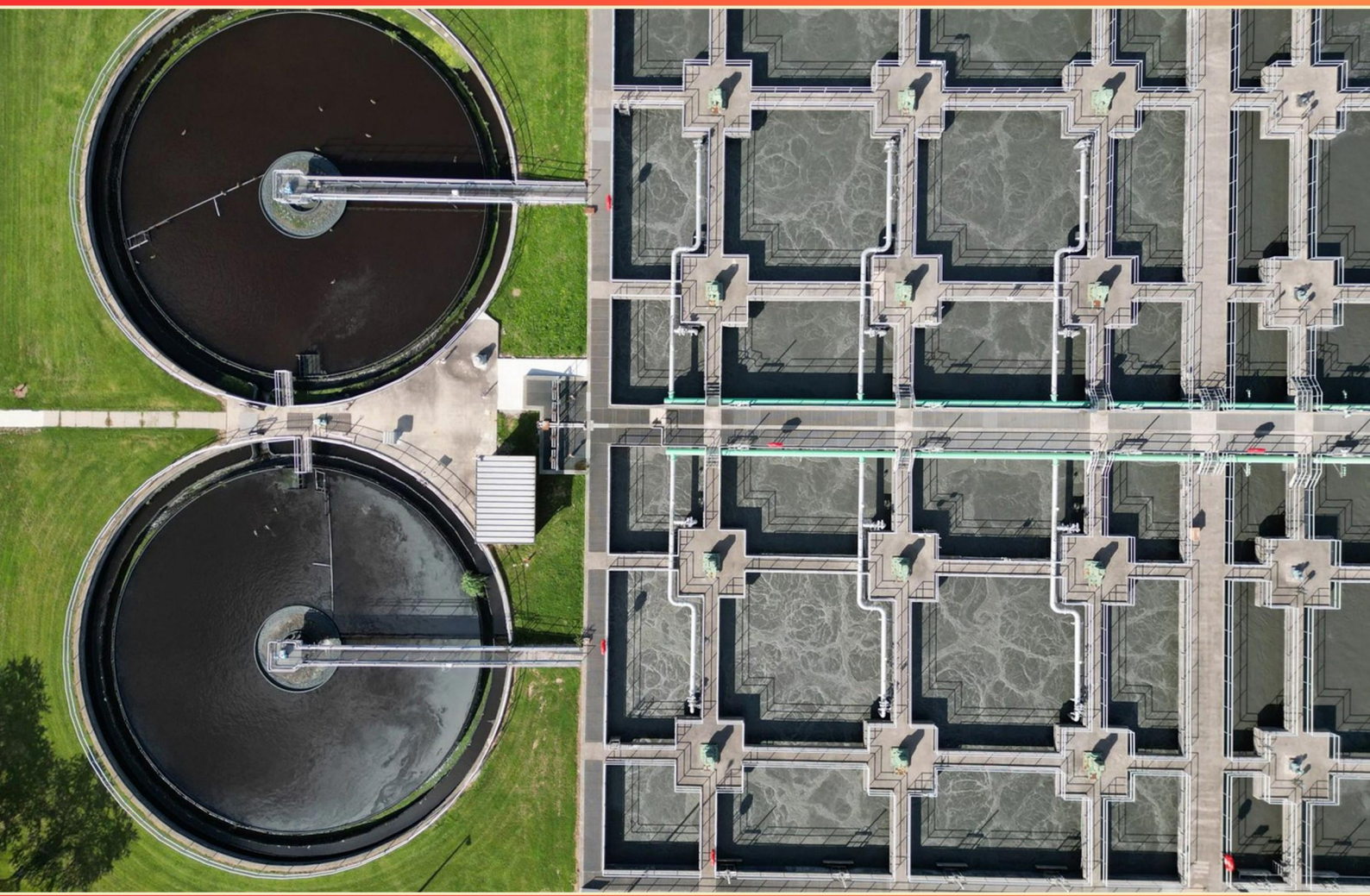
WATER DISTRIBUTION MANAGER (WDM) GREENBOOK 2 PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR 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.

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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!

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Questions

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1. Emergency power should operate how long per week?

A. 5 minutes

B. 15 minutes

C. 1 hour

D. 30 minutes

2. How many packing rings are permitted?

A. 6

B. 4

C. 8

D. 2

3. What role does SCADA play in incident response during a contamination event?

A. SCADA is disabled during incidents.

B. SCADA only stores historical data with no real-time access.

C. Provides real-time data and remote control that supports decision making.

D. SCADA determines regulatory penalties.

4. What is the recommended hydrant testing procedure?

A. Perform uncontrolled flow tests.

B. Perform controlled flow tests, measure residual pressure and flow, record test data, and verify system performance and safety.

C. Only measure residual pressure.

D. Only measure flow.

5. Which term describes operator sends control signals back to the site of a transmitting sensor using a single transmission?

A. Full duplex

B. Duplexing

C. Half duplex

D. Simplex

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6. What is the purpose of a valve exercising program and how often should critical valves be exercised?

A. To survey customers about valve conditions.

B. To ensure operational readiness and prevent seizing; critical valves annually, non-critical valves every 2–3 years, per policy.

C. To replace all valves every year.

D. To exercise only when a valve fails.

7. Which motor has no slip?

A. Squirrel cage induction motor

B. Synchronous motor

C. Wound-rotor induction motor

D. Fractional horsepower single-phase motor

8. Which statement best describes typical chlorine residual targets in a distribution system and how to manage residuals during high demand?

A. Target minimal residuals of zero at all points; manage by reducing chlorine dosing.

B. Maintain minimum residuals at critical points (commonly 0.2–0.5 mg/L) and manage by flushing zones, adjusting booster dosing, and controlling water age.

C. Keep residuals fixed at 3 mg/L everywhere and never adjust dosing.

D. Rely solely on pH adjustments to manage residuals without flushing or dosing changes.

9. Mixed flow design is for water that contains solids.

A. Water that contains solids

B. Clean water

C. Water with high mineral content

D. Water with dissolved gases

10. Motors larger than fractional horsepower use what to start and stop?

A. Motor Starter

B. Control Relay

C. Soft Starter

D. Motor Controller

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Answers

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

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Explanations

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1. Emergency power should operate how long per week?

A. 5 minutes

B. 15 minutes

C. 1 hour

D. 30 minutes

Regular testing of emergency power is about keeping backup generators ready to start and carry a load when needed. Running the emergency generator for about 30 minutes each week ensures it reaches normal operating temperature, circulates lubricants, and exercises the cooling system, fuel system, battery charging, and the transfer switch under representative conditions. This duration provides a meaningful test of reliability without wasting fuel or causing unnecessary wear. Shorter tests, like a few minutes, may not fully exercise the engine and critical components, while a longer test isn't typically necessary and simply adds wear and fuel use. Thirty minutes per week is a practical, standard duration that balances readiness with practicality, which is why it's the correct choice.

2. How many packing rings are permitted?

A. 6

B. 4

C. 8

D. 2

Packing rings are placed in the stuffing box around the valve stem to create a seal that prevents leakage as the stem moves. There is a designed limit to how many rings can be used—six rings—to balance sealing capability with the ability to turn the stem smoothly. Using the full six rings provides enough compression to seal effectively without overstuffing the gland, which would make the stem hard to turn or could cause the packing to bind and fail. If you tried to use fewer rings, leakage could occur; with more than six, the increased friction and resistance could damage the stem or gland and impair operation. So, the permitted number is six.

3. What role does SCADA play in incident response during a contamination event?

A. SCADA is disabled during incidents.

B. SCADA only stores historical data with no real-time access.

C. Provides real-time data and remote control that supports decision making.

D. SCADA determines regulatory penalties.

During a contamination event, the value of SCADA lies in giving operators a live picture of what's happening and the ability to act quickly. It continuously collects and displays real time sensor data—things like water quality indicators, flow rates, pressures, tank levels, and the status of pumps and valves—so decision makers can see where contamination may be spreading and how hydraulic conditions are changing. Alarms and trends help highlight abnormal conditions, speeding the assessment process. With remote control, SCADA lets operators implement containment and mitigation steps from the control room: opening or closing valves, redirecting or stopping pumps, isolating zones, initiating flushing or enhanced treatment sequences, and coordinating field actions. This combination of timely information and immediate operational control supports fast, informed decisions to protect public health and restore safe service. SCADA isn't typically turned off during incidents, nor is it limited to storing historical data; it provides ongoing real-time visibility and control. It also doesn't determine regulatory penalties—that's outside the system and handled by authorities.

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4. What is the recommended hydrant testing procedure?

A. Perform uncontrolled flow tests.

B. Perform controlled flow tests, measure residual pressure and flow, record test data, and verify system performance and safety.

C. Only measure residual pressure.

D. Only measure flow.

The best hydrant testing approach uses controlled flow tests, measures both residual pressure and flow, records all test data, and uses that information to verify system performance and safety. Controlling the discharge lets you obtain accurate, repeatable results without causing pressure surges or damage to the distribution network. Measuring residual pressure shows how much pressure remains in the system during demand, which helps ensure nearby customers will still have adequate service and helps identify potential pressure-reducing issues. Measuring the flow rate determines the hydrant's capacity and whether it meets the required supply for firefighting or normal operation. Recording the data creates a traceable record for maintenance, hydraulics calculations, and future planning, and it supports verifying that the system continues to meet design and safety standards. Uncontrolled flow tests can produce unpredictable results and risk damage or unsafe conditions, so they're not appropriate. Only measuring residual pressure misses the flow demand information, and only measuring flow misses important pressure constraints.

5. Which term describes operator sends control signals back to the site of a transmitting sensor using a single transmission?

A. Full duplex

B. Duplexing

C. Half duplex

D. Simplex

Duplexing describes two way communication over a single transmission path. In this scenario, signals travel back from the operator to the remote sensor using the same transmission medium, enabling the control signals to reach the site where the sensor is located. This captures the idea of two way exchange on one channel, which is what duplexing concerns. Simplex is one way only, so it wouldn't support the operator sending controls back. Full duplex implies simultaneous two way communication on separate channels, which isn't required here since the emphasis is on using a single transmission. Half duplex involves two way communication on one channel but not at the same time; the term duplexing covers the broader concept of two way capability on the same medium, which aligns with the scenario.

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6. What is the purpose of a valve exercising program and how often should critical valves be exercised?

A. To survey customers about valve conditions.

B. To ensure operational readiness and prevent seizing; critical valves annually, non-critical valves every 2–3 years, per policy.

C. To replace all valves every year.

D. To exercise only when a valve fails.

Regularly exercising valves keeps them operable and ready to isolate parts of the water system when needed. It prevents seizing from corrosion, deposits, or infrequent use, and it also verifies that the valve's actuation devices, wiring, and position indication are working so operators can trust the control system during emergencies or maintenance. Critical valves—those whose operation affects large service areas or essential facilities—should be exercised on a yearly basis to maintain a reliable isolation capability. Non-critical valves can be scheduled less frequently, typically every two to three years, in line with policy, to balance reliability with available resources. This approach is proactive, not reactive, and it's about ensuring readiness rather than surveying customers, replacing valves annually, or exercising only after a failure.

7. Which motor has no slip?

A. Squirrel cage induction motor

B. Synchronous motor

C. Wound-rotor induction motor

D. Fractional horsepower single-phase motor

Slip is the difference between the rotor speed and the speed of the rotating magnetic field produced by the stator. A synchronous motor runs exactly at the speed of that rotating field, so in steady-state it has no slip. The rotor is excited (DC current or permanent magnets) and locks to the stator field, matching the synchronous speed for the given supply frequency and pole count. Because torque in a synchronous motor is developed without requiring the rotor to lag behind the field, the rotor speed equals the synchronous speed and s = 0 under load. Induction motors, such as squirrel-cage or wound-rotor types, rely on slip to generate torque: the rotor must lag behind the stator field to induce rotor currents, so there is always some slip. Fractional horsepower single-phase motors are typically induction types as well and exhibit slip. So the motor that has no slip is the synchronous motor.

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8. Which statement best describes typical chlorine residual targets in a distribution system and how to manage residuals during high demand?

A. Target minimal residuals of zero at all points; manage by reducing chlorine dosing.

B. Maintain minimum residuals at critical points (commonly 0.2–0.5 mg/L) and manage by flushing zones, adjusting booster dosing, and controlling water age.

C. Keep residuals fixed at 3 mg/L everywhere and never adjust dosing.

D. Rely solely on pH adjustments to manage residuals without flushing or dosing changes.

Maintaining a disinfectant residual throughout the distribution system is essential to keep the water safe as it moves from treatment to consumers. In practice, you aim to keep a minimum free chlorine residual at critical points in the system, commonly around 0.2–0.5 mg/L. This provides ongoing disinfection even as water travels through pipes and encounters organic matter, biofilms, and varying flows. Zero residual is unsafe because it allows microbial growth; an overly high, fixed value like 3 mg/L is impractical and can cause taste, odor, and byproduct issues; relying on pH changes alone won't guarantee a stable residual because residual levels depend on dose and the chlorine demand of the water. During high demand, the chlorine residual can drop as more water is pulled through the system and as demand reactions consume chlorine. To keep the residual above the minimum, you manage by flushing zones to replace aged water with fresher, chlorine-containing water; adjust booster dosing to restore or maintain the target residual where it's dropping; and control water age by improving turnover and reducing stagnation, especially in reservoirs and storage tanks. These combined actions help ensure the distribution system remains protected while meeting customer demand.

9. Mixed flow design is for water that contains solids.

A. Water that contains solids

B. Clean water

C. Water with high mineral content

D. Water with dissolved gases

Mixed-flow design is chosen when the liquid contains solids because it blends features of axial and centrifugal flow to pass solids more readily while still delivering a solid amount of head and flow. The impeller passages are larger than in a pure centrifugal design, which helps solids travel through without clogging, making it well suited for solids-laden water or slurries often found in drainage, wastewater, or industrial processes. This contrasts with clean water scenarios, where the emphasis is on high head and efficiency with smooth liquids, not solids handling. Water with high mineral content or water with dissolved gases involve chemical or physical properties unrelated to solids passage through the pump, so mixed-flow isn't specifically addressing those concerns.

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10. Motors larger than fractional horsepower use what to start and stop?

A. Motor Starter

B. Control Relay

C. Soft Starter

D. Motor Controller

Starting and stopping large motors safely requires a device that can handle high current and protect the motor. A motor starter is designed for this purpose: it combines a contactor to switch the motor on and off with an overload protection device to trip if the motor overheats or is overloaded. This setup allows remote control from a switch or automatic control system and provides the necessary protection for motors larger than fractional horsepower. Soft starters are used to ramp voltage and limit inrush during startup, which is useful for reducing mechanical stress, but they're not the standard device for simple on/off control with protection. A control relay can control circuits but isn't sized to switch heavy motor current or provide motor protection. A motor controller is a broader term and isn't as specific as "motor starter" for the typical on/off control with protection required for larger motors.

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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:

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

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