

# CHARACTERISTICS OF NATURAL GAS PRACTICE TEST (SAMPLE)

**STUDY GUIDE**



**SAMPLE STUDY GUIDE  
WITH LIMITED QUESTIONS**

**VISIT US ONLINE FOR  
THE FULL VERSION STUDY GUIDE**

<https://characteristicsofnaturalgas.examzify.com>



**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 .....            | 15 |

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. What happens to the possibility of combustion when natural gas concentration exceeds 15% in air?**
  - A. Combustion is more likely
  - B. Combustion cannot occur because there is not enough air
  - C. Combustion occurs at the same rate as with lower concentrations
  - D. Combustion becomes spontaneous
- 2. What happens to water removed during dehydration before it is sent to refining or sale?**
  - A. Water is removed from gas and glycol is regenerated by heating.
  - B. Water is removed and then added back.
  - C. Water is converted to steam in the pipeline.
  - D. Water remains in gas to help prevent hydrates.
- 3. What percentage of propane and heavier hydrocarbons does natural gas contain?**
  - A. 1%
  - B. 2%
  - C. 3%
  - D. 4%
- 4. If you encounter an abnormal operating condition related to gas service to a customer, what two actions should you take?**
  - A. Notify customers and evacuate
  - B. Shut off meters to affected customers and contact appropriate company personnel
  - C. Shut off the main valve only
  - D. Inspect the area and wait for instructions
- 5. Which statement best describes the most common indication of a natural gas leak?**
  - A. A faint sound of rushing air
  - B. A visible flame
  - C. A strong gas odor
  - D. A sweet taste in the air

- 6. What is the ignition temperature of propane?**
- A. 400 degrees Fahrenheit
  - B. 600 degrees Fahrenheit
  - C. 800 degrees Fahrenheit
  - D. 84%
- 7. Which heating value includes the latent heat of condensation?**
- A. Higher Heating Value (HHV)
  - B. Lower Heating Value (LHV)
  - C. Both LHV and HHV
  - D. Neither LHV nor HHV
- 8. What is the typical methane content range in pipeline natural gas?**
- A. Approximately 85–95% methane by volume.
  - B. About 70% methane by volume.
  - C. 60–70% methane by volume.
  - D. 95–99% methane by volume.
- 9. Which statement about compression of natural gas is true?**
- A. It decreases pressure and density
  - B. It increases only pressure
  - C. It increases only density
  - D. It increases both pressure and density
- 10. What is the primary factor influencing how gas travels through the ground?**
- A. Soil conditions
  - B. Temperature
  - C. Humidity
  - D. Atmospheric pressure

## **Answers**

SAMPLE

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

SAMPLE

## **Explanations**

SAMPLE

**1. What happens to the possibility of combustion when natural gas concentration exceeds 15% in air?**

- A. Combustion is more likely
- B. Combustion cannot occur because there is not enough air**
- C. Combustion occurs at the same rate as with lower concentrations
- D. Combustion becomes spontaneous

*When a methane air mixture is considered, there is a specific flammability window defined by the upper flammable limit. As the fuel concentration climbs toward and beyond this limit, there isn't enough oxidizer (oxygen) available to sustain a flame. Around methane in air, that upper limit is about 15% by volume. So, when natural gas concentration exceeds this, the mixture is too fuel rich and combustion cannot occur under normal conditions because there isn't enough air to support ignition and flame propagation. The idea that ignition would happen more easily, occur at the same rate, or become spontaneous doesn't fit with the flammable limit concept, which states combustion cannot be sustained once the mixture is above the upper limit.*

**2. What happens to water removed during dehydration before it is sent to refining or sale?**

- A. Water is removed from gas and glycol is regenerated by heating.**
- B. Water is removed and then added back.
- C. Water is converted to steam in the pipeline.
- D. Water remains in gas to help prevent hydrates.

*In glycol dehydration, water is removed from the gas by contacting it with lean glycol that absorbs the water. The water-rich glycol is then sent to a regenerator where it is heated, which drives off the absorbed water as vapor. The regenerated (lean) glycol is cooled and returned to the absorber to dry more gas. This regeneration step is essential to keep the drying process continuous and to ensure the gas meets requirements before refining or sale. The water isn't reintroduced to the gas, isn't turned into steam in the pipeline, and water isn't left in the gas to prevent hydrates.*

**3. What percentage of propane and heavier hydrocarbons does natural gas contain?**

- A. 1%**
- B. 2%
- C. 3%
- D. 4%

*The amount of propane and heavier hydrocarbons in natural gas is typically very small, usually about 1% by volume. These heavier components (the C3+ fraction) can condense into liquids if present in larger amounts, which creates processing and pipeline handling challenges. Because gas must meet pipeline specifications and avoid liquid formation, it's common to find and aim to keep this fraction around a modest, low level like 1%. Higher percentages would require more extensive processing to remove the liquids, which is why the standard value emphasized in many guidelines is about 1%.*

4. If you encounter an abnormal operating condition related to gas service to a customer, what two actions should you take?

- A. Notify customers and evacuate
- B. Shut off meters to affected customers and contact appropriate company personnel**
- C. Shut off the main valve only
- D. Inspect the area and wait for instructions

*When gas service shows an abnormal operating condition, the priority is to quickly limit the hazard and get trained help on the scene. The best two actions are to shut off the meters to the affected customers to stop the gas flow at the source, and to contact the appropriate company personnel to coordinate the response. Shutting off the meters isolates the immediate area and reduces the amount of gas that could escape or ignite, which is the fastest way to reduce risk for everyone nearby. Notifying the right company personnel ensures that experienced responders—like supervisors, control room staff, or field operations—are alerted, can assess the situation, provide further instructions, and arrange any additional action needed, such as further isolation or emergency services if required. Other options don't fit as well because notifying customers and evacuating is a broader action that isn't the immediate fix, shutting off only the main valve can disrupt more service than necessary and may require authorization, and simply inspecting and waiting for instructions delays essential safety steps.*

5. Which statement best describes the most common indication of a natural gas leak?

- A. A faint sound of rushing air
- B. A visible flame
- C. A strong gas odor**
- D. A sweet taste in the air

*Natural gas is kept detectable by adding a strong odorant, usually resembling rotten eggs, so leaks are noticed quickly. This odor is the most reliable and common cue people are trained to recognize, prompting immediate safe action. A faint rushing sound can occur but isn't as dependable because it may be hard to hear in noise or from a distance. A visible flame would mean the gas has already ignited, which is dangerous and not a normal leak symptom. Tasting gas is unsafe and should never be done. If you smell gas, leave the area and call the gas company or emergency services from a safe location.*

6. What is the ignition temperature of propane?

- A. 400 degrees Fahrenheit
- B. 600 degrees Fahrenheit
- C. 800 degrees Fahrenheit
- D. 84%**

*Ignition temperature here means the autoignition temperature—the minimum temperature at which propane will ignite in air without an external flame or spark. For propane, this value is around 470°C, which converts to roughly 850–900°F. The temperatures listed (400°F, 600°F, 800°F) are all below that autoignition range, so they wouldn't reliably cause autoignition on their own. The choice that shows a percent is not a temperature and doesn't apply to ignition temperature. In real-world scenarios, propane can ignite at lower temperatures if a spark or flame is present, but autoignition requires the higher temperature range noted above.*

## 7. Which heating value includes the latent heat of condensation?

- A. Higher Heating Value (HHV)
- B. Lower Heating Value (LHV)**
- C. Both LHV and HHV
- D. Neither LHV nor HHV

Latent heat of condensation is the energy released when water formed during combustion changes from vapor to liquid. The higher heating value accounts for this energy by assuming the combustion products are cooled and the water vapor is condensed, so the energy from that condensation is recovered. That makes the HHV higher than the lower heating value, which assumes the water remains as vapor and does not recover the condensation energy. Therefore, the heating value that includes the latent heat of condensation is the higher heating value.

## 8. What is the typical methane content range in pipeline natural gas?

- A. Approximately 85–95% methane by volume.**
- B. About 70% methane by volume.
- C. 60–70% methane by volume.
- D. 95–99% methane by volume.

Methane is the primary component of natural gas delivered through pipelines, but the gas isn't pure methane. In most pipeline gas, methane makes up the majority of the volume—typically about 85–95% by total gas volume. The remaining 5–15% consists of other hydrocarbons such as ethane, propane, and butane, plus non-hydrocarbon gases like carbon dioxide and nitrogen. The exact makeup varies by source and processing, but 85–95% methane reflects the common composition range for pipeline-quality gas. Ranges like 70% or 60–70% would indicate substantial other gases, while 95–99% would be unusually pure for typical pipeline gas.

## 9. Which statement about compression of natural gas is true?

- A. It decreases pressure and density
- B. It increases only pressure
- C. It increases only density
- D. It increases both pressure and density**

Compression reduces the gas's volume, so the gas atoms are forced closer together. With the same amount of gas, squeezing it into a smaller space raises its pressure and also increases its density (mass per unit volume). Temperature can rise during compression, which can boost pressure further, and density still goes up because volume is smaller while mass stays the same. So the statement that both pressure and density increase is the best fit for what happens when natural gas is compressed. The other options aren't correct because compression does not reduce pressure, and it does not increase density without also increasing pressure.

**10. What is the primary factor influencing how gas travels through the ground?**

**A. Soil conditions**

**B. Temperature**

**C. Humidity**

**D. Atmospheric pressure**

*Gas moving through the ground is governed primarily by the soil's ability to transmit it, which comes down to soil conditions like porosity, permeability, texture, moisture content, and how the soil is layered. If the soil has many interconnected pores and isn't compacted or waterlogged, gas can travel more freely. In contrast, tight, clay-rich, or water-saturated soils restrict flow and slow or trap gas as it moves. Other factors can tweak how fast or in what way gas moves, but they don't set the main path as strongly. Temperature can change gas properties a bit, affecting diffusion and viscosity, but a permeable soil with open pathways will still let gas move more readily. Humidity affects moisture levels, which in turn influence porosity and diffusion, yet the underlying soil structure remains the dominant control. Atmospheric pressure can create driving forces, but again, the soil's permeability and moisture determine how readily gas can move through the ground. So, the primary factor is the soil conditions.*

SAMPLE

## 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](mailto:hello@examzify.com).

Or visit your dedicated course page for more study tools and resources:

<https://characteristicsofnaturalgas.examzify.com>

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

SAMPLE