TECHNICAL STANDARDS AND SAFETY AUTHORITY (TSSA) G2 PRACTICE EXAM (SAMPLE)

STUDY GUIDE

SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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

1. What is the maximum output pressure from a first stage regulator?

A. 11.0" w.c.

B. psi

C. 10.0 psi

D. 15.0 psi

2. A leak limiting device on a regulator is designed to do what?

A. Allow a controlled amount of leakage if the diaphragm ruptures

B. Shut off completely if the diaphragm ruptures

C. Route all leaking gas back into the piping system if the diaphragm ruptures

D. Shut off all pilot lights if the diaphragm ruptures

3. When converting an oil furnace to gas, what type of atmospheric burner can be used?

A. Burner tray

B. In shot

C. Ribbon burner

D. Primary air fan assist burner

4. If the thermostat terminals read 24V but the gas valve coil reads 0V in a no-heat call, which component is likely open?

A. Gas valve coil

B. Thermostat

C. High limit

D. Transformer

5. What is the minimum clearance to combustibles from the top of a gas refrigerator except when permitted?

A. 2 in.

B. 10 in.

C. 36 in.

D. 12 in

6. A thermostat serving a unit with separate heating and cooling control transformers and one stage of each is classified as a ... control.

A. SPST

B. SPDT

C. DPST

D. DPDT

7. How are electronic air cleaners wired?

A. In parallel with the appliance blower fan motor

B. In series with the appliance blower fan motor

C. In parallel with the fan

D. In series with the fan

8. During seasonal start-up, a pool heater should run how?

A. Intermittently

B. Continuously for 24 hours

C. Continuously until the thermostat is satisfied

D. One hour on and one hour off until the thermostat is satisfied

9. It is permissible to use gas piping as an electrical ground if:

A. The piping is 1 inch in diameter or larger

B. The piping has welded joints

C. The voltage is less than 120 volts

D. It is used in the flame safeguard circuit

10. On category IV appliances, can a single wall vent be used to vent flue gases?

A. Yes

B. No

C. Manufacturer approved only

D. Only if vents are silicone together

Answers

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

Explanations

1. What is the maximum output pressure from a first stage regulator?

A. 11.0" w.c.

B. psi

C. 10.0 psi

D. 15.0 psi

The maximum output pressure from a first stage regulator is 10.0 psi. This is because first stage regulators are designed to reduce high inlet pressures from the gas supply system down to a manageable level for further regulation. Typically, the first stage regulator outputs pressure measured in psi, and for many common systems, this output level is standardized at 10.0 psi. It is crucial for safe operation to maintain this regulated output pressure to prevent over-pressurization of downstream components. In the context of gas regulation, the other options present either incorrect values or units that are not applicable. For instance, a pressure measurement of 11.0" w.c. refers to water column inches, which is typically associated with low-pressure systems rather than standard output from a first stage regulator. The use of "psi" without any value lacks specificity, while 15.0 psi exceeds the commonly accepted maximum output for a first stage regulator.

2. A leak limiting device on a regulator is designed to do what?

A. Allow a controlled amount of leakage if the diaphragm ruptures

B. Shut off completely if the diaphragm ruptures

C. Route all leaking gas back into the piping system if the diaphragm ruptures

D. Shut off all pilot lights if the diaphragm ruptures

A leak limiting device on a regulator serves the purpose of allowing a controlled amount of leakage if the diaphragm ruptures. This design is important for safety and functionality. When a regulator's diaphragm fails, instead of completely shutting off the gas supply—potentially disrupting service or causing pressure build-up—the leak limiting device enables a measured release of gas. This balance minimizes the risk of an explosive atmosphere by preventing dangerous gas accumulation while still allowing for continued operation, albeit in a restricted manner. This controlled leakage is essential in many applications where complete gas supply interruption might cause operational issues or safety concerns, thus facilitating a safer environment where potential gas leaks can be monitored and managed appropriately.

3. When converting an oil furnace to gas, what type of atmospheric burner can be used?

A. Burner tray

B. In shot

C. Ribbon burner

D. Primary air fan assist burner

When converting an oil furnace to gas, the in-shot burner is the appropriate choice because it is specifically designed for gas applications, offering efficient combustion and consistent performance. This type of burner atomizes the gas and mixes it with combustion air before it enters the combustion chamber, allowing for precise control of the flame characteristics and combustion process. This characteristic is essential for ensuring that the furnace operates safely and efficiently after the conversion, as it minimizes the chances of incomplete combustion and related hazards. In-shot burners are robust in design and can easily adjust to the varying operational conditions typically found within an existing oil furnace framework, making them ideal for conversions. Other types of burners listed may not provide the same level of efficiency or compatibility with gas fuel. For instance, a burner tray is generally used in commercial applications rather than residential conversions of oil to gas, while ribbon burners, which are also effective, might not be suitable for all existing oil furnace designs. Primary air fan assist burners, on the other hand, utilize a fan to inject air, which may lead to complications in adapting them to a system originally designed for oil combustion. Thus, the in-shot burner stands out as the most fitting and effective solution for this conversion process.

4. If the thermostat terminals read 24V but the gas valve coil reads 0V in a no-heat call, which component is likely open?

A. Gas valve coil

B. Thermostat

C. High limit

D. Transformer

In a heating system, when the thermostat is set to call for heat, it typically sends a signal by closing a circuit, which should result in a voltage reading at the gas valve coil. If the thermostat terminals are reading 24V but the gas valve coil is reading 0V during a no-heat call, this indicates that the signal from the thermostat is not reaching the gas valve. The thermostat acts as the control center in the system, and if it is functioning correctly and showing a voltage at its terminals, it should be able to effectively transmit that voltage to the gas valve coil. Since the gas valve coil is reading 0V, it suggests that the connection between the thermostat and the gas valve coil is interrupted, likely due to an issue within the thermostat itself. This could mean that the thermostat is either stuck in the "off" position, malfunctioning, or not properly closing the circuit to allow the current to reach the gas valve. Therefore, the thermostat is the component that is likely open, preventing the current necessary to operate the gas valve coil. Understanding this helps in troubleshooting the system effectively, as further checks would need to be performed on the thermostat to ensure it is functioning properly.

5. What is the minimum clearance to combustibles from the top of a gas refrigerator except when permitted?

A. 2 in.

B. 10 in.

C. 36 in.

D. 12 in

The minimum clearance to combustibles from the top of a gas refrigerator is established to ensure safe operation and prevent any potential fire hazards. The correct clearance of 12 inches allows for adequate ventilation and prevents heat buildup, which could ignite nearby combustible materials. This clearance is essential for ensuring that the appliance operates efficiently without obstructing airflow, which could affect performance and safety. Proper spacing reduces the risk of overheating and allows for maintenance access, contributing to overall safety standards as mandated by relevant codes and regulatory bodies. Other options present either insufficient measurements or unnecessary excessive distance that does not align with industry standards for this type of appliance. Therefore, maintaining a clearance of 12 inches is a recognized best practice in the installation and operation of gas refrigerators to safeguard against fire hazards.

6. A thermostat serving a unit with separate heating and cooling control transformers and one stage of each is classified as a ... control.

A. SPST

B. SPDT

C. DPST

D. DPDT

A thermostat serving a unit with separate heating and cooling control transformers and one stage of each is classified as a DPDT (Double Pole Double Throw) control. This classification indicates that the thermostat has two separate circuits, allowing it to control both heating and cooling functionalities. In a DPDT configuration, the device features two poles (which can control two independent circuits) and each pole can connect to one of two outputs, effectively providing the ability to switch between different states for both the heating and cooling systems. This is important because it allows a thermostat to switch between heating and cooling depending on the temperature setpoint, ensuring comfort and efficiency in various conditions. In contrast, options like SPST or SPDT would not adequately manage separate circuits for heating and cooling since they are single-pole configurations. An SPST (Single Pole Single Throw) operates only one circuit, while an SPDT (Single Pole Double Throw) can switch between two paths but cannot handle multiple independent systems like a heating and cooling setup effectively. The DPST, while it manages two circuits, lacks the capability of changing between multiple outputs as required in this situation. Thus, DPDT is the most appropriate classification for the given setup.

7. How are electronic air cleaners wired?

A. In parallel with the appliance blower fan motor

B. In series with the appliance blower fan motor

C. In parallel with the fan

D. In series with the fan

Electronic air cleaners are typically wired in parallel with the appliance blower fan motor. This configuration allows the air cleaner to operate independently of the fan, ensuring that air is filtered continuously while the blower is running. Wiring in this manner ensures that the electronic air cleaner receives power whenever the blower motor is operational, which is crucial for maintaining optimal air quality in the system. When wired in parallel, there is no need for the electronic air cleaner to depend on the status of the blower motor, which facilitates effective air cleaning regardless of the fan's operational state. This is important for applications where air quality is a high priority, ensuring that contaminants are removed from the airstream efficiently. Wiring configurations that involve series connections would cause the electronic air cleaner to rely on the blower motor's operation, potentially leading to reduced efficiency in air cleaning when the blower is inactive. Therefore, parallel wiring is the preferred practice for ensuring both the appliance and air cleaner function effectively within the system.

8. During seasonal start-up, a pool heater should run how?

A. Intermittently

B. Continuously for 24 hours

C. Continuously until the thermostat is satisfied

D. One hour on and one hour off until the thermostat is satisfied

The correct response indicates that during the seasonal start-up of a pool heater, it should operate continuously until the thermostat is satisfied. This approach ensures that the heater can efficiently raise the pool water to the desired temperature. Continuous operation allows for steady heating, which is essential for achieving optimal water temperature quickly, especially after a period of inactivity when the water has likely cooled significantly. Starting the heater and allowing it to run uninterrupted until the thermostat's setpoint is met helps to avoid temperature fluctuations and maintains a more consistent heating process. Once the thermostat is satisfied, the heater will shut off automatically, conserving energy and reducing unnecessary wear on the equipment. In contrast, intermittent or cyclical operation—such as running for one hour on and one hour off—can lead to inefficiencies and prolonged heating times. Running the heater continuously for a set 24 hours may be excessive unless it is necessary to achieve the desired temperature. Continuous operation until the thermostat reaches the set point strikes a balance between efficiency, effectiveness, and equipment care.

9. It is permissible to use gas piping as an electrical ground if:

A. The piping is 1 inch in diameter or larger

B. The piping has welded joints

C. The voltage is less than 120 volts

D. It is used in the flame safeguard circuit

Using gas piping as an electrical ground is permissible in certain specific situations, particularly when it is utilized in the flame safeguard circuit. This is because grounding in this context ensures safety by providing a reliable path for electrical faults, preventing the risk of electrical shock or fire in systems where ignition sources can be present. Flame safeguard systems are critical in ensuring that appliances operate safely, and proper grounding can help avoid dangerous electrical conditions that may lead to failures or accidents. The other options do not provide the necessary context for effective grounding or safety. Constraints such as the size of the piping, the type of joints, or voltage levels do not inherently ensure a safe grounding practice in the context of gas installations. The critical factor for grounding is its application in safety systems such as flame safeguard circuits, which are designed to protect against risks associated with gas-fired appliances.

10. On category IV appliances, can a single wall vent be used to vent flue gases?

A. Yes

B. No

C. Manufacturer approved only

D. Only if vents are silicone together

In the context of category IV appliances, utilizing a single wall vent to vent flue gases is not permissible due to specific venting requirements and safety standards. Category IV appliances are designed to operate with positive vent pressure and typically require either double-wall or special venting systems that are capable of safely handling the high efficiency and condensation produced during operation. Single wall vents lack the necessary insulation and structural integrity to manage the flue gases effectively, which can result in a risk of overheating and potentially hazardous conditions, such as flue gas leaks or improper draft. Thus, the requirement for more robust venting systems ensures both the safety and compliance with applicable codes and standards related to appliance installation and operation. This compliance is critical to ensure effective venting and to minimize environmental impact, thus adhering to the safety protocols established by regulatory bodies like TSSA. Therefore, a single wall vent cannot be used with these appliances under standard safety regulations, making the statement that it is not allowed accurate.

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://tssag2.examzify.com

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