

SEWER COLLECTION SYSTEMS OPERATOR PRACTICE TEST (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.

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 equation expresses Ohm's law in the form voltage equals current times resistance?
 - A. $I = E / R$
 - B. $P = E \times I$
 - C. $E = I \times R$
 - D. $R = E / I$
2. Which of the following is NOT a step in preliminary treatment?
 - A. Screening
 - B. Grit Removal
 - C. Oil and Grease Removal
 - D. Biological Digestion
3. Which term describes a section of sewer that is lower than adjacent sections to pass beneath an obstacle?
 - A. Relief sewer
 - B. Storm overflow sewer
 - C. Outfall sewer
 - D. Depressed sewer
4. What kind of sewer receives waste water from a relatively small area and discharges into a sub-main sewer?
 - A. Sub-main
 - B. Main sewer
 - C. Interceptor
 - D. Branch sewer
5. What are the four types of maintenance?
 - A. Preventative, Corrective, Predictive, Reliability Centered
 - B. Preventative, Corrective, Predictive, Reactive
 - C. Preventive, Corrective, Predictive, Risk-Based
 - D. Preventive, Corrective, Predictive, Proactive

6. In a comparison of an 8-inch line to a 6-inch line over 500 feet, what is the approximate percent volume reduction?
- A. 56% volume reduction
 - B. 30% volume reduction
 - C. 44% volume reduction
 - D. 22% volume reduction
7. During Lamping, how many people typically perform the procedure?
- A. One
 - B. Two
 - C. Three
 - D. Four
8. During an air pressure test, what psi should the pressure never exceed?
- A. 4 psi
 - B. 6 psi
 - C. 8 psi
 - D. 10 psi
9. Which type of pump is described as having an impeller fixed on a rotating shaft enclosed in a casing with an inlet and a discharge, where the impeller creates pressure by centrifugal force?
- A. Diaphragm
 - B. Jet
 - C. Gear
 - D. Centrifugal
10. The description of millions of tiny air bubbles forming inside the impeller, not fully submerged, and causing damage describes which phenomenon?
- A. Cavitation
 - B. Centrifugal force
 - C. Suction lift
 - D. Hydraulic shock

Answers

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

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Explanations

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1. Which equation expresses Ohm's law in the form voltage equals current times resistance?

- A. $I = E / R$
- B. $P = E \times I$
- C. $E = I \times R$**
- D. $R = E / I$

Ohm's law links voltage, current, and resistance. The form that shows voltage as the product of current and resistance is written with voltage on the left and IR on the right. If voltage is represented by E , the correct expression is $E = I \times R$. This matches the request to have voltage equal to current times resistance. The other forms rearrange the same relationship or involve different quantities (like power, $P = VI$), but they don't present voltage as the product of current and resistance.

2. Which of the following is NOT a step in preliminary treatment?

- A. Screening
- B. Grit Removal
- C. Oil and Grease Removal
- D. Biological Digestion**

Preliminary treatment aims to quickly remove solids that could clog or damage equipment early in the process. Screening traps large debris, grit removal settles out sand and heavy inorganic material, and oil and grease removal targets fats and oils that can cause blockages or odor issues in subsequent steps. Biological digestion, on the other hand, is a secondary treatment process that biologically breaks down organic matter in sludge, typically in a digestion tank after the initial physical treatment. It is not part of preliminary treatment, which is why it is the correct choice.

3. Which term describes a section of sewer that is lower than adjacent sections to pass beneath an obstacle?

- A. Relief sewer
- B. Storm overflow sewer
- C. Outfall sewer
- D. Depressed sewer**

A depressed sewer is a section where the invert (the bottom inside of the pipe) is intentionally lowered below the elevations of the adjacent sewer sections so the line can pass beneath an obstacle. In gravity sewer systems, maintaining a steady slope is crucial for sewage to flow by gravity. When an obstacle—such as a road, railway, or other structure—would hinder continuing at the same grade, a depressed section lets the pipe drop to a lower level, then continue at the proper slope after clearing the obstacle. This approach avoids awkward rerouting or pumping and keeps the system flowing smoothly. It's different from other terms like a relief sewer, which provides an alternate path during overloads; an outfall sewer, which carries effluent to a downstream receiving water; and a storm overflow sewer, which handles excess stormwater. The essential idea here is the pipe is deliberately lowered compared with adjacent sections to pass beneath an obstacle while preserving gravity flow.

4. What kind of sewer receives waste water from a relatively small area and discharges into a sub-main sewer?

- A. Sub-main
- B. Main sewer
- C. Interceptor
- D. Branch sewer**

Branch sewers collect wastewater from a relatively small area, such as a few streets or a single block, and discharge into a sub-main. This setup is what allows local areas to feed into a larger conduit that carries the combined flow toward the main sewer. In the hierarchy, a sub-main then receives from several branches and feeds the main sewer, the main sewer collects from sub-mains and transports toward the treatment system, and an interceptor is the largest line that carries wastewater over long distances to treatment. Because the scenario specifies a line serving a small area that feeds into a sub-main, the branch sewer is the best fit.

5. What are the four types of maintenance?

- A. Preventative, Corrective, Predictive, Reliability Centered**
- B. Preventative, Corrective, Predictive, Reactive
- C. Preventive, Corrective, Predictive, Risk-Based
- D. Preventive, Corrective, Predictive, Proactive

Maintenance strategies determine when and how to service equipment to prevent failures and manage risk and cost. The four commonly recognized types are preventive maintenance, corrective maintenance, predictive maintenance, and Reliability Centered Maintenance. Preventive maintenance involves scheduled tasks designed to prevent failures before they happen. Corrective maintenance is performed after a failure to restore service. Predictive maintenance uses data from monitoring equipment condition to estimate remaining useful life and schedule maintenance just in time. Reliability Centered Maintenance applies a systematic analysis of functions, failure modes, and consequences to decide the most effective maintenance tasks, often guiding and optimizing the use of the other strategies. The other options swap in reactive, risk-based, or proactive ideas, which aren't the standard fourth type alongside preventive, corrective, and predictive maintenance in this framework.

6. In a comparison of an 8-inch line to a 6-inch line over 500 feet, what is the approximate percent volume reduction?

- A. 56% volume reduction
- B. 30% volume reduction
- C. 44% volume reduction**
- D. 22% volume reduction

The main idea is that, for pipes of the same length, the volume (or capacity) scales with the cross-sectional area, and for a circular pipe that area is proportional to the square of the diameter. So compare volumes by squaring the diameters. Compute the volume ratio: $V_6/V_8 = (6^2)/(8^2) = 36/64 = 0.5625$. This means the 6-inch line has about 56% of the 8-inch line's volume. The decrease from 8 inches to 6 inches is $1 - 0.5625 = 0.4375$, which is 43.75%, roughly 44%. So the approximate percent volume reduction is 44%. The other options don't match this squared-diameter relationship (they'd correspond to the ratio itself rather than the reduction).

7. During Lamping, how many people typically perform the procedure?

- A. One
- B. Two**
- C. Three
- D. Four

Lamping is a sewer inspection task done inside a manhole or pipe to visually assess conditions with a portable light. It requires a two-person team because safety and communication are essential in confined spaces. One person handles the light and observes the interior, while the other stays outside or at the rim to monitor air/gas conditions, assist with equipment, and be ready to help rescue if something goes wrong. This arrangement helps prevent entrapment and ensures a quick, coordinated response if an hazard appears. For these safety reasons, the typical number of people involved is two.

8. During an air pressure test, what psi should the pressure never exceed?

- A. 4 psi
- B. 6 psi**
- C. 8 psi
- D. 10 psi

The test is about checking airtightness of the sewer line using a low-pressure air test. You seal the line, pressurize with air, and watch how the pressure holds over a set period. The goal is to use enough pressure to reveal leaks, but not so much that joints or seals could be damaged. Six psi is chosen as the limit because it provides a reliable indication of leaks while staying well below the level that could overstress typical sewer joints and fittings. Pressures much lower than this can make leaks hard to detect, while higher pressures increase the risk of damage or safety issues. If the line holds pressure at or below six psi with only an allowable, minimal drop, the test passes.

9. Which type of pump is described as having an impeller fixed on a rotating shaft enclosed in a casing with an inlet and a discharge, where the impeller creates pressure by centrifugal force?

- A. Diaphragm
- B. Jet
- C. Gear
- D. Centrifugal**

This question focuses on how a centrifugal pump operates. The key idea is that energy is added to the fluid by an impeller fixed on a rotating shaft inside a casing with an inlet and a discharge. As the impeller spins, it throws the fluid outward due to centrifugal force, increasing its velocity. The casing then converts that higher velocity into increased pressure, producing flow out of the discharge. This converting of kinetic energy from the spinning impeller into pressure is the hallmark of a centrifugal pump. Think of other pump types to see why this fits: a diaphragm pump uses a flexible membrane to displace fluid, not relying on centrifugal energy; a jet pump uses a high-velocity jet and venturi effects rather than an impeller-driven mechanism; a gear pump traps fixed volumes between meshing gears to move fluid, generating pressure by displacement rather than centrifugal acceleration.

10. The description of millions of tiny air bubbles forming inside the impeller, not fully submerged, and causing damage describes which phenomenon?

A. Cavitation

B. Centrifugal force

C. Suction lift

D. Hydraulic shock

Cavitation occurs when the pressure in the liquid around the impeller drops below the liquid's vapor pressure, causing tiny vapor bubbles to form. As these bubbles move into regions of higher pressure near the blades, they collapse violently, releasing powerful energy that erodes metal, creates pitting, and causes damage and vibration. If the impeller isn't fully submerged or flow conditions create low-pressure zones, bubbles can form inside the impeller and contribute to this damaging process. The other concepts don't describe bubble formation and damage in this way: centrifugal force is just the outward push from rotation, suction lift is about pulling fluid into the pump, and hydraulic shock is a sudden pressure surge from rapid flow changes.

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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://sewercollectionsysop.examzify.com>

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

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