

EDMONTON FIRE RESCUE SERVICES (EFRS) 159 PART 1 PRACTICE EXAM (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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

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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. Release of contents; Container breaches is most closely described by which event?**
 - A. Detonation
 - B. Puncture
 - C. Runaway cracking
 - D. Disintegration
- 2. What is the length of the Pump line in TRT rope inventories?**
 - A. 100m
 - B. 50m
 - C. 150m
 - D. 200m
- 3. For calibration gas mention, which gas is listed as a calibration gas?**
 - A. Pentane
 - B. Argon
 - C. Nitrogen
 - D. Helium
- 4. Secondary searches are performed when?**
 - A. During the initial attack on the fire
 - B. After the primary search is complete and the fire is under control
 - C. Only after firefighters leave the scene
 - D. After fire is under control and primary is complete
- 5. Which item is listed as a key to effective TIC operation?**
 - A. Orientation
 - B. ICO
 - C. Interpretation
 - D. Communication

- 6. According to the 5-10-20 air bag rule, how far should you be from the steering wheel?**
- A. 5 inches
 - B. 10 inches
 - C. 20 inches
 - D. 30 inches
- 7. Which of the following is a branch of EFRS?**
- A. Public Relations
 - B. Operations and Training
 - C. Finance
 - D. Logistics
- 8. Which device is used to initiate a fire alarm manually?**
- A. Manual Pull Stations
 - B. Fixed temperature heat detectors
 - C. Rate of rise
 - D. Smoke detector
- 9. Which of the following is a type of ice?**
- A. Frazil
 - B. Wind
 - C. Go
 - D. Thermal Crack
- 10. Which of the following does not contribute to ice strength?**
- A. Thickness
 - B. Wind
 - C. Water presence
 - D. Anchor

Answers

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

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Explanations

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1. Release of contents; Container breaches is most closely described by which event?

- A. Detonation
- B. Puncture**
- C. Runaway cracking
- D. Disintegration

The main idea is how a container loses its contents when its integrity is breached. A puncture is a hole in the container that directly allows contents to escape under pressure, so it best matches a breach leading to release. Detonation implies a violent explosion with rapid energy release and destruction, not just a breach for leaking contents. Runaway cracking describes fast crack growth, which can lead to failure but isn't the specific "breach" event. Disintegration means breaking apart into pieces, which can cause release but is a broader, more complete failure than a simple breach. So a puncture is the most precise descriptor for release through container breach.

2. What is the length of the Pump line in TRT rope inventories?

- A. 100m**
- B. 50m
- C. 150m
- D. 200m

In TRT rope inventories, the pump line is standardized at 100 meters because this length hits a practical balance between reach and manageability. A 100-meter coil is long enough to reach a pump or water source in most urban rescue scenarios without needing to splice together multiple lengths, which can introduce friction points and slow down deployment. It also keeps the rope easier to handle and control under load, reducing tangling and overall setup time. If more length is needed, you can supplement with additional rope or other lines, but the 100-meter pump line covers common missions efficiently. Shorter lengths would require more splicing or multiple reels, while much longer lengths add unnecessary weight and complexity for typical TRT operations.

3. For calibration gas mention, which gas is listed as a calibration gas?

- A. Pentane**
- B. Argon
- C. Nitrogen
- D. Helium

Calibrating a gas detector means using a gas with a known concentration to set or verify the instrument's response. For detectors that measure hydrocarbons or volatile organic compounds, a hydrocarbon calibration gas is used so the sensor shows an accurate signal when exposed to similar vapors. Pentane fits this role because it's a simple hydrocarbon with a well-defined concentration in a calibration mix, providing a reliable, repeatable reference for adjusting the detector's readings. Inert gases like argon, nitrogen, and helium don't produce a hydrocarbon signal, so they aren't used to calibrate hydrocarbon sensors (though they may be used for purging or zeroing in some setups). That's why pentane is listed as the calibration gas.

4. Secondary searches are performed when?

- A. During the initial attack on the fire
- B. After the primary search is complete and the fire is under control
- C. Only after firefighters leave the scene
- D. After fire is under control and primary is complete**

Secondary searches are a follow-up check to ensure nothing was missed after the immediate life-safety tasks are done. They're performed once the fire is under control and the primary search for occupants is complete. At that point conditions are safer and crews can thoroughly verify that no occupants remain and that there are no hidden pockets of fire or other hazards. Conducting the secondary search earlier would place crews at unnecessary risk during active fire, and waiting until crews leave would miss the chance to verify safety on scene. So, the best timing is after the fire is under control and the primary search is finished.

5. Which item is listed as a key to effective TIC operation?

- A. Orientation
- B. ICO**
- C. Interpretation
- D. Communication

Effective TIC use hinges on having a defined role that coordinates and communicates what the camera shows. The Incident Communications Officer (ICO) is the person who handles TIC information flow, making sure findings are relayed clearly to the incident commander and to the crew in real time. This coordination keeps everyone aligned, helps translate heat signatures and hazy imagery into actionable guidance, and ensures updates are shared as conditions change. Without this centralized, clear communication, even accurate orientation, interpretation, and individual communications can become fragmented and slow the decision-making process. So the ICO is listed as the key because it ties the TIC data into the team's actions and safety decisions.

6. According to the 5-10-20 air bag rule, how far should you be from the steering wheel?

- A. 5 inches
- B. 10 inches**
- C. 20 inches
- D. 30 inches

Airbags deploy with very rapid and forceful inflation, so you need enough distance from the steering wheel to avoid being struck by the bag as it deploys. Keeping about ten inches between your chest/face and the steering wheel allows the airbag to open in front of you rather than into you, reducing the risk of facial, eye, neck, or chest injuries. It also helps you maintain control and visibility. If you sit closer than that, injury risk increases; sitting a lot farther away isn't necessary for protection and can hinder control. So, ten inches is the recommended distance.

7. Which of the following is a branch of EFRS?

- A. Public Relations
- B. Operations and Training**
- C. Finance
- D. Logistics

EFRS is organized into branches that cover different responsibilities, and the one dedicated to hands-on emergency response and training crews is Operations and Training. This branch handles actual incident response—fire suppression, rescue, and medical calls—and runs the training programs that keep firefighters proficient and prepared for diverse scenarios. Public Relations focuses on community outreach and communications, Finance deals with budgeting and financial controls, and Logistics supports equipment and supplies. While these areas are essential, they are separate support functions from the branch that directly conducts and trains for emergency responses. So, Operations and Training is the branch aligned with the department's frontline work.

8. Which device is used to initiate a fire alarm manually?

- A. Manual Pull Stations**
- B. Fixed temperature heat detectors
- C. Rate of rise
- D. Smoke detector

Initiating a fire alarm manually relies on a device designed for occupant action. Manual Pull Stations are placed near exits and require a person to pull a handle or lever to send a signal to the fire alarm control panel. This action triggers alarms throughout the building and can notify responders, even if automatic detectors haven't yet activated. The other options are all automatic devices: fixed temperature heat detectors respond when the ambient temperature hits a set point, rate-of-rise detectors trigger on rapid temperature increases, and smoke detectors react to airborne smoke. So, the manual pull station is the device you use to manually initiate the alarm.

9. Which of the following is a type of ice?

- A. Frazil**
- B. Wind
- C. Go
- D. Thermal Crack

Frazil ice forms in cold, turbulent water as tiny ice crystals. In rivers or fast-moving sections of lakes, water can become supercooled and churned, causing slender crystals to develop and float. These crystals cluster into frazil ice, an early stage of ice formation before a solid, continuous sheet forms. It helps explain why this is considered a type of ice. The other options aren't ice types: wind is a force acting on ice, not a form of ice itself; "go" isn't a recognized ice type; a thermal crack is a crack that develops in ice due to temperature changes, not a type of ice.

10. Which of the following does not contribute to ice strength?

- A. Thickness
- B. Wind
- C. Water presence
- D. Anchor**

Ice strength is about the ice's ability to carry loads, which depends on material and environmental conditions. Thicker ice is generally stronger because there's more material to resist bending and fracture. Wind adds dynamic loads through gusts and waves, creating stresses that can crack or bend the ice. Water presence—whether unfrozen gaps, slush, or brine pockets—weakens ice by reducing its rigidity and increasing the likelihood of crack propagation. An anchor, however, is an external device used to attach to the ice; it does not increase the ice's inherent strength. It may alter how loads are applied locally, but it doesn't make the ice itself stronger.

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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://efrs159part1.examzify.com>

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

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