FIRE PUMP RUN 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

1. In pump calculations, what does PDP stand for?

A. Pressure Drop Parameter.

B. PUMP DELIVERY PRESSURE.

C. Pump Discharge Pressure.

D. Pneumatic Diffusion Pressure.

2. How can you prevent water hammer when opening discharge valves?

A. Open valves gradually, maintain consistent speed, and avoid sudden pressure changes.

B. Open valves quickly to establish flow quickly.

C. Increase throttle before opening any valve.

D. Open discharge lines in rapid succession with no sequencing.

3. Why is it important to inspect suction strainers?

A. Debris can block suction and cause cavitation or loss of prime.

B. Suction strainers influence only color of water

C. Suction strainers have no effect on priming

D. Strainers prevent cavitation

4. Which action best ensures personnel safety before advancing a deck gun into a potential structure fire?

A. Ensure the path is clear

B. Confirm personnel are clear of the stream

C. Select the appropriate nozzle setting

D. Establish a safe operating range

5. How should you respond to a significant drop in discharge pressure while maintaining throttle?

A. Ignore and continue to throttle up to compensate.

B. Check for air leaks, valve positions, clogged lines, or increased demand; investigate and correct sources of loss while maintaining safe operation.

C. Immediately shut down the pump.

D. Increase prime water to artificially raise pressure.

6. Which device indicates the total hours the engine has been running?

A. Hour meter

B. Engine running time meter

C. Tachometer

D. Fuel gauge

7. What is the purpose of a jockey pump in a fire protection system?

A. To provide primary firefighting water flow.

B. To measure system pressure.

C. To maintain system pressure and reduce cycling of the main fire pump when demand is low.

D. To bleed air from the system.

8. What is the purpose of the intake relief valve on some fire pump setups?

A. To regulate discharge flow to fixed rate

B. To prevent suction line cavitation by venting excess pressure or air on the suction side and maintaining prime

C. To vent exhaust from engine

D. To drain water when shutting down

9. Which statement correctly completes the requirement about the pump energy source and brake horsepower?

A. The energy source shall supply the starting horsepower

B. The energy source shall supply the rated horsepower

C. The energy source shall supply the peak horsepower

D. The energy source shall supply the necessary brake horsepower

10. What does governor do in a fire pump system?

A. It increases flow to the nozzle automatically.

B. It prevents the engine from operating above idle speed.

C. It automatically adjusts engine RPM to maintain targeted pump discharge pressure.

D. It switches between manual and automatic modes.

Answers

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

Explanations

1. In pump calculations, what does PDP stand for?

A. Pressure Drop Parameter.

B. PUMP DELIVERY PRESSURE.

C. Pump Discharge Pressure.

D. Pneumatic Diffusion Pressure.

In pump calculations, PDP refers to the pressure on the discharge side of the pump—the pressure the pump must develop to push water through the hose and appliances to the nozzle. This discharge pressure is what you compare against the required nozzle pressure after accounting for friction losses in hose and fittings and any elevation changes. The term is standard for describing the pressure the pump must produce at its outlet. The other options don't reflect the usual hydraulic term used in these calculations, so Pump Discharge Pressure is the best fit. For example, if the nozzle needs 100 psi and you're facing 40 psi of hose friction losses plus 10 psi of elevation head, the pump must deliver about 150 psi at discharge.

2. How can you prevent water hammer when opening discharge valves?

A. Open valves gradually, maintain consistent speed, and avoid sudden pressure changes.

B. Open valves quickly to establish flow quickly.

C. Increase throttle before opening any valve.

D. Open discharge lines in rapid succession with no sequencing.

Water hammer happens when a rapid change in flow velocity creates a sudden pressure surge in the piping. Opening discharge valves too quickly lets the water slam into the valve and downstream piping, causing shock waves that can damage equipment and joints. Prevent it by easing valve operation: open valves gradually and smoothly, so the flow ramps up rather than jumps to full speed. Keep the pump running at a steady speed to maintain a gentle, continuous increase in flow, avoiding abrupt throttle changes. If multiple discharge lines are involved, open them in a controlled sequence rather than all at once, so each line adds flow without creating a large simultaneous surge. In short, slow, controlled valve openings and coordinated sequencing minimize velocity spikes and protect the system from water hammer.

3. Why is it important to inspect suction strainers?

A. Debris can block suction and cause cavitation or loss of prime.

B. Suction strainers influence only color of water

C. Suction strainers have no effect on priming

D. Strainers prevent cavitation

Inspecting suction strainers matters because they keep debris out of the pump suction. If debris blocks the strainer, suction can be restricted, which can lead to loss of prime and reduced flow. A loss of prime means the pump can't stay fully filled with water, causing startup or running issues. The restricted flow and pressure drop can also create conditions that promote cavitation, which damages the pump. So the main reason to inspect is to remove debris, keep the suction path clear, and preserve prime to prevent flow problems that could lead to cavitation. Strainers don't inherently prevent cavitation by themselves—cavitation depends on pressure, vapor pressure, and overall system hydraulics—so saying they prevent cavitation outright isn't accurate.

4. Which action best ensures personnel safety before advancing a deck gun into a potential structure fire?

A. Ensure the path is clear

B. Confirm personnel are clear of the stream

C. Select the appropriate nozzle setting

D. Establish a safe operating range

Before moving a deck gun into a structure fire, the primary safety step is to verify that no personnel are in the path of the discharge. The high-velocity water stream can injure firefighters or knock them off balance, and anything in its line of fire can be struck unexpectedly as you adjust aim or reposition the gun. Establishing that the stream will not cross anyone's position directly protects crews in the vicinity and prevents serious injuries. While keeping the path clear, selecting the right nozzle setting and establishing a safe operating range are important for effectiveness and control, they don't address the immediate hazard of someone standing in the line of fire. If someone were in the stream's path, the other precautions wouldn't prevent an injury until they're moved out of the way.

5. How should you respond to a significant drop in discharge pressure while maintaining throttle?

A. Ignore and continue to throttle up to compensate.

B. Check for air leaks, valve positions, clogged lines, or increased demand; investigate and correct sources of loss while maintaining safe operation.

C. Immediately shut down the pump.

D. Increase prime water to artificially raise pressure.

When you see a significant drop in discharge pressure while you're holding the throttle, focus on finding and fixing the real source of the loss rather than trying to push harder. Systematic checks should include looking for air leaks in suction or discharge lines, valve positions that aren't fully open, clogged lines or filters, and any sudden increase in downstream demand. As you identify a source, correct it while keeping the pump operating within safe limits. This approach addresses the actual cause of the pressure drop, helps prevent equipment damage, and maintains safe operation. Masking the problem by increasing throttle can overstress the pump and piping, shutting down the pump isn't necessarily the right move unless there's a hazard, and simply adding prime water won't resolve a loss of pressure caused by leaks, blockages, or high demand.

6. Which device indicates the total hours the engine has been running?

A. Hour meter

B. Engine running time meter

C. Tachometer

D. Fuel gauge

The key idea is recognizing which instrument tracks actual engine usage time. The engine running time meter records the total hours the engine has been operating, starting when the engine begins running and continuing until it stops. This makes it the best match for indicating cumulative running time, which is important for maintenance and service intervals. A tachometer shows engine speed (RPM), not hours. A fuel gauge shows how much fuel remains. While an hour meter also tracks hours, the term that directly conveys running time aligns most closely with what the question describes.

7. What is the purpose of a jockey pump in a fire protection system?

A. To provide primary firefighting water flow.

B. To measure system pressure.

C. To maintain system pressure and reduce cycling of the main fire pump when demand is low.

D. To bleed air from the system.

Maintaining system pressure with a small, automatic pump is the main idea here. A jockey pump starts when the sprinkler system pressure drops below a set point and runs just enough to bring the pressure back up, so the larger main fire pump isn't started for every little drop in pressure. This keeps the system ready and pressurized during low-demand periods and greatly reduces unnecessary starts and stops of the main pump, cutting wear, energy use, and nuisance cycling. It's not intended to provide the primary firefighting flow—that's the job of the main fire pump—nor is it a pressure sensor, a gauge, or a device to bleed air from the system. The jockey pump serves specifically to maintain pressure and minimize main-pump cycling when demand is small.

8. What is the purpose of the intake relief valve on some fire pump setups?

A. To regulate discharge flow to fixed rate

B. To prevent suction line cavitation by venting excess pressure or air on the suction side and maintaining prime

C. To vent exhaust from engine

D. To drain water when shutting down

The key idea is keeping the suction side primed by venting air and preventing suction-side pressure issues. An intake relief valve opens to vent any trapped air or abnormal pressure on the suction line to the atmosphere. By releasing that air, the suction path can fill with water and stay primed, which prevents cavitation and loss of prime as the pump runs. It's not about controlling discharge flow, venting engine exhaust, or draining water when shutting down—those functions use different components.

9. Which statement correctly completes the requirement about the pump energy source and brake horsepower?

A. The energy source shall supply the starting horsepower

B. The energy source shall supply the rated horsepower

C. The energy source shall supply the peak horsepower

D. The energy source shall supply the necessary brake horsepower

The main idea is that the drive powering the pump must be able to deliver the actual power the pump needs at the shaft, not just a nominal or starting value. Brake horsepower represents the real horsepower that makes it through the drive to the pump, after accounting for losses in the motor and drive train. Because starting conditions and running under load can demand more torque than the pump's rated power, the energy source must be capable of supplying at least the necessary brake horsepower to start and sustain operation at the required performance. Starting horsepower alone might not ensure enough power once the pump is running, and rated horsepower is a nominal figure that may not reflect the real demand during start-up or heavy operation. Peak horsepower is not the standard metric for ensuring reliable, continuous performance. By requiring the necessary brake horsepower, you guarantee the drive can meet the true power needs of the pump during both starting and normal operation.

10. What does governor do in a fire pump system?

A. It increases flow to the nozzle automatically.

B. It prevents the engine from operating above idle speed.

C. It automatically adjusts engine RPM to maintain targeted pump discharge pressure.

D. It switches between manual and automatic modes.

In a fire pump system, the governor is the speed-control device that keeps the pump producing the desired discharge pressure by adjusting the engine RPM based on pressure readings. It uses feedback from the pump discharge pressure: when pressure tends to drop (more flow is needed), the governor increases engine speed to raise the pump head and restore the set pressure; when pressure is high, it reduces RPM to prevent overshoot. This automatic regulation centers on maintaining the targeted discharge pressure, not simply pushing more water to the nozzle or keeping the engine at idle, and it isn't just about switching modes.

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://firepumprun.examzify.com

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