

NFPA 20 FIRE PUMP CERTIFICATION PRACTICE EXAM (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

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THE FULL VERSION STUDY GUIDE**

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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. What information is typically found on a fire pump nameplate?**
 - A. The model name only.
 - B. The temperature rating.
 - C. The rpm, voltage, phase, and serial data.
 - D. Rated head and flow, rpm, motor/engine type, voltage, phase, and manufacturer/model serial data.
- 2. Which testing measure specifically confirms that the pump can deliver required pressure while maintaining flow through the system?**
 - A. Static testing verifies pressure without flow
 - B. Visual inspection
 - C. Dynamic testing verifies pressure and flow with pump operating
 - D. Electrical insulation test
- 3. What is the purpose of an alarm initiating device in NFPA 20 fire pump systems?**
 - A. To alert building personnel or the fire alarm system when the pump starts, stops, or fails.
 - B. To automatically start the pump under all conditions.
 - C. To measure discharge flow.
 - D. To regulate valve positions.
- 4. What group of devices governs starting and stopping of the fire pump driver and monitors the status of the pump unit?**
 - A. Pump Control Panel
 - B. Fire Pump Unit
 - C. Control Panel
 - D. Fire Pump Controller
- 5. Dust-Ignition-Proof Motor is a totally enclosed motor whose enclosure excludes ignitable amounts of dust or dust that might affect performance and will not permit arcs, sparks, or heat inside to ignite exterior dust.**
 - A. Dust-Ignition-Proof Motor
 - B. Dripproof Motor
 - C. Dripproof Guarded Motor
 - D. Explosion-Proof Motor

- 6. What is a likely consequence if the pump head is not sufficient to meet system demand?**
- A. The system experiences insufficient pressure.
 - B. The discharge line will automatically open a relief valve.
 - C. The pump will draw less current.
 - D. The system will self-prime.
- 7. Why is priming water important in a centrifugal fire pump per NFPA 20?**
- A. To fill the pump casing and remove air so the pump can develop rated head and flow
 - B. To lubricate bearings
 - C. To cool the motor
 - D. To balance the system
- 8. Which practice supports maintaining system integrity under fire conditions as per NFPA 20?**
- A. Proper interface with water supply and appropriate piping design.
 - B. Disconnecting the pump from power during operation.
 - C. Omitting pressure relief devices.
 - D. Using flexible hoses for all connections.
- 9. How does NFPA 20 address backflow prevention?**
- A. By mandating backflow prevention devices on all discharge lines regardless of demand.
 - B. By eliminating any backpressure in the system through automatic relief valves.
 - C. By prohibiting any connection to the public water supply.
 - D. By requiring proper interface with water supply and appropriate piping design to maintain system integrity.
- 10. Which pump type is described by having an end suction configuration in some piping layouts?**
- A. End Suction Pump
 - B. Fire Pump
 - C. Gear Pump
 - D. Horizontal Pump

Answers

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

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Explanations

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1. What information is typically found on a fire pump nameplate?

- A. The model name only.
- B. The temperature rating.
- C. The rpm, voltage, phase, and serial data.
- D. Rated head and flow, rpm, motor/engine type, voltage, phase, and manufacturer/model serial data.**

A fire pump nameplate is a quick-reference that provides the essential operating and identification data needed to select, install, and maintain the pump correctly. The best-fit information includes the rated head and flow, rpm, motor or engine type, voltage, phase, and manufacturer/model/serial data. Rated head and flow show what the pump is designed to deliver under design conditions, so you can verify it meets the system's demand. RPM indicates how fast the pump operates, which affects the hydraulic performance and compatibility with the drive. The motor or engine type tells you what drives the pump—electric motor or internal combustion engine—so you can plan the correct power source and controls. Voltage and phase specify the electrical supply required, ensuring proper wiring, protection, and coordination with other equipment. Manufacturer/model and serial data uniquely identify the unit, aiding part replacement, service history, warranty, and traceability. Temperature rating isn't a primary piece of data on the typical nameplate, and a model name alone doesn't provide the full set of operational and identification details needed.

2. Which testing measure specifically confirms that the pump can deliver required pressure while maintaining flow through the system?

- A. Static testing verifies pressure without flow
- B. Visual inspection
- C. Dynamic testing verifies pressure and flow with pump operating**
- D. Electrical insulation test

The ability to verify performance under actual operating conditions is what confirms the pump can deliver the required pressure while maintaining flow through the system. Static tests only check the pressure the pump can develop with no flow, so they don't show how the pump behaves once the system is circulating water. Visual inspection and electrical insulation tests don't assess hydraulic performance at all. Dynamic testing, on the other hand, runs the pump with the system in service and measures both discharge pressure and flow while the pump is operating. This demonstrates that the pump can meet the design pressure at the required flow and keep that flow through the piping, which is exactly what you need to confirm.

3. What is the purpose of an alarm initiating device in NFPA 20 fire pump systems?

- A. To alert building personnel or the fire alarm system when the pump starts, stops, or fails.**
- B. To automatically start the pump under all conditions.
- C. To measure discharge flow.
- D. To regulate valve positions.

An alarm initiating device in NFPA 20 is there to provide immediate notification of the fire pump's status to building personnel and the fire alarm system. When the pump starts, stops, or fails to start, this device sends a signal to the control panel or fire alarm system so occupants and responders are alerted and actions can be taken promptly. It is a signaling device that enhances situational awareness and coordination with the building's fire alarm, not a control that starts the pump, regulates valves, or measures discharge flow.

4. What group of devices governs starting and stopping of the fire pump driver and monitors the status of the pump unit?

- A. Pump Control Panel
- B. Fire Pump Unit
- C. Control Panel
- D. Fire Pump Controller**

The starting and stopping of the fire pump driver, along with monitoring the pump's status, are handled by the fire pump controller. This device accepts start signals from various sources (pressure switches, manual starts, or automatic controls), energizes or de-energizes the pump driver, and sequences the pump's operation while watching for run status and faults. It also communicates alarms or status to the fire alarm or building management system. The pump unit itself is the mechanical pump and driver, not the controller, so it doesn't manage start/stop logic. The term control panel is a general enclosure for electrical controls, but the specialized function of initiating, controlling, and monitoring the pump is performed by the fire pump controller.

5. Dust-Ignition-Proof Motor is a totally enclosed motor whose enclosure excludes ignitable amounts of dust or dust that might affect performance and will not permit arcs, sparks, or heat inside to ignite exterior dust.

- A. Dust-Ignition-Proof Motor**
- B. Dripproof Motor
- C. Dripproof Guarded Motor
- D. Explosion-Proof Motor

Dust-ignition-proof motors are designed for environments with ignitable dust. They have a totally enclosed housing that keeps dust out and prevents internal sources of heat, arcs, or sparks from igniting any dust outside the motor. That combination—excluding dust and preventing internal ignition sources—is what defines this rating, making it the correct description. Dripproof motors focus on preventing liquid water from entering the enclosure, not on preventing ignition by dust. Dripproof guarded motors add protective features but still aren't specifically about stopping dust ignition. Explosion-proof motors are built to contain internal explosions and prevent ignition of flammable gases or vapors outside the enclosure, which is a different hazard scenario than dust ignition in a dusty environment.

6. What is a likely consequence if the pump head is not sufficient to meet system demand?

- A. The system experiences insufficient pressure.**
- B. The discharge line will automatically open a relief valve.
- C. The pump will draw less current.
- D. The system will self-prime.

When the pump can't develop enough head to meet system demand, the pressure in the system drops below what's required. In a fire protection setup, that means the discharge pressure at sprinklers or standpipes won't reach the needed level to push water where it's needed, leaving parts of the system inadequately supplied. The other scenarios don't fit this situation: a relief valve opens only when pressure is too high, not when it's too low; self-priming is about getting the pump started rather than the steady pressure once running; and motor current isn't a reliable indicator of insufficient head, since current varies with load and can behave unpredictably.

7. Why is priming water important in a centrifugal fire pump per NFPA 20?

- A. To fill the pump casing and remove air so the pump can develop rated head and flow
- B. To lubricate bearings
- C. To cool the motor
- D. To balance the system**

Priming water is essential because a centrifugal fire pump must be filled with liquid to work correctly. The impeller transfers energy to the liquid to produce head and flow, but if air remains in the pump casing or the suction line, that air compresses instead of being moved by the impeller. Air pockets cause air binding and cavitation, so the pump cannot develop its rated head or deliver the required flow. Introducing priming water fills the pump and suction piping, removing air and creating a continuous liquid column from the source to the discharge. This enables the pump to reach and maintain the required pressure and flow when the fire protection system is in use. Priming water is not meant for lubricating bearings, cooling the motor, or balancing the system; those functions come from other design features and components. The main purpose here is to ensure the pump can develop the specified head and flow by eliminating air in the suction path.

8. Which practice supports maintaining system integrity under fire conditions as per NFPA 20?

- A. Proper interface with water supply and appropriate piping design.**
- B. Disconnecting the pump from power during operation.
- C. Omitting pressure relief devices.
- D. Using flexible hoses for all connections.

Maintaining system integrity under fire conditions starts with a solid connection to the water supply and piping that supports reliable pump operation. When the pump has a proper interface with the water source and the suction and discharge piping is designed correctly, the system keeps prime, maintains adequate suction pressure, and minimizes air entrainment and flow restrictions. This means the pump can deliver the needed water flow and pressure when demand spikes during a fire, and it helps prevent issues like cavitation, air pockets, or pressure fluctuations that could compromise performance. Disrupting power during operation would prevent the pump from delivering water, which defeats the purpose of the fire protection system. Leaving out pressure relief devices removes a critical safety feature and protection against overpressure. Using flexible hoses for all connections can introduce excessive movement, vibration, and potential leaks, reducing reliability in a high-demand, critical scenario.

9. How does NFPA 20 address backflow prevention?

- A. By mandating backflow prevention devices on all discharge lines regardless of demand.
- B. By eliminating any backpressure in the system through automatic relief valves.
- C. By prohibiting any connection to the public water supply.**
- D. By requiring proper interface with water supply and appropriate piping design to maintain system integrity.

Backflow prevention in NFPA 20 is about how the fire protection water supply is tied into the public water system and how the piping is arranged to keep water from flowing backward into the supply. The standard requires a proper interface with the water supply and sound piping design to maintain system integrity, so that any pressure changes from the fire pump don't create a path for potentially contaminated water to enter the potable supply. Where the AHJ or local water authority requires it, backflow prevention devices (such as check valves or backflow preventers) are installed at that interface to stop reverse flow. It isn't about putting backflow devices on every discharge line, and it isn't about eliminating backpressure with automatic relief valves. It also doesn't forbid connecting to the public water supply; instead, it governs how that connection is made and protected to prevent contamination.

10. Which pump type is described by having an end suction configuration in some piping layouts?

- A. End Suction Pump**
- B. Fire Pump
- C. Gear Pump
- D. Horizontal Pump

End suction configuration describes where the pump draws fluid from—the suction connection is at the end of the pump casing. This layout is common in centrifugal pumps used in fire protection because it allows straightforward piping in many layouts: the suction line connects to the end of the pump and the discharge exits from the opposite side or top, keeping installation simple and compact. The term End Suction Pump directly names this feature, so it best fits the description. A fire pump is defined by its service, not how the suction is connected; a gear pump is a positive-displacement pump with gears and not defined by end-suction layout; a horizontal pump describes the orientation, which can be end suction or other types, but doesn't specify the end-suction feature itself.

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://nfpa20.examzify.com>

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

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