

AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF) END OF COURSE PRACTICE TEST (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

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- 1. Which combination of factors should guide the decision to deploy an aerial device for rescue?**
 - A. Time of day, traffic, and equipment color.
 - B. Weather forecast for the following week.
 - C. Occupant location, reach requirements, and structural safety conditions.
 - D. Number of firefighters present only.
- 2. Which of the following is a low-energy foam proportioning system installed on ARFF apparatus?**
 - A. Direct-injection
 - B. Balanced pressure
 - C. Venturi
 - D. Eductor
- 3. Which action best helps prevent cross-exposure when dealing with contaminated PPE?**
 - A. Dispose of all gear without decontamination.
 - B. Doff in proper order, and decontaminate as required, and store gear separately.
 - C. Keep contaminated gear with clean gear for efficiency.
 - D. Reuse contaminated PPE after a simple wipe.
- 4. What is a key feature of balanced pressure foam proportioning systems regarding water intake pressure?**
 - A. There is a water intake pressure limitation
 - B. Water intake pressure is unlimited
 - C. They require compressed air
 - D. They discharge foam only from a single outlet
- 5. Which factors determine when to deploy an aerial device for rescue?**
 - A. Weather only.
 - B. Fire department budget and response time.
 - C. Color of equipment and uniform.
 - D. Occupant location, reach requirements, and structural safety conditions.

- 6. Which signs indicate a potential fuel spill near storm drains?**
- A. Fuel odor only.
 - B. No signs at all.
 - C. Sheen or color in water only.
 - D. Fuel odor, sheen or color in water, and visible fuel on surface or ground near drainage.
- 7. Which of the following is a low-energy foam proportioning system?**
- A. Balanced Pressure
 - B. High-Pressure Foam
 - C. Gravity-fed Direct Injection
 - D. Compressed Air
- 8. Name two types of extinguishing agents used in ARFF besides water.**
- A. Foam concentrates and dry chemical powders
 - B. Sand and gravel
 - C. Steam and fog
 - D. Carbon dioxide and helium
- 9. What is the role of the defensive attack in ARFF?**
- A. Enter interior immediately.
 - B. Focus on ventilation only.
 - C. Abandon attack and wait outside.
 - D. Protect exposures and avoid interior entry until conditions improve.
- 10. Fuel, oil, and mileage records should be updated according to what guidance?**
- A. Manufacturer
 - B. The airport authority
 - C. As determined by the authority having jurisdiction
 - D. According to the operator's preference

Answers

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

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Explanations

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1. Which combination of factors should guide the decision to deploy an aerial device for rescue?

- A. Time of day, traffic, and equipment color.
- B. Weather forecast for the following week.
- C. Occupant location, reach requirements, and structural safety conditions.**
- D. Number of firefighters present only.

Deploying an aerial device is guided by three practical factors: where the occupants are located, how far and high the device must reach to reach them, and whether the structure or scene can safely support the operation. Knowing occupant location helps determine if rescue from outside is necessary or if access through the interior is blocked, making the aerial the fastest and safest option. Reach requirements ensure the platform can get to the target area—accounting for vertical height, reach distance, and alignment with the rescue point—without overextending or creating hazards. Structural safety conditions cover the integrity of the building or vehicle, potential collapsing elements, and other hazards like wind or energized lines; if the area is unsafe or the device cannot be positioned securely, deployment becomes a high-risk move and alternative tactics must be considered. While factors such as time of day, traffic, or even the color of equipment might influence other aspects of operations, they do not determine the feasibility or necessity of an aerial rescue as directly as occupant location, reach capability, and structural safety do.

2. Which of the following is a low-energy foam proportioning system installed on ARFF apparatus?

- A. Direct-injection**
- B. Balanced pressure
- C. Venturi
- D. Eductor

Foam proportioning systems on ARFF apparatus vary in how they mix foam concentrate with water, and the amount of energy required to do that. The direct-injection approach is a low-energy method because it meters the foam concentrate and injects it directly into the water stream—typically at the pump discharge—so the mixing happens with the pump's own pressure and a controlled injection point. There's no need to create suction or rely on high-velocity water through a constricted nozzle to pull the concentrate in, which is what happens with venturi or eductor-based systems. Those devices require higher flow and pressure to entrain the concentrate, making them more energy-demanding. So, direct-injection stands out as the straightforward, low-energy option for foam proportioning on ARFF rigs, providing reliable mixing with less energy and mechanical complexity.

3. Which action best helps prevent cross-exposure when dealing with contaminated PPE?

- A. Dispose of all gear without decontamination.
- B. Doff in proper order, and decontaminate as required, and store gear separately.**
- C. Keep contaminated gear with clean gear for efficiency.
- D. Reuse contaminated PPE after a simple wipe.

Preventing cross-exposure comes from controlling how you handle PPE from removal through storage. The best approach is to doff in the proper order to minimize self-contamination, decontaminate as required to remove residual contaminants, and store gear separately so contaminated equipment doesn't touch clean gear or surfaces. Doffing in the correct sequence reduces the chance that contaminants on gloves or surfaces will spread to your skin, clothing, or other PPE during removal. Decontaminating as needed helps remove contaminants that could be transferred later, even after removal. Storing gear separately ensures that any lingering contamination stays isolated, preventing contact with clean PPE or the work environment. Disposing of all gear without decontamination wastes protective equipment and leaves a residual risk of exposure. Keeping contaminated gear with clean gear allows cross-contact, and simply wiping PPE and reusing it often isn't enough to remove all contaminants.

4. What is a key feature of balanced pressure foam proportioning systems regarding water intake pressure?

- A. There is a water intake pressure limitation
- B. Water intake pressure is unlimited**
- C. They require compressed air
- D. They discharge foam only from a single outlet

In a balanced pressure foam proportioning system, the foam concentrate is added to the water stream in a way that keeps the foam-to-water ratio constant no matter what the incoming water pressure is. The system equalizes pressures on the water side and the foam concentrate side, so fluctuations in water supply pressure don't change how much concentrate is drawn into the mix. That's why water intake pressure isn't a limiting factor—the proportioning remains stable across a wide range of pressures within the system's design. This is particularly useful in ARFF operations because water sources and hydrant pressures can vary a lot, yet you still get a consistent foam solution. The other options aren't defining features: the system isn't limited by a fixed water pressure, it doesn't require compressed air to the proportioning process, and it isn't restricted to a single foam outlet—the design supports multiple discharge points.

5. Which factors determine when to deploy an aerial device for rescue?

- A. Weather only.
- B. Fire department budget and response time.
- C. Color of equipment and uniform.
- D. Occupant location, reach requirements, and structural safety conditions.**

The key factors guiding when to deploy an aerial device for rescue are where the occupants are, how far and high you must reach, and whether the scene and structure can safely support the operation. Occupant location matters because you need to know exactly where people are to determine if they can be reached from an exterior platform. If occupants are on upper floors or in areas not accessible by ground crews, an aerial device may be necessary to reach them quickly and safely. Reach requirements are about the needed vertical and horizontal reach to reach the occupants and perform a safe transfer or rescue. You have to match the device's maximum working height and outreach with the target location and ensure you can reach without compromising stability or safety. Structural safety conditions focus on whether the structure, ground, and environment can withstand the operation. This includes wind limits, fire conditions, potential collapse, electrical hazards, and the stability of the surface supporting the apparatus. If any of these factors render the operation unsafe, deployment should be delayed or alternative methods used. Weather, budget, or appearance alone don't determine feasibility. Weather influences safety and performance, but it's part of the overall safety assessment rather than the sole determinant. Budgets and equipment color don't affect the ability to reach or safely perform a rescue. So, the decision hinges on occupant location, reach requirements, and structural safety conditions.

6. Which signs indicate a potential fuel spill near storm drains?

- A. Fuel odor only.
- B. No signs at all.
- C. Sheen or color in water only.
- D. Fuel odor, sheen or color in water, and visible fuel on surface or ground near drainage.**

Recognizing multiple indicators of a fuel spill near storm drains is essential. When there's a spill, you may notice several signs, not just one. A fuel odor signals volatile hydrocarbons present in the area. A sheen on the water surface indicates a petroleum layer spreading on the liquid, which can happen even if the odor isn't strong. A color change in the water can point to contamination, sometimes from dyed fuels or other hydrocarbons. And seeing actual fuel on the surface or on the ground near a drainage inlet is a clear, direct sign that a spill is occurring or has occurred. Because spills can present in any combination of these cues, the most comprehensive and reliable indication is to observe all of them together—odor, sheen or color in water, and visible fuel near drainage. The other scenarios miss one or more signs and could delay identifying a spill or triggering the proper response. If you observe any of these signs, treat it as a potential spill and follow your facility's spill-reporting and containment procedures immediately.

7. Which of the following is a low-energy foam proportioning system?

- A. Balanced Pressure**
- B. High-Pressure Foam
- C. Gravity-fed Direct Injection
- D. Compressed Air

The main idea is that low-energy foam proportioning relies on keeping the water and foam concentrate at similar pressures so the mix can be produced without large energy losses. Balanced pressure proportioning achieves this by using a valve arrangement that equalizes the supply pressures of water and concentrate, so the correct foam-to-water ratio is maintained across a range of discharge pressures. This approach minimizes the energy needed to draw and mix the concentrate, making it reliable and efficient for ARFF operations. High-energy foam systems depend on large pressure differentials or eduction devices to pull concentrate into the water stream, which requires more energy and results in heavier gear and more potential for pressure fluctuations. Gravity-fed direct injection can struggle to maintain a constant, accurate proportioning as discharge pressures change, because it relies on height differences and gravity rather than balanced pressures. Compressed air is used to pressurize systems or assist certain delivery methods, but by itself it isn't a foam proportioning method that defines low-energy operation.

8. Name two types of extinguishing agents used in ARFF besides water.

- A. Foam concentrates and dry chemical powders**
- B. Sand and gravel
- C. Steam and fog
- D. Carbon dioxide and helium

Foam concentrates and dry chemical powders are two extinguishing agents commonly used in ARFF besides water. Foam concentrates mix with water to create a foamy layer that blankets and cools the fuel, separating the fuel from the air and helping to suppress hydrocarbon fires such as jet fuel. Dry chemical powders act by interrupting the chemical reactions occurring in the flame and by forming a crust that helps isolate the fuel from heat, making them effective on both liquid fuel fires and electrical fires. Sand and gravel aren't extinguishing agents and can hinder firefighting efforts or contaminate fuel systems. Steam and fog refer to water deployment methods rather than separate agents. Carbon dioxide can be used for small, enclosed spaces but is not practical for large aircraft fires and poses oxygen displacement risks; helium has no extinguishing properties.

9. What is the role of the defensive attack in ARFF?

- A. Enter interior immediately.
- B. Focus on ventilation only.
- C. Abandon attack and wait outside.
- D. Protect exposures and avoid interior entry until conditions improve.**

Defensive attack in ARFF means fighting the fire from the outside to protect exposures and prevent spread, rather than rushing to enter the burning aircraft. This approach is used when interior conditions are too hazardous—extreme heat, dense smoke, or risk of collapse—so the priority becomes keeping adjacent aircraft, hangars, and fuel sources safe. Exterior water application and barrier protection help contain the fire and reduce danger to responders and assets while conditions are stabilized. Interior entry is avoided until conditions improve and a safe, effective interior operation can be conducted. The other options describe actions that would push for interior entry too soon, focus only on ventilation without addressing exposure protection, or imply stopping suppression, which doesn't fit the defensive mindset.

10. Fuel, oil, and mileage records should be updated according to what guidance?

- A. Manufacturer
- B. The airport authority
- C. As determined by the authority having jurisdiction**
- D. According to the operator's preference

Keeping fuel, oil, and mileage records is governed by the authority having jurisdiction. This body sets what must be tracked, how often records are updated, and how long they're kept, so following their guidance ensures records are complete, current, and defensible during audits and inspections. Manufacturer guidance covers technical specs and maintenance intervals, not the formal regulatory recordkeeping requirements. The airport authority can be the AHJ in a given location, but the key is to follow the guidance of the authority having jurisdiction. Relying on operator preference can lead to gaps and potential noncompliance.

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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://arffeoc.examzify.com>

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

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