Edmonton Fire Rescue Services (EFRS) 159 Part 1 Practice Exam (Sample)

Study Guide

Everything you need from our exam experts!

Table of Contents

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 specified air pressure for Paratech airbags?

A. 50 psi

B. 100 psi

C. 150 psi

D. 200 psi

2. Which standpipe subsection describes a system that automatically fills a dry standpipe with water upon activation?

A. Automatic dry

B. Automatic wet

C. Semi automatic dry

D. Manual dry

3. In the Illuminating Gases section, which gas is listed?

A. Acetylene

B. Carbon Monoxide

C. Nitrogen

D. Neon

4. Elevation head pressure is 10 kPa per meter above the pump; what is the equivalent pressure per floor?

A. 25 kPa

B. 40 kPa

C. 35 kPa

D. 20 kPa

5. Which term denotes the amount of fuel present in a fire scenario?

A. Fuel Type

B. Fuel Load

C. Ambient conditions

D. Ventilation

6. Contamination through PPE methods is described by which term?

A. Permeation

B. Penetration

C. Degradation

D. Absorption

7. Which of the following is a defensive technique?

A. Deluge

B. Absorption

C. Evacuation

D. Isolation

8. Which model is described as a Rotary Cutoff Saw?

A. Stihl 360 - 16\" carbide tipped

B. Stihl 460RS - 20\" tungsten carbide and cobalt tip

C. Rotary Cutoff Saw - Desert Diamond Industries 12\"

D. Stihl 024 - 12\"

9. Which model is a Stihl saw with a carbide tipped blade?

A. Rotary Cutoff Saw - Desert Diamond Industries 12\"

B. Stihl 360 - 16\" carbide tipped

C. Stihl 460RS - 20\" tungsten carbide and cobalt tip

D. Stihl 024 - 12\"

10. Which of the following is a main roof type?

A. Dome

B. Gable

C. Flat

D. Arched

Answers

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

Explanations

1. What is the specified air pressure for Paratech airbags?

A. 50 psi

B. 100 psi

C. 150 psi

D. 200 psi

Paratech airbags are designed with a specific maximum inflation pressure to ensure safe lifting and stabilization. The specified air pressure for these airbags is 150 psi. This rating comes from the bag's construction and the inflator system, providing predictable lift while keeping the bladder and seams within their design limits. Pushing beyond 150 psi risks bag failure or loss of control, while inflating far below this pressure generally won't achieve the necessary lift for most rescue scenarios. Use a regulator and gauge that keep the system at or below 150 psi, and monitor the load during inflation. The other pressures are either too low to provide reliable lift or exceed the bag's rated maximum.

2. Which standpipe subsection describes a system that automatically fills a dry standpipe with water upon activation?

A. Automatic dry

B. Automatic wet

C. Semi automatic dry

D. Manual dry

Standpipe systems can be dry or wet, and the way water is brought into the system matters. An automatic dry standpipe is normally empty but is designed to fill with water automatically when the system is activated, such as when a discharge valve at a standpipe outlet is opened. This means water is quickly delivered to the connected outlets without someone having to manually charge the lines. It contrasts with manual dry, where a person must manually introduce water into the system, and with wet, where water is already present in the pipes at all times. Therefore, the system described—automatically filling with water upon activation—aligns with an automatic dry standpipe.

3. In the Illuminating Gases section, which gas is listed?

A. Acetylene

B. Carbon Monoxide

C. Nitrogen

D. Neon

Acetylene is listed because it was historically used as a lighting gas due to its bright, luminous flame. It was commonly produced from calcium carbide and water and used in portable lamps and mine lighting, making it a classic example of an illuminating gas. Carbon monoxide is known for toxicity and is not used for illumination. Nitrogen is inert and does not burn or glow. Neon is used in modern lighting, but in the Illuminating Gases section this topic centers on gases traditionally used to provide light, with acetylene as the primary example. So the gas described in that section is acetylene.

4. Elevation head pressure is 10 kPa per meter above the pump; what is the equivalent pressure per floor?

A. 25 kPa

B. 40 kPa

C. 35 kPa

D. 20 kPa

Elevation head pressure converts height into pressure: for every meter of elevation, you gain 10 kPa. A standard floor-to-floor height used in many fire-rescue calculations is 3.5 meters. Multiply 3.5 meters by 10 kPa per meter and you get 35 kPa per floor. So the equivalent pressure per floor is 35 kPa. If the floor were only 2.5 meters, you'd have 25 kPa; at 4 meters, 40 kPa. The 3.5 m per floor assumption gives the 35 kPa result.

5. Which term denotes the amount of fuel present in a fire scenario?

A. Fuel Type

B. Fuel Load

C. Ambient conditions

D. Ventilation

Fuel load is the amount of fuel present in a fire scenario. It covers the quantity and potential energy of all combustible materials in the space—furniture, textiles, structural components, stored fuels, and similar fuels that could burn. This amount directly affects how much heat can be released, how quickly a fire can grow, and how long it can sustain itself. It's different from the material type of the fuel, which describes what the fuel is, and from ambient conditions or ventilation, which influence how the fire behaves but do not describe how much fuel is available. For example, a room with many furnishings and construction materials has a higher fuel load than a sparsely furnished room, leading to a more severe fire potential.

6. Contamination through PPE methods is described by which term?

A. Permeation

B. Penetration

C. Degradation

D. Absorption

Contamination through PPE materials is described by permeation. Permeation is the process by which a chemical moves through an intact barrier at the molecular level: it sorbs into the material, diffuses through it, and emerges on the other side. This is what happens when a hazardous chemical passes through gloves or other protective gear during exposure, and it's typically characterized by breakthrough time and permeation rate. Penetration would involve the contaminant getting through defects, seams, or pores in the barrier, not the normal passage through the material itself. Degradation refers to the breakdown or damage of the material from chemical attack. Absorption is uptake into the material but does not necessarily imply movement all the way through to the other side.

7. Which of the following is a defensive technique?

A. Deluge

B. Absorption

C. Evacuation

D. Isolation

In firefighting, defensive techniques are actions taken from outside the structure to control the fire, protect exposures, and keep firefighters safe. Absorption refers to cooling by soaking up heat energy, primarily with water. When water absorbs heat, it lowers the temperature of fuels and the surrounding gases, reducing the heat release and slowing or stopping the fire's growth. This exterior cooling is a hallmark of a defensive approach: you're operating from outside to keep the situation under control and prevent the fire from advancing or re-igniting, rather than forcing an interior attack. Deluge can be part of an exterior effort to knock down flames but isn't inherently the defining defensive concept. Evacuation is a life-safety action, not a firefighting technique used to control the fire itself. Isolation aims to limit fire spread by separating compartments or shutting ventilation, which is defensible, but the term absorption specifically emphasizes cooling and heat absorption, aligning best with the defensive objective.

8. Which model is described as a Rotary Cutoff Saw?

A. Stihl 360 - 16\" carbide tipped

B. Stihl 460RS - 20\" tungsten carbide and cobalt tip

C. Rotary Cutoff Saw - Desert Diamond Industries 12\"

D. Stihl 024 - 12\"

Recognizing tool types by their descriptions. A Rotary Cutoff Saw is a metal-cutting power tool that uses a circular abrasive or carbide wheel to slice through metal and other hard materials, rather than cutting wood with a chain. In the options, the Desert Diamond Industries model is explicitly labeled as a Rotary Cutoff Saw with a 12-inch wheel, which matches this description exactly, making it the best choice. The remaining options are chain saws from Stihl, intended for wood cutting with bars and chains, so they don't fit the Rotary Cutoff Saw category. In practice, firefighters use Rotary Cutoff Saws for rapid metal cuts in rescue or scene stabilization, and the 12-inch size indicates the blade diameter you'd expect for a compact, portable cutoff saw. Always observe safety protocols and verify tool specs before operation.

9. Which model is a Stihl saw with a carbide tipped blade?

A. Rotary Cutoff Saw - Desert Diamond Industries 12\"

B. Stihl 360 - 16\" carbide tipped

C. Stihl 460RS - 20\" tungsten carbide and cobalt tip

D. Stihl 024 - 12\"

Carbide tipped blades have carbide inserts on the teeth to resist wear, giving longer life when cutting hard materials. Among the options, the Stihl 360 with a 16" carbide tipped blade is the one that explicitly describes the blade as carbide tipped, making it the best fit. The other options either aren't Stihl models or don't specify a carbide tipped blade (and one mentions a different tip composition). So the Stihl 360 is the correct choice.

10. Which of the following is a main roof type?

A. Dome

B. Gable

C. Flat

D. Arched

Roof types are categorized by the overall shape of the roof surface. A flat roof is the main roof type because it represents a broad, nearly horizontal roof plane that defines many modern and commercial buildings. It stands out as a primary classification, distinct from curved forms like domes or arches, which are specialized designs, and from pitched forms like gable roofs, which fall under a different category of roof shapes. In many building classifications and exam contexts, flat is treated as the fundamental or default roof type among the options, making it the best choice here.

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!