

Gas Technician 2 (G2) License Practice Exam (Sample)

Study Guide



Everything you need from our exam experts!

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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. In a different no heat call scenario, if the high limit terminals read 110 volts while the thermostat terminals read 0 volts, which component is identified as open?
 - A. Gas Valve
 - B. High Limit Switch
 - C. Thermostat
 - D. Transformer

2. What is the main cause for the stack effect in a residential water heater?
 - A. Long draws of water
 - B. Short draws of water
 - C. Inadequate insulation
 - D. High temperature differentials

3. What materials are approved for joining single wall vent connectors?
 - A. Screws and Rivets
 - B. Sheet Metal Screws
 - C. Welding and Soldering
 - D. Glue and Tape

4. In what way can a hydrated atmosphere affect the thermal comfort level in a home?
 - A. Increases Comfort
 - B. Decreases Comfort
 - C. No Significant Effect
 - D. Increases Energy Consumption

5. Why is it necessary to de-energize a circuit before using an Ohmmeter?
 - A. To prevent damage to the meter
 - B. To obtain a valid resistance reading
 - C. To avoid electric shock
 - D. All of the above

6. What should be done before adjusting the set point of a gas appliance regulator?
- A. Turn off the main gas supply
 - B. Ensure the appliance is operating
 - C. Check the gas pressure downstream
 - D. Measure the gas flow rate
7. What is a potential hazard if a gas valve fails to receive proper voltage?
- A. Increased energy efficiency
 - B. Potential gas leaks
 - C. Higher operational costs
 - D. Lower pressure in the system
8. What is the specific gravity of natural gas?
- A. 0.80
 - B. 0.60
 - C. 1.00
 - D. 0.40
9. What happens to the pressure difference across a water pump as flow rate increases?
- A. It increases
 - B. It decreases
 - C. It remains the same
 - D. It fluctuates
10. What is the maximum outlet pressure for a second stage regulator on a residential propane tank system?
- A. 7" W.C.
 - B. 10" W.C.
 - C. 11" W.C.
 - D. 14" W.C.

Answers

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

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Explanations

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1. In a different no heat call scenario, if the high limit terminals read 110 volts while the thermostat terminals read 0 volts, which component is identified as open?
 - A. Gas Valve
 - B. High Limit Switch
 - C. Thermostat
 - D. Transformer

In this scenario, the reading of 0 volts at the thermostat terminals indicates that there is no voltage present to signal a call for heat. This situation typically suggests that the thermostat is either not functioning or is set to a temperature below the ambient temperature, meaning it isn't calling for heat. On the other hand, the high limit switch reading 110 volts means that it is closed and allowing current to flow, indicating that it is functioning correctly and not open. The purpose of the high limit switch is to prevent overheating by interrupting the current if temperatures exceed safe operating limits; in this case, it is not the source of the problem. Therefore, given that the high limit switch is operating normally while the thermostat terminals show no voltage, the correct conclusion is that the thermostat must be open or defective, as it is not providing the necessary signal to initiate heating. This aligns with the readings presented in the question.

2. What is the main cause for the stack effect in a residential water heater?
 - A. Long draws of water
 - B. Short draws of water
 - C. Inadequate insulation
 - D. High temperature differentials

The primary cause for the stack effect in a residential water heater is the presence of high temperature differentials. When the water inside the tank is heated, it expands and becomes less dense compared to the cooler water that is located higher up in the tank or in the surrounding environment. This difference in temperature creates a pressure difference, which encourages the hot water to rise and the cooler water to displace it, effectively creating a "stack" of hot water. Inadequate insulation could contribute to heat loss, but it doesn't directly cause the stack effect itself. The stack effect relies on the principles of thermodynamics, specifically related to temperature and density differences, more than on the insulation levels. Long or short draws of water impact water temperature and availability but are not the fundamental cause of the stack effect. The stack effect primarily occurs due to the significant temperature difference that drives the movement of water.

3. What materials are approved for joining single wall vent connectors?

- A. Screws and Rivets
- B. Sheet Metal Screws
- C. Welding and Soldering
- D. Glue and Tape

The use of sheet metal screws for joining single wall vent connectors is recognized as a suitable method because they provide a secure mechanical connection that can withstand the thermal expansion and contraction experienced in venting systems. This method allows for easy disassembly if necessary for maintenance or repairs, which is a significant consideration in gas appliance installation and safety. Using mechanical fasteners like sheet metal screws ensures that connections can maintain their integrity over time, minimizing the risk of leaks in the venting system. Additionally, the code requirements for vent connections emphasize the importance of using approved methods to ensure the reliability and safety of gas venting systems. Other methods of joining vent connectors, such as welding or soldering, while effective in some applications, are generally not recommended for single wall connectors due to potential issues with heat transfer and the inability to easily disassemble the joints for repairs. Adhesives like glue or tape do not provide reliable mechanical strength or thermal resistance needed in gas venting applications, thereby making such options unsafe and non-compliant with industry standards.

4. In what way can a hydrated atmosphere affect the thermal comfort level in a home?

- A. Increases Comfort
- B. Decreases Comfort
- C. No Significant Effect
- D. Increases Energy Consumption

A hydrated atmosphere, which contains higher levels of humidity, can negatively impact thermal comfort levels in a home. When humidity levels increase, the moisture in the air can make it more difficult for the body to cool itself through the evaporation of sweat. This can lead to a feeling of stickiness and discomfort, as the body's natural cooling mechanisms become less effective. People often perceive higher humidity as warmer, even if the actual temperature remains unchanged. This perception occurs because the moisture-laden air reduces the effectiveness of sweat evaporation, causing a rise in the body's perceived temperature. As a result, occupants may feel uncomfortable and may need to adjust the indoor climate, typically by using cooling systems or dehumidifiers, to restore a comfortable environment. While high humidity can increase energy consumption if additional cooling or dehumidification is needed, the main immediate effect on comfort is a decrease. Therefore, the impact of a hydrated atmosphere on thermal comfort is significant and largely negative.

5. Why is it necessary to de-energize a circuit before using an Ohmmeter?

- A. To prevent damage to the meter
- B. To obtain a valid resistance reading
- C. To avoid electric shock
- D. All of the above

De-energizing a circuit before using an Ohmmeter is essential for several critical reasons. First and foremost, it helps to prevent damage to the meter. Ohmmeters are designed to measure resistance by applying a small test voltage across the circuit; if the circuit is live, this can lead to excessive voltage and current that could potentially damage the meter's internal components. In addition, de-energizing the circuit ensures that you obtain a valid resistance reading. When a circuit is energized, other factors such as inductance and capacitance can affect the measurements, resulting in inaccurate readings. A stable, uninterrupted path without current allows the Ohmmeter to measure pure resistance without interference. Lastly, safety is a paramount concern. Working with energized circuits poses a risk of electric shock, which can lead to serious injury or even be lethal. Disabling the circuit ensures that the technician can perform the measurement safely, without the risk of electrocution. By addressing these factors—protecting the meter, ensuring accurate measurements, and prioritizing personal safety—de-energizing the circuit becomes an essential step before using an Ohmmeter.

6. What should be done before adjusting the set point of a gas appliance regulator?

- A. Turn off the main gas supply
- B. Ensure the appliance is operating
- C. Check the gas pressure downstream
- D. Measure the gas flow rate

Before adjusting the set point of a gas appliance regulator, checking the gas pressure downstream is essential. This step involves measuring the pressure on the outlet side of the regulator to ensure that it is within the manufacturer's specified range. Proper downstream pressure indicates that the regulator is functioning correctly, and adjustments can be made to achieve optimal performance without risking the appliance's safety or efficiency. Additionally, this measurement helps identify if there are any existing issues with the gas pressure that would need to be addressed before making any adjustments. Properly understanding the downstream pressure allows a technician to make informed decisions when setting the regulator to ensure that the appliance operates safely and effectively under the intended conditions.

7. What is a potential hazard if a gas valve fails to receive proper voltage?

- A. Increased energy efficiency
- B. Potential gas leaks**
- C. Higher operational costs
- D. Lower pressure in the system

A gas valve that fails to receive proper voltage can lead to significant risks, primarily the potential for gas leaks. Gas valves are essential components in controlling the flow of gas in various systems, such as furnaces and water heaters. If the valve does not receive the correct voltage, it may not open or close as intended, which can result in gas being continuously fed into the system without adequate control. This condition can create situations where gas accumulates and poses a serious safety hazard, including the risk of fire or explosion. The focus on the gas valve's voltage highlights the importance of electrical functioning in safely controlling gas flow. Inadequate voltage means the valve may remain open longer than it should or may not close when it should, directly leading to leaks. This potential hazard underscores the necessity for proper electrical inspection and maintenance of gas systems to ensure all components operate correctly within their designated parameters.

8. What is the specific gravity of natural gas?

- A. 0.80
- B. 0.60**
- C. 1.00
- D. 0.40

Natural gas is primarily composed of methane, which has a specific gravity less than that of air. The specific gravity of a gas is a measure of its density relative to air, which is considered to have a specific gravity of 1. The specific gravity of natural gas typically ranges between 0.55 to 0.70. The choice of 0.60 falls within this range, indicating that natural gas is less dense than air, which is a crucial characteristic for understanding how it behaves when released into the atmosphere. Because it rises and disperses rapidly, this property helps in safety considerations, such as preventing the accumulation of gas in enclosed spaces. Other options present specific gravities that are either too high or outside the common range for natural gas, making them less applicable. Understanding the specific gravity of natural gas is important for gas technicians when dealing with venting, system design, and safety protocols.

9. What happens to the pressure difference across a water pump as flow rate increases?

- A. It increases
- B. It decreases
- C. It remains the same
- D. It fluctuates

As the flow rate through a water pump increases, the pressure difference across the pump typically decreases. This behavior can be explained by the principles of fluid dynamics, particularly the concept of resistance in a fluid system. When the flow rate increases, the velocity of the water rising in the system also increases. According to Bernoulli's principle, as the speed of the fluid increases, the static pressure within the fluid decreases. This results in an overall reduction in pressure difference across the pump due to the increased velocity of the water. Additionally, as flow rate increases, the friction losses in the piping system become more significant, further contributing to the decrease in pressure difference. Understanding this relationship helps in the design and troubleshooting of water pumping systems, as it indicates that pumps must be selected carefully to handle the expected flow rates while providing adequate pressure for system needs.

10. What is the maximum outlet pressure for a second stage regulator on a residential propane tank system?

- A. 7" W.C.
- B. 10" W.C.
- C. 11" W.C.
- D. 14" W.C.

In a residential propane system, the second stage regulator is critical for maintaining a safe and usable pressure for appliances. The maximum outlet pressure of a second stage regulator is typically set to 11 inches of water column (W.C.). This pressure is suitable for most residential appliances designed to operate on propane, ensuring they receive an appropriate amount of gas to function efficiently without risking damage or safety issues. Setting the outlet pressure at this level allows for adequate gas flow while keeping the system within safe operating limits. This is essential for appliances, as pressures that are too high can lead to malfunctions or unsafe conditions, while pressures that are too low can prevent appliances from lighting or operating correctly. Understanding the appropriate pressure levels is crucial for gas technicians to ensure proper installation and maintenance of propane systems in residential settings.

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://gastechnician2.examzify.com>

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

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