

GAS TECHNICIAN 2 (G2) LICENSE PRACTICE EXAM (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

**VISIT US ONLINE FOR
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. Which component is NOT typically found in a gas-fired refrigerator?**
 - A. Compressor
 - B. Absorber
 - C. Evaporator
 - D. Condenser

- 2. What is the best procedure to increase the speed of a furnace blower?**
 - A. Change the motor type
 - B. Close up the motor pulley
 - C. Increase the voltage supply
 - D. Adjust the thermostat settings

- 3. What ratio of combustion air is typically recommended for effective combustion in propane systems?**
 - A. 20
 - B. 25
 - C. 30
 - D. 35

- 4. Which of the following components is essential for the safe operation of a gas regulator?**
 - A. Flame arrestor
 - B. Diaphragm
 - C. Control valve
 - D. Igniter

- 5. What is the most common cause of flue gas spillage from gas appliances?**
 - A. Excessive Ventilation
 - B. Negative Air Pressure caused by Mechanical Systems
 - C. Blocked Flues
 - D. High Ambient Temperature

- 6. If too many Lava Rocks are placed in the rack of a barbeque, what is likely to happen?**
- A. The Burner will burn out prematurely
 - B. The temperature will increase significantly
 - C. The barbecue will not ignite
 - D. The cooking time will be reduced
- 7. What is the minimum distance that the vent from a 75,000 BTUH category 3 furnace may terminate from a door?**
- A. 1 foot
 - B. 2 feet
 - C. 3 feet
 - D. 4 feet
- 8. If one cubic foot of Natural Gas is 1000 BTUH, what is the ratio of Total Air?**
- A. 25
 - B. 30
 - C. 35
 - D. 40
- 9. What is the electrical potential difference that results in current flow through resistance?**
- A. Voltage
 - B. Amperage
 - C. Ohm's
 - D. Conductance
- 10. How large should the grill be for two hot water boilers and two water heaters firing at the specified BTUH in a contained room?**
- A. 200 Square Inches
 - B. 250 Square Inches
 - C. 300 Square Inches
 - D. 350 Square Inches

Answers

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

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Explanations

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1. Which component is NOT typically found in a gas-fired refrigerator?

A. Compressor

B. Absorber

C. Evaporator

D. Condenser

In a gas-fired refrigerator, the primary components involved in the refrigeration cycle include the absorber, evaporator, and condenser. These components work together in a refrigeration system using an absorption cycle rather than a traditional mechanical compression system. The absorber is crucial in a gas-fired refrigerator as it absorbs the refrigerant vapor to create a solution. The evaporator then allows the refrigerant to expand and absorb heat, leading to a cooling effect. Lastly, the condenser plays a vital role by allowing the vapor to cool and condense back into a liquid, ready to be absorbed again. The compressor is the component typically associated with mechanical refrigerators that rely on compression refrigeration cycles, where it compresses the refrigerant to raise its pressure and temperature. In a gas-fired refrigerator, there is no need for a mechanical compressor since the absorption refrigeration cycle does not utilize this component. Therefore, identifying the compressor as not typically found in gas-fired refrigerators correctly highlights the distinction between different refrigeration technologies.

2. What is the best procedure to increase the speed of a furnace blower?

A. Change the motor type

B. Close up the motor pulley

C. Increase the voltage supply

D. Adjust the thermostat settings

To increase the speed of a furnace blower, adjusting the motor pulley by closing it up is an effective procedure. When you close up the motor pulley, you effectively increase the speed at which the blower operates. This is due to the relationship between the size of the pulley and the rotational speed of the motor; by making the pulley smaller in diameter, the motor must turn faster to maintain the same output speed at the blower. In the context of the other options: changing the motor type typically involves replacing the entire motor, which is not only costly but may also not guarantee an increase in speed without the right specifications. Increasing the voltage supply to the motor can lead to potential damage or burning out the motor, as it may exceed the motor's capacity; hence, it is not a safe or standard procedure for adjusting blower speed. Adjusting thermostat settings primarily affects temperature regulation and does not directly influence the speed of the blower itself. By closing the motor pulley, the adjustment leads to improved airflow while maintaining efficiency and reliability in the operation of the furnace blower.

3. What ratio of combustion air is typically recommended for effective combustion in propane systems?

- A. 20
- B. 25**
- C. 30
- D. 35

The recommended ratio of combustion air for effective combustion in propane systems is typically around 25 parts of air to 1 part of propane. This ratio is important for ensuring that the propane burns efficiently, producing optimal heat output while minimizing the production of harmful emissions and unburned fuel. When combustion occurs, there needs to be enough oxygen available for the propane to react with, allowing it to combust completely. If there is too little air, incomplete combustion can occur, resulting in carbon monoxide production and lower efficiency. Conversely, too much air can lead to heat loss and also reduce efficiency. The specified ratio of 25:1 is considered a good balance, ensuring that there is sufficient oxygen for the propane to combust fully while still maintaining an efficient combustion process. This ratio is part of standard practices outlined in various gas appliance and combustion system guidelines, where proper air-to-fuel ratios are crucial for safety and effectiveness.

4. Which of the following components is essential for the safe operation of a gas regulator?

- A. Flame arrestor
- B. Diaphragm**
- C. Control valve
- D. Igniter

The essential component for the safe operation of a gas regulator is the diaphragm. The diaphragm is responsible for regulating the pressure of gas flowing through the system. It senses the pressure and adjusts accordingly to ensure that the output pressure remains steady and within safe limits. This mechanism helps to prevent over-pressurization, which can lead to dangerous situations, including gas leaks or explosions. The diaphragm also serves to isolate the sensing and control functions within the regulator, making it critical for maintaining consistent gas delivery under varying demand conditions. The other components listed do not play the same vital role in regulating gas pressure as the diaphragm does, although some may be important for specific functions in a larger gas system. For example, a flame arrestor prevents the propagation of flame into the gas line, while a control valve might manage the flow rate of gas. An igniter is involved in starting combustion but does not interact directly with the regulation of gas pressure. Hence, the diaphragm is the key component that ensures the safe and reliable functioning of a gas regulator.

5. What is the most common cause of flue gas spillage from gas appliances?

- A. Excessive Ventilation
- B. Negative Air Pressure caused by Mechanical Systems**
- C. Blocked Flues
- D. High Ambient Temperature

The most common cause of flue gas spillage from gas appliances is negative air pressure caused by mechanical systems. This phenomenon occurs when exhaust fans, kitchen hoods, or HVAC systems create a pressure differential within a building. If the air pressure inside the home is lower than the pressure outside, it may cause the appliances to draw air from the flue instead of from the room, leading to spillage. In gas appliances designed to expel combustion gases properly, maintaining a balanced air pressure is crucial for efficient and safe operation. When negative pressure is present, it can disrupt this balance, preventing the flue gases from venting outside effectively, thus increasing the risk of backdrafting harmful gases into the living space. This situation emphasizes the importance of proper ventilation and ensuring that mechanical systems are correctly balanced to prevent flue gas spillage, which is vital for both safety and appliance performance.

6. If too many Lava Rocks are placed in the rack of a barbeque, what is likely to happen?

- A. The Burner will burn out prematurely**
- B. The temperature will increase significantly
- C. The barbecue will not ignite
- D. The cooking time will be reduced

Placing too many lava rocks in the rack of a barbecue can lead to the burner burning out prematurely. When there is an excessive amount of lava rock, it can obstruct the flow of heat generated by the burner. Lava rocks are designed to help distribute heat evenly and retain it, but if the volume is too high, insufficient air circulation can occur. This may cause the burner to overheat, leading to failure or burnout due to thermal stress. Proper spacing and the correct amount of lava rocks are essential to ensure effective heat distribution and protect the integrity of the burner, thus preventing premature failure. The other options do not accurately reflect the implications of overloading lava rocks. An increase in temperature or reduced cooking time would suggest enhanced performance rather than a malfunction, and the barbecue still has the capacity to ignite even with excessive lava rocks, though it may not burn efficiently.

7. What is the minimum distance that the vent from a 75,000 BTUH category 3 furnace may terminate from a door?

- A. 1 foot
- B. 2 feet
- C. 3 feet**
- D. 4 feet

The minimum distance that the vent from a 75,000 BTUH category 3 furnace may terminate from a door is indeed three feet. This distance is specified to ensure safety and functionality. In the context of gas appliances, particularly those that utilize a venting system, it's critical to maintain clearances to prevent any potential hazards. A vent that is too close to a door can lead to exhaust gases entering the building when the door is opened, especially if there is any negative pressure created in the building. The three-foot requirement helps mitigate this risk by ensuring that the vent outlet allows for proper discharge of combustion gases away from openings where people may enter or exit. This guideline focuses on safeguarding health and safety by preventing backdraft issues or the reintroduction of harmful gases into occupied spaces. Other options might represent lesser distances, which do not provide the same level of precaution, thereby not aligning with safety best practices established in building codes and guidelines for gas appliances.

8. If one cubic foot of Natural Gas is 1000 BTUH, what is the ratio of Total Air?

- A. 25
- B. 30**
- C. 35
- D. 40

When considering the combustion of natural gas, it's essential to understand the air-to-fuel ratio necessary for efficient burning. For natural gas, the approximate stoichiometric requirement is about 10:1, meaning roughly 10 parts of air for every one part of natural gas by volume for complete combustion. In this context, if one cubic foot of natural gas produces 1000 BTU/hr, the total air needed for complete combustion can be calculated. A common conversion in gas combustion is that 1 cubic foot of natural gas approximately requires around 10 cubic feet of air to achieve optimal combustion. To convert this to a ratio, we can use the 1000 BTUH output in relation to the BTU content of air, leading to a total air requirement ratio that typically aligns closely with 30, based on standard combustive calculations and factors considering the complete combustion efficiency. Consequently, understanding that 30 represents a balance between the requirements of air and the energy produced by natural gas leads to the conclusion that the ratio of total air to natural gas in this scenario is indeed around 30. This is why option B is identified as the correct choice.

9. What is the electrical potential difference that results in current flow through resistance?

- A. Voltage**
- B. Amperage
- C. Ohm's
- D. Conductance

The term that describes the electrical potential difference causing current to flow through a resistance is voltage. Voltage is essentially the electrical "pressure" that pushes charged electrons through a circuit. When there is a difference in electric potential between two points, it creates a movement of electrons, resulting in an electric current. In a circuit, when a voltage is applied across a resistor, it allows current to flow based on the resistance of the component and the relationship defined by Ohm's law ($V = IR$), where V is voltage, I is current, and R is resistance. Thus, in the context of electrical systems, voltage is key to understanding how current moves and interacts with resistance. The other terms relate to aspects of electrical circuits but do not describe the potential difference itself. Amperage, for example, refers to the amount of current flowing through a circuit, while Ohm's pertains to the unit of resistance. Conductance reflects how easily current can flow through a material, but none of these terms encapsulate the concept of electrical potential difference in the way that voltage does.

10. How large should the grill be for two hot water boilers and two water heaters firing at the specified BTUH in a contained room?

- A. 200 Square Inches
- B. 250 Square Inches**
- C. 300 Square Inches
- D. 350 Square Inches

Makeup air for gas-fired equipment in a confined room must be sized to supply enough combustion air for all appliances. The common rule used in practice is that the net free area of the air opening equals the total BTUH input divided by 1,000, giving the opening area in square inches. So you add up the BTUH ratings of both boilers and both water heaters, then divide by 1,000 to get the grill size in square inches. In this case, the total BTUH yields 250 square inches of required net free area, so a 250 square inch grill is correct. This ensures sufficient air for proper combustion and venting; choosing a smaller opening would starve the appliances of air, while a larger opening would exceed what's needed for the given load.

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:

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

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