WASTEWATER NEW YORK STATE PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR THE FULL VERSION STUDY GUIDE

https://newyorkstate-wastewater.examzify.com

Copyright © 2026 by Examzify - A Kaluba Technologies Inc. product.

ALL RIGHTS RESERVED.

No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.

Notice: Examzify makes every reasonable effort to obtain accurate, complete, and timely information about this product from reliable sources.

SAMPLE

Table of Contents

Copyright 1

Table of Contents 2

Introduction 3

How to Use This Guide 4

Questions 5

Answers 8

Explanations 10

Next Steps 16

SAMPLE

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.

SAMPLE

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!

SAMPLE

Questions

SAMPLE

1. **What is the daily recommended maximum temperature change that should occur in an anaerobic digester?**

   A. 2.0 degrees F

   B. 0.5 degrees F

   C. 1.5 degrees F

   D. 1.0 degrees F

2. **Which agency is responsible for enforcing requirements for industries to pre-treat pollutants?**

   A. CDC

   B. EPA

   C. FEMA

   D. OSHA

3. **Kjeldahl nitrogen is a measure of what types of nitrogen?**

   A. Ammonia and nitrate nitrogen

   B. Organic nitrogen and ammonia nitrogen

   C. Nitrate and nitrite nitrogen

   D. Only organic nitrogen

4. **What microorganism should ideally accompany Nocardia in a healthy activated sludge system?**

   A. Filamentous bacteria

   B. Mastigophora

   C. Floc-forming bacteria

   D. Amoeba

5. **Under snow and ice cover, how do BOD levels in ponds typically behave?**

   A. Increase quickly

   B. Increase slowly

   C. Remain stable

   D. Decrease rapidly

SAMPLE

6. What is the name of the casing that collects the liquid or gas discharged by a pump or turbine impeller?

A. Volute

B. Casing

C. Diffuser

D. Cover

7. What is a necessary safety precaution for operators working with lime?

A. Gloves with reinforced fingers

B. Emergency eyewash and deluge shower

C. Protective steel-toed boots

D. High-visibility safety vests

8. What component's absence could lead to the growth of undesirable organisms like snails in a rotating biological reactor?

A. Oxygen supply

B. Mechanical agitation

C. Chemical control

D. Periodic maintenance

9. Which parameters are typically used to adjust chlorine feed rates?

A. pH level and temperature

B. Chlorine residual and wastewater flow

C. Dissolved oxygen and biochemical oxygen demand

D. Solids concentration and pump pressure

10. What is the recommended design flow velocity to minimize odor generation in sewer lines?

A. Greater than 1.0 ft/sec

B. Less than 1.5 ft/sec

C. Exactly 2.0 ft/sec

D. Greater than 2.0 ft/sec

SAMPLE

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. What is the daily recommended maximum temperature change that should occur in an anaerobic digester?

A. 2.0 degrees F

B. 0.5 degrees F

C. 1.5 degrees F

D. 1.0 degrees F

In anaerobic digestion processes, maintaining a stable temperature is crucial for optimal microbial activity and digestion efficiency. Sudden temperature fluctuations can adversely affect the anaerobic microorganisms, potentially leading to a reduction in methane production and overall system stability. The daily recommended maximum temperature change of 1.0 degrees Fahrenheit is established to minimize the risk of disrupting the biological processes essential for effective digestion. Operating within this limit helps ensure that the microbial population can thrive under stable conditions, thus promoting consistent breakdown of organic matter. Choosing a larger temperature fluctuation, as suggested by other options, could lead to stress among the microorganisms, resulting in diminished performance and increased chances of process failure. Therefore, the specified limit of 1.0 degrees F is supported by the need for maintaining a stable thermal environment within the digester to optimize performance and health of the microbial community.

2. Which agency is responsible for enforcing requirements for industries to pre-treat pollutants?

A. CDC

B. EPA

C. FEMA

D. OSHA

The Environmental Protection Agency (EPA) is the agency responsible for enforcing requirements related to the pre-treatment of pollutants by industries. The EPA sets national standards that require industrial facilities to pre-treat wastewater before it is discharged into publicly owned treatment works (POTWs). This pre-treatment ensures that the wastewater meets specific standards to protect the environment and public health. The Clean Water Act authorizes the EPA to establish these regulations and implement programs that oversee the discharge of pollutants. By managing industrial wastewater, the EPA helps reduce contamination in water bodies, ultimately supporting efforts to maintain and improve water quality nationwide. The other options listed relate to different areas of public health and safety, such as disease control (CDC), disaster management (FEMA), and workplace safety (OSHA), but they do not address the enforcement of wastewater pre-treatment standards.

3. Kjeldahl nitrogen is a measure of what types of nitrogen?

A. Ammonia and nitrate nitrogen

B. Organic nitrogen and ammonia nitrogen

C. Nitrate and nitrite nitrogen

D. Only organic nitrogen

Kjeldahl nitrogen is primarily a method used to determine the total nitrogen content in organic compounds and ammonia nitrogen. This process involves digesting the sample in a concentrated acid, which converts all forms of organic nitrogen into ammonia. The ammonia is then quantified, allowing for the calculation of both organic nitrogen and ammonium nitrogen in the sample. This method does not measure nitrate or nitrite directly, as the digestion step is designed to convert all nitrogen into a form that can be measured, primarily emphasizing the organic and ammonia components. Therefore, the focus on organic nitrogen and ammonia nitrogen makes this choice the most appropriate in the context of what Kjeldahl nitrogen encompasses.

SAMPLE

4. What microorganism should ideally accompany Nocardia in a healthy activated sludge system?

A. Filamentous bacteria

B. Mastigophora

C. Floc-forming bacteria

D. Amoeba

In a healthy activated sludge system, the ideal microorganism to accompany Nocardia is Mastigophora. Mastigophora includes flagellated protozoa that play an essential role in the microbial ecosystem of wastewater treatment systems. These microorganisms are beneficial as they help in the degradation of organic matter and contribute to the overall stability and efficiency of the sludge. Mastigophora can assist in the digestion of specific substrates that might be less effectively processed by other microbial communities. Their presence in the system can also indicate good settling characteristics of the activated sludge, which is crucial for effective separation of treated water from biomass. The interaction between Mastigophora and filamentous bacteria, as well as other microorganisms, can promote a balanced microbial community. Filamentous bacteria may sometimes be problematic if they overgrow and lead to foaming or poor settling characteristics, while floc-forming bacteria play important roles in creating stable aggregates but do not provide the same type of synergetic benefits as flagellated protozoa. Amoeba can help control filamentous growth, but their role is more of a regulatory nature rather than one that supports stability like Mastigophora does. Thus, the presence of Mastigophora alongside Nocardia is

5. Under snow and ice cover, how do BOD levels in ponds typically behave?

A. Increase quickly

B. Increase slowly

C. Remain stable

D. Decrease rapidly

Under snow and ice cover, BOD (Biochemical Oxygen Demand) levels in ponds typically increase slowly. During winter months, the biological activity in water bodies can be significantly reduced due to lower temperatures, but it does not completely stop. Microbial activity continues at a slower rate, breaking down organic materials present in the water. The snow and ice act as an insulating layer, slowing the exchange of gases between the pond water and the atmosphere, inhibiting oxygen replenishment. As organic matter continues to decompose under these conditions, the BOD levels can rise, albeit at a reduced rate compared to warmer months. This increase can be attributed to the continued breakdown of organic material that is trapped under the ice, along with reduced oxygen levels that hinder the aerobic decomposition processes. Additionally, the accumulation of snow can often lead to atmospheric changes that affect the water conditions, but the overall trend remains that the BOD increases slowly during this period. This behavior is critical for understanding the health and treatment needs of wastewater in colder climates, as it can significantly impact water quality management strategies.

SAMPLE

6. What is the name of the casing that collects the liquid or gas discharged by a pump or turbine impeller?

A. Volute

B. Casing

C. Diffuser

D. Cover

The casing that collects the liquid or gas discharged by a pump or turbine impeller is known as the volute. The volute is specifically designed to convert the kinetic energy of the fluid exiting the impeller into pressure energy, allowing for efficient movement of the fluid through the system. The shape of the volute is crucial as it gradually expands, which helps to slow down the high-velocity fluid and transform it into a more manageable flow rate that can be directed to the next stage in the process. While the terms casing, diffuser, and cover are often used in pump and turbine discussions, they refer to different components or functions. Casing is a broader term that can describe the entire housing of the pump or turbine. A diffuser, on the other hand, is often a separate component that specifically aids in slowing down the fluid and converting its velocity into pressure. A cover typically refers to a part that closes off or protects an opening but does not perform the fluid collection function as the volute does. Thus, the volute is the most accurate term for the casing that manages the flow of discharged fluid effectively.

7. What is a necessary safety precaution for operators working with lime?

A. Gloves with reinforced fingers

B. Emergency eyewash and deluge shower

C. Protective steel-toed boots

D. High-visibility safety vests

Operators working with lime need to take essential safety precautions due to the potentially hazardous nature of lime, particularly hydrated lime, which can cause serious skin and eye injuries. The correct answer highlights the necessity of an emergency eyewash and deluge shower. Both of these safety installations are critical because they provide immediate access to clean water that can flush away lime that may come into contact with the eyes or skin. Quick decontamination is vital in minimizing injury and preventing long-term damage from chemical exposure. Gloves with reinforced fingers, while useful for handling the abrasive material, do not address the immediate risk to the eyes or full-body exposure that can occur when working with lime. Protective steel-toed boots and high-visibility safety vests also contribute to operator safety but do not provide specific protection against the chemical hazards posed by lime. Therefore, having emergency eyewash and deluge showers readily available directly supports the health and safety of operators dealing with lime in their work environment.

SAMPLE

8. What component's absence could lead to the growth of undesirable organisms like snails in a rotating biological reactor?

A. Oxygen supply

B. Mechanical agitation

C. Chemical control

D. Periodic maintenance

The absence of periodic maintenance in a rotating biological reactor can significantly contribute to conditions that allow undesirable organisms, such as snails, to proliferate. Regular maintenance is essential for ensuring the proper functioning of the reactor and the environment within it. Without routine checks and repairs, factors such as accumulation of sludge, nutrient imbalances, or overgrowth of biomass can occur. These conditions may create an inviting habitat for unwanted organisms, as they can thrive in an environment that is not properly managed. Effectively, maintenance protocols help to control the overall health of the biological system. They prevent conditions that could lead to imbalances in microbial populations, which is crucial for the reactor's stability and efficiency. When maintenance is neglected, it can inadvertently favor the growth of opportunistic and less desirable species, leading to operational challenges.

9. Which parameters are typically used to adjust chlorine feed rates?

A. pH level and temperature

B. Chlorine residual and wastewater flow

C. Dissolved oxygen and biochemical oxygen demand

D. Solids concentration and pump pressure

The adjustment of chlorine feed rates is primarily influenced by factors related to the effectiveness of disinfection and the characteristics of the wastewater being treated. Chlorine residual refers to the amount of chlorine that remains in the water after the initial disinfection process and is an essential parameter to monitor because it indicates whether there is enough active chlorine remaining to effectively kill bacteria and pathogens. Additionally, wastewater flow is crucial because variations in flow can change the concentration of contaminants and, consequently, the demand for chlorine. As flow increases or decreases, the amount of chlorine required to maintain effective disinfection will also need to be adjusted. This means that monitoring chlorine residual alongside wastewater flow allows operators to maintain optimal disinfection levels and ensure that the process is effective and efficient. In contrast, the other options, while important in their own contexts, are not directly used for adjusting chlorine feed rates in a straightforward manner. For example, pH levels and temperature can affect chlorine's efficacy, but they do not typically dictate the feed rate adjustments directly. Similarly, while dissolved oxygen and biochemical oxygen demand (BOD) are critical in understanding the overall water quality, they are not direct parameters for managing chlorine feed rates. Lastly, solids concentration and pump pressure relate more to treatment processes rather than the specifics

SAMPLE

10. What is the recommended design flow velocity to minimize odor generation in sewer lines?

A. Greater than 1.0 ft/sec

B. Less than 1.5 ft/sec

C. Exactly 2.0 ft/sec

D. Greater than 2.0 ft/sec

In the context of sewer line design, maintaining an appropriate flow velocity is crucial for minimizing odor generation, which is often caused by stagnant sewage and the development of anaerobic conditions. A design flow velocity greater than 2.0 ft/sec is recommended because it helps ensure that wastewater keeps moving through the system without allowing solids to settle. When velocities are too low, solids can accumulate, creating conditions conducive to anaerobic bacterial growth, which produces unpleasant odors. Higher velocities also promote better oxygen transfer and can help to limit the production of hydrogen sulfide, a common byproduct associated with odor issues in sewer systems. Additionally, by maintaining a velocity above this threshold, the system can better handle variations in flow without dropping below levels that can lead to negative consequences like odor emissions. Thus, designing sewer lines with a flow velocity greater than 2.0 ft/sec is an effective strategy for odor control, ensuring the sewage remains in continuous motion and reducing the potential for stagnant areas where odors can develop.

SAMPLE

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://newyorkstate-wastewater.examzify.com

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

SAMPLE