

Technical Standards and Safety Authority (TSSA) G3 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. According to the workplace safety and insurance board act, which of the following statements is part of the workers obligation in all cases of injury and or disease?**
 - A. Obtain first aid promptly**
 - B. Notify the employer of any injury within eight hours**
 - C. Notify the employer of the possible onset of a work related disease/condition within two working days**
 - D. Find a doctor or qualified practitioner who will give a second opinion concerning the injury**

- 2. What is the approximate flame temperature of natural gas?**
 - A. 2500 oF (1371 oC)**
 - B. 2500 oC (4532 oF)**
 - C. 3600 oF (1980 oC)**
 - D. 3500 oC (6332 oF)**

- 3. What is the expression for the maximum pressure to which any component or portion of the fuel system can be subjected?**
 - A. maximum allowable operating pressure**
 - B. ultimate stress pressure**
 - C. relief pressure**
 - D. maximum working pressure**

- 4. How does a thermocouple work in gas appliances?**
 - A. It generates a spark to ignite the gas**
 - B. It generates voltage to close the gas valve if the pilot light goes out**
 - C. It controls the temperature of the gas**
 - D. It regulates the pressure of gas supplied to the appliances**

- 5. What role does the B149 code play in gas fitting?**
 - A. It regulates gas prices**
 - B. It provides installation and safety requirements for gas appliances and piping systems in Canada**
 - C. It describes the history of gas appliances**
 - D. It sets standards for customer service in gas fitting**

- 6. What does the term "exhaust" refer to in gas appliances?**
- A. The air needed for combustion**
 - B. The heat emitted from the appliance**
 - C. The byproducts of combustion that must be vented outside**
 - D. The sound produced during appliance operation**
- 7. When should one consider increasing the frequency of servicing gas appliances?**
- A. When the appliance is new**
 - B. Only if there is a noticeable performance issue**
 - C. Based on specific manufacturer recommendations or changes in use**
 - D. Once every decade is sufficient**
- 8. What is the indication of a well-functioning venturi in a gas appliance?**
- A. It delivers inconsistent gas pressure**
 - B. It successfully mixes air with gas for combustion**
 - C. It is made of stainless steel material**
 - D. It is located at the base of the appliance**
- 9. Which of the following does not have an air circulating blower?**
- A. Make up air unit**
 - B. Unit heater**
 - C. Rooftop package unit**
 - D. Gravity warm air system**
- 10. How does an orifice for a propane appliance compare in size to one for a natural gas appliance with the same input?**
- A. The same size as the natural gas orifice**
 - B. Smaller than the natural gas orifice**
 - C. Larger than the natural gas orifice**
 - D. Interchangeable with the natural gas orifice**

Answers

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

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Explanations

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1. According to the workplace safety and insurance board act, which of the following statements is part of the workers obligation in all cases of injury and or disease?

A. Obtain first aid promptly

B. Notify the employer of any injury within eight hours

C. Notify the employer of the possible onset of a work related disease/condition within two working days

D. Find a doctor or qualified practitioner who will give a second opinion concerning the injury

The correct choice emphasizes the importance of timely communication regarding injuries in the workplace. According to the Workplace Safety and Insurance Board Act, it is essential for workers to notify their employer of any injury within eight hours. This obligation is crucial, as it enables the employer to take immediate action, such as providing medical assistance or ensuring safety measures are implemented to prevent further incidents. Prompt reporting can also assist in the quicker management of claims and facilitate the necessary documentation and investigations into the injury or accident. The timing set by the Act underscores the need for urgency in handling workplace injuries, reflecting a wider goal of maintaining workplace safety and health. By ensuring that employers are informed promptly, the infrastructure of support and resources surrounding workplace injuries is activated much sooner, which can be beneficial for both workers and employers alike.

2. What is the approximate flame temperature of natural gas?

A. 2500 oF (1371 oC)

B. 2500 oC (4532 oF)

C. 3600 oF (1980 oC)

D. 3500 oC (6332 oF)

The approximate flame temperature of natural gas, when fully combusted under ideal conditions, can reach around 3600 degrees Fahrenheit (or 1980 degrees Celsius). This high temperature is attributed to the efficient combustion of natural gas, which primarily consists of methane (CH₄). The complete oxidation of methane with sufficient oxygen produces water vapor and carbon dioxide and releases a significant amount of energy, resulting in extreme heat. Understanding this flame temperature is crucial for applications in heating, cooking, and powering various industrial processes, where precise temperature control is necessary for efficiency and safety. The other options present temperatures that exceed or do not accurately represent the combustion characteristics of natural gas under typical conditions.

3. What is the expression for the maximum pressure to which any component or portion of the fuel system can be subjected?

- A. maximum allowable operating pressure**
- B. ultimate stress pressure**
- C. relief pressure**
- D. maximum working pressure**

The maximum allowable operating pressure is the term used to define the highest pressure that any component or section of a fuel system is designed to safely withstand during normal operation. This pressure is critical for ensuring that the system operates within safe limits without risking failure or leaks. It takes into account factors such as material strength, design specifications, and safety factors mandated by relevant codes and standards. In contrast, ultimate stress pressure typically refers to the maximum stress a material can endure before failing, rather than the operational limits set for fuel system components. Relief pressure is associated with safety mechanisms that prevent overpressure scenarios by venting excess pressure, but it does not represent the maximum allowable operational threshold. Maximum working pressure can often be confused with the allowable operating pressure, yet it does not encompass all safety considerations and may not account for structural integrity in the same comprehensive manner. Thus, the maximum allowable operating pressure serves as the definitive standard for ensuring safe operation within the specified limits.

4. How does a thermocouple work in gas appliances?

- A. It generates a spark to ignite the gas**
- B. It generates voltage to close the gas valve if the pilot light goes out**
- C. It controls the temperature of the gas**
- D. It regulates the pressure of gas supplied to the appliances**

A thermocouple functions by generating a small electrical voltage in response to temperature differentials, which makes it a vital safety feature in gas appliances equipped with pilot lights. When the pilot light is lit, the heat generated by the flame warms the thermocouple, causing it to create a voltage. This voltage activates a solenoid within the gas valve, keeping it open and allowing gas to flow to the burner. If the pilot light goes out, the thermocouple cools down, resulting in a drop in the generated voltage. This drop triggers the solenoid to close the gas valve, stopping the flow of gas and preventing potential leaks or dangerous situations. Thus, the thermocouple serves as a critical safety device that ensures gas is only supplied when the pilot light is operational, effectively protecting against gas buildup and associated hazards. Understanding this mechanism emphasizes the importance of the thermocouple in ensuring safe operation of gas appliances, distinguishing it clearly from other functionalities such as igniting the gas or regulating pressure and temperature.

5. What role does the B149 code play in gas fitting?

- A. It regulates gas prices
- B. It provides installation and safety requirements for gas appliances and piping systems in Canada**
- C. It describes the history of gas appliances
- D. It sets standards for customer service in gas fitting

The B149 code is a crucial aspect of gas fitting as it provides comprehensive installation and safety requirements for gas appliances and piping systems in Canada. This code ensures that gas installations are performed safely and in compliance with established technical standards, thus minimizing risks associated with gas use, such as leaks, explosions, and other hazards. By defining clear guidelines for installation practices, material specifications, and safety protocols, the B149 code helps protect both consumers and technicians working in the gas fitting industry. It covers a variety of elements, including proper venting, connection procedures, and maintenance standards, making it an essential reference for anyone involved in the gas fitting process. Although other options suggest important concepts related to gas fitting, they do not accurately reflect the primary function of the B149 code. It is specifically focused on the technical and safety aspects of installations, rather than pricing, historical context, or customer service standards.

6. What does the term "exhaust" refer to in gas appliances?

- A. The air needed for combustion
- B. The heat emitted from the appliance
- C. The byproducts of combustion that must be vented outside**
- D. The sound produced during appliance operation

The term "exhaust" in the context of gas appliances specifically refers to the byproducts of combustion that must be vented outside. When gas is burned in an appliance, it produces combustion gases such as carbon dioxide, water vapor, and possibly other harmful substances if the combustion is not complete. Proper ventilation is crucial to ensure that these byproducts do not build up inside the space where the appliance operates, as they can pose serious health risks such as carbon monoxide poisoning. Understanding the significance of exhaust is essential for ensuring safety in environments where gas appliances are used. It emphasizes the necessity for correct installation and functioning of exhaust systems to efficiently direct these harmful gases outdoors. This definition aligns with safety regulations and best practices in the use and maintenance of gas appliances to protect occupants and ensure air quality. The other choices pertain to different aspects of gas appliances, such as combustion air or heat output, which do not accurately describe the concept of exhaust in this context.

7. When should one consider increasing the frequency of servicing gas appliances?

A. When the appliance is new

B. Only if there is a noticeable performance issue

C. Based on specific manufacturer recommendations or changes in use

D. Once every decade is sufficient

Increasing the frequency of servicing gas appliances is best based on specific manufacturer recommendations or changes in use. Manufacturers typically provide guidelines that outline how often an appliance should be serviced to maintain optimal safety and efficiency. If there are any changes in how the appliance is being used, such as increased usage, a different operational environment, or modifications to installation requirements, these can also warrant more frequent servicing. This proactive approach helps in identifying potential safety hazards, ensuring the appliance operates efficiently, and prolonging its lifespan. Routine servicing based on these criteria greatly reduces the risk of malfunctions or dangerous situations, thereby aligning with safety regulations set by the Technical Standards and Safety Authority. Hence, following manufacturer recommendations and adjusting servicing frequency based on actual usage are key to maintaining gas appliances safely and effectively.

8. What is the indication of a well-functioning venturi in a gas appliance?

A. It delivers inconsistent gas pressure

B. It successfully mixes air with gas for combustion

C. It is made of stainless steel material

D. It is located at the base of the appliance

A well-functioning venturi in a gas appliance is characterized by its ability to effectively mix air with gas for combustion. The venturi principle relies on the differential pressure created as gas flows through a constricted area, which draws in surrounding air and allows for an optimal air-to-gas ratio. This mixing is crucial because it ensures that the gas burns efficiently and cleanly, providing a stable flame and maximizing the appliance's operational effectiveness. When the venturi is functioning properly, it leads to consistent combustion and optimal performance of the appliance. The ability to mix air and gas properly directly influences the efficiency and safety of the gas appliance in operation.

9. Which of the following does not have an air circulating blower?

- A. Make up air unit**
- B. Unit heater**
- C. Rooftop package unit**
- D. Gravity warm air system**

The gravity warm air system is designed to operate using the natural convection of air rather than relying on mechanical means to circulate air. This system takes advantage of the basic principle that warm air rises and cool air descends, allowing for a passive movement of warm air throughout the space. As a result, it does not require an air circulating blower to function effectively. In contrast, the other systems mentioned—make up air units, unit heaters, and rooftop package units—utilize air movers or fans to actively circulate heated or conditioned air to provide adequate comfort in building spaces. These systems rely on blowers to distribute air efficiently, ensuring that heated or cooled air reaches various areas of a structure. Understanding the function and components of different heating systems helps clarify why gravity warm air systems do not include air circulating blowers, highlighting the difference in operational mechanics among these types of equipment.

10. How does an orifice for a propane appliance compare in size to one for a natural gas appliance with the same input?

- A. The same size as the natural gas orifice**
- B. Smaller than the natural gas orifice**
- C. Larger than the natural gas orifice**
- D. Interchangeable with the natural gas orifice**

In the context of appliances utilizing propane and natural gas, the size of the orifice is a critical factor due to the differences in the gas compositions and their respective energy content. Propane is denser and has a higher heating value than natural gas. As a result, to achieve the same energy output or input, the orifice size for a propane appliance must be smaller than that of a natural gas appliance. The smaller orifice for propane restricts the flow of gas, ensuring that the correct amount of gas is delivered to match its higher energy content. If a propane appliance were to use the same orifice size as a natural gas appliance, it would deliver too much gas, which could lead to incomplete combustion, producing carbon monoxide and reducing appliance efficiency. The smaller orifice ensures that the appliance operates safely and efficiently when using propane, conforming to the necessary standards for gas appliances. This fundamental understanding of gas characteristics and appliance design is critical for technicians and professionals working with these systems.

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://tssa-g3.examzify.com>

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

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