. If the leads are inadvertently connected in reverse, the meter reads negative voltage, which is reflected as a needle movement below the zero mark on the scale. It's important to ensure the leads are connected correctly to obtain the proper reading and understand the polarity of the voltage in the circuit being tested. This situation does not suggest that the meter is malfunctioning, the circuit is open, or the battery is dead, as those would typically result in a zero reading or an indication of the meter's failure to operate properly.

8. Which type of gas burns with a blue flame indicating efficient combustion?

- A. Propane
- B. Natural gas
- C. Butane
- D. Coal gas

Natural gas is known for burning with a blue flame, which indicates efficient combustion. The blue flame signifies that the gas is burning completely with adequate air supply, leading to proper mixing of fuel and oxygen. This results in a more complete combustion process, minimizing the production of carbon monoxide and other harmful byproducts. In contrast, other types of fuel may produce a yellow or orange flame, indicative of incomplete combustion, which can occur due to insufficient oxygen. This can lead to the formation of soot and carbon monoxide. The efficiency of natural gas as a fuel source, along with its cleaner-burning qualities, makes it a preferred choice in many residential and commercial applications. Understanding flame color can help technicians assess appliance performance and ensure safe operation.

9. What is the recommended minimum distance for venting gas appliances from property lines?

- A. 1 foot
- B. 3 feet
- C. 5 feet
- D. 10 feet

The recommended minimum distance for venting gas appliances from property lines is based on safety and regulatory standards to ensure that exhaust gases from appliances do not negatively impact neighboring properties or create hazardous conditions. Maintaining a distance of 3 feet helps to prevent possible re-entry of harmful gases into buildings, while also considering the wind patterns and the location of windows or other openings on adjacent properties. The regulation also accounts for preventing the risks associated with flammable gases potentially accumulating in close proximity to other structures. Proper venting distance is vital for ensuring that the gases disperse effectively and do not pose health or safety hazards. This standard is usually outlined in local codes and manufacturer's guidelines, which are critical considerations for compliance and safety in gas appliance installation.

10. Why are stainless steel connectors often preferred in gas systems?

- A. They are cheaper
- B. They are resistant to corrosion and provide durability
- C. They are lighter
- D. They are easier to install

Stainless steel connectors are often preferred in gas systems primarily due to their resistance to corrosion and exceptional durability. In gas applications, connectors are exposed to various environmental conditions that can lead to deterioration over time. Stainless steel, known for its ability to resist rust and corrosion, can withstand the effects of moisture and various chemicals, making it ideal for long-term use in gas systems. This corrosion resistance helps maintain the integrity of the gas lines, ensuring a safe and reliable transfer of gas without the risk of leaks or failures that can occur with materials that are more susceptible to corrosion. Additionally, the durability of stainless steel means that it tends to last longer, requiring fewer replacements and resulting in lower long-term maintenance costs. While factors such as cost, weight, and ease of installation are certainly considerations when selecting materials for gas systems, the primary advantage of stainless steel connectors lies in their ability to resist corrosion and provide longevity, which is crucial for safety and reliability in gas applications.

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://gastechnician3.examzify.com>

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

SAMPLE