

USAF Mobile Water Supply (MWS) Fire Practice Test (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. Why should piping, pump, and booster lines be drained before storage?**
 - A. To prevent freezing**
 - B. To reduce wear**
 - C. To increase pressure**
 - D. To prevent rusting**

- 2. NFPA 1911 requires a MWS apparatus equipped with a fire pump to be service tested:**
 - A. Monthly**
 - B. At Least once a year or when it has undergone extensive pump repairs**
 - C. Every two years**
 - D. Only after major overhaul**

- 3. In drafting terminology, LIFT is defined as what distance?**
 - A. The vertical distance from the surface of the water to the middle of the intake.**
 - B. The horizontal distance from the surface of the water to the middle of the intake.**
 - C. The vertical distance from the surface of the water to the pump discharge.**
 - D. The vertical distance from the surface of the water to the edge of the intake.**

- 4. What size is the standard direct fill connection on the MWS apparatus?**
 - A. 4 Inches**
 - B. 2.5 Inches**
 - C. 6 Inches**
 - D. 3 Inches**

- 5. NFPA 1901 defines which standard?**
 - A. Standard for Fire Apparatus Equipment**
 - B. Standard for Automotive Fire Apparatus**
 - C. Guide for Fire Service Vehicles**
 - D. Standard for Fire Department Operations**

- 6. Which statement about static water sources is most accurate?**
- A. The static water source closest to the incident should always be used first.**
 - B. Static water sources may be used depending on availability.**
 - C. Distance to incident has no effect.**
 - D. Static sources cannot be used if hydrants are available.**
- 7. What is the minimum required intake pressure for an apparatus being resupplied?**
- A. 20 PSI**
 - B. 10 PSI**
 - C. 30 PSI**
 - D. 40 PSI**
- 8. What is the total flow rate for the MWS under the described shuttle conditions?**
- A. 215 gpm**
 - B. 260 gpm**
 - C. 280 gpm**
 - D. 245 gpm**
- 9. The most efficient way to operate a dump site is to use a water shuttle operation is to use a:**
- A. Portable water tank**
 - B. Direct Pumping from MWS**
 - C. Hydrant Connection**
 - D. Foam Proportioner**
- 10. What is the friction loss in 100 feet of 2 ½ inch hose flowing 400 gpm?**
- A. 16 PSI**
 - B. 32 PSI**
 - C. 48 PSI**
 - D. 64 PSI**

Answers

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

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Explanations

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1. Why should piping, pump, and booster lines be drained before storage?

- A. To prevent freezing**
- B. To reduce wear**
- C. To increase pressure**
- D. To prevent rusting**

Water left in piping, pumps, and booster lines can freeze when temperatures drop during storage. Ice expands, and that expansion inside pipes and fittings creates internal pressure that can crack, split, or burst components and damage seals or pump housings. Draining removes the water from these lines, so there's nothing to freeze and form ice plugs or cause damage. While minimizing moisture can help with corrosion over time, the immediate and primary reason for draining before storage is to prevent freezing. The other options don't address that freezing hazard directly—reducing wear isn't the main concern, draining doesn't raise pressure, and rust prevention is a longer-term issue.

2. NFPA 1911 requires a MWS apparatus equipped with a fire pump to be service tested:

- A. Monthly**
- B. At Least once a year or when it has undergone extensive pump repairs**
- C. Every two years**
- D. Only after major overhaul**

Regular service testing of a fire pump is done to verify that the pump can still deliver its rated performance under expected conditions, which is essential for reliability in emergencies. NFPA 1911 requires this service test to be performed at least once every year to catch wear, leaks, or calibration drift that could reduce flow or pressure. It also mandates a service test after extensive pump repairs because, after major work, the pump's hydraulic performance may be altered and needs re-verification to ensure it meets the required standards. This approach balances safety and practicality: annual testing keeps maintenance up-to-date without being overly burdensome, while testing after major repairs catches problems that could prevent the pump from delivering the necessary water flow during a fire.

3. In drafting terminology, LIFT is defined as what distance?

- A. The vertical distance from the surface of the water to the middle of the intake.**
- B. The horizontal distance from the surface of the water to the middle of the intake.**
- C. The vertical distance from the surface of the water to the pump discharge.**
- D. The vertical distance from the surface of the water to the edge of the intake.**

Lift in drafting is the vertical distance from the water surface down to the centerline of the intake. This measures how far water must be drawn up to reach the pump, which determines the suction head the pump must develop and affects priming and the risk of air entering the system. The other descriptions describe horizontal distance, distance to the pump discharge, or distance to the edge of the intake, which are not what lift represents.

4. What size is the standard direct fill connection on the MWS apparatus?

- A. 4 Inches**
- B. 2.5 Inches**
- C. 6 Inches**
- D. 3 Inches**

The main idea is that the fill inlet on the Mobile Water Supply apparatus is sized to move a large volume of water into the tank quickly, using hoses and adapters that are common in firefighting. Four inches is the standard size because it matches the common 4-inch hydrant supply hoses and fittings, allowing fast, smooth connections and high flow without needing special equipment. A smaller diameter, like 2.5 or 3 inches, would restrict flow and slow the fill noticeably, while a much larger size, like 6 inches, isn't the standard on this apparatus and would require different hoses and adapters. So the 4-inch direct fill connection provides a practical balance of fast fill rates and compatibility with standard equipment.

5. NFPA 1901 defines which standard?

- A. Standard for Fire Apparatus Equipment**
- B. Standard for Automotive Fire Apparatus**
- C. Guide for Fire Service Vehicles**
- D. Standard for Fire Department Operations**

The test is asking you to know what NFPA 1901 covers. NFPA 1901 defines the Standard for Automotive Fire Apparatus, meaning it sets the design, performance, and safety requirements for the vehicle itself—the motorized fire apparatus that fire departments use to respond to emergencies. This ensures that fire engines and similar apparatus from different manufacturers meet a common baseline for things like chassis, body construction, and pumping capabilities. The other options describe aspects that are not what NFPA 1901 governs. A standard for Fire Apparatus Equipment would pertain to the equipment carried on the vehicle rather than the vehicle itself. A Guide for Fire Service Vehicles would be a nonbinding guidance document, not a formal standard. A Standard for Fire Department Operations addresses procedures and tactics, not the vehicle's technical requirements. So the correct match is the Standard for Automotive Fire Apparatus.

6. Which statement about static water sources is most accurate?

- A. The static water source closest to the incident should always be used first.**
- B. Static water sources may be used depending on availability.**
- C. Distance to incident has no effect.**
- D. Static sources cannot be used if hydrants are available.**

The deciding factor is what water sources are actually available and capable of meeting the needed flow at the scene. Static water sources can be used when they are accessible and can deliver the required volume without compromising safety or equipment, so they aren't ruled out just because hydrants exist or because they aren't the closest option. In practice you weigh availability, distance, capacity, and system constraints to choose the most effective combination of sources. That's why this statement is the best: it recognizes that static sources may be used depending on what's available and feasible at the moment. The other ideas imply rigid rules—always use the nearest source, distance doesn't matter, or you can't use static sources if hydrants are present—that don't fit real-world operations where supply needs and conditions can vary.

7. What is the minimum required intake pressure for an apparatus being resupplied?

- A. 20 PSI**
- B. 10 PSI**
- C. 30 PSI**
- D. 40 PSI**

Maintaining a minimum intake pressure keeps the pump primed and able to draw water from the resupply source without pulling in air. When an apparatus is being resupplied from a Mobile Water Supply, a positive, steady intake pressure around 20 psi ensures the water column remains established through the pump and allows the engine to overcome line losses as it takes in water. If intake pressure drops too low, the pump can lose prime, air pockets form, and flow becomes inconsistent. Pressures higher than this minimum aren't required for the clean, reliable draw from the supply and can complicate coordination with the source. So the required minimum intake pressure is 20 psi.

8. What is the total flow rate for the MWS under the described shuttle conditions?

- A. 215 gpm**
- B. 260 gpm**
- C. 280 gpm**
- D. 245 gpm**

In shuttle operations, the total flow rate from the Mobile Water Supply is the sum of the discharge rates from all lines that are operating at once. When two lines are used together, you add their individual flows to get the overall delivery to the target. Here, the two active lines contribute about 120 gpm and 125 gpm, respectively, giving a combined total of 245 gpm. This reflects the actual water being delivered when both lines work in tandem under these shuttle conditions. The other numbers would only apply if a single line were used or if the individual line rates were different under the same setup, which isn't the scenario described.

9. The most efficient way to operate a dump site is to use a water shuttle operation is to use a:

- A. Portable water tank**
- B. Direct Pumping from MWS**
- C. Hydrant Connection**
- D. Foam Proportioner**

When you're running a dump site for a water shuttle, the goal is to keep the site supplied with minimal downtime for each tanker. A portable water tank acts as a movable reservoir placed near the dump area, so tanker trucks can quickly fill from it and resume pumping to the scene. This setup creates an efficient shuttle system: water is staged close to the action, reducing long pumping runs and time spent managing lines, and multiple tankers can operate in quick succession. Direct pumping from the MWS tied to a single source can be slower and less flexible, since it relies on the MWS being in position and maintaining supply along longer runs. Hydrant connections require a fixed infrastructure and aren't as portable for a remote dump site. A foam proportioner is used for mixing foam into water, not for providing the primary water supply to a dump site.

10. What is the friction loss in 100 feet of 2 ½ inch hose flowing 400 gpm?

- A. 16 PSI**
- B. 32 PSI**
- C. 48 PSI**
- D. 64 PSI**

Friction loss is the pressure drop caused by moving water through hose, and it grows with how much water you're sending and how long the hose is. In firefighting practice we use friction loss values from tables or calculators that show how many psi are lost per 100 feet for a given hose size and flow. For a 2 ½ inch hose, delivering 400 gpm, the friction loss is about 32 psi per 100 feet. Since the problem specifies 100 feet, the friction loss is 32 psi. If the hose were longer, you'd add more psi proportionally; and since friction loss increases with the square of the flow, increasing gpm would raise the loss quickly.

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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://usafmwsfire.examzify.com>

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

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