ARIZONA STATE UNIVERSITY (ASU) GLG108 WATER PLANET MIDTERM 2 PRACTICE EXAM (SAMPLE)

STUDY GUIDE

Prepare with structure. Pass with confidence

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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. What was a key lesson learned about water resource management from 1890 to 1960?

A. Water scarcity was considered a myth

B. Water should be conserved at all costs

C. Dependence on technology is essential for water issues

D. Water should only be shared equally

2. What is defined as a "dead pool" in reservoir management?

A. The level at which a reservoir can still supply water

B. The level that has dropped below the output area

C. The level where flooding becomes critical

D. The level at which water quality is compromised

3. What does stormwater management aim to control?

A. High rates of water evaporation

B. Runoff from rainfall

C. The temperature of water bodies

D. Groundwater depletion

4. What is a common use for greywater, excluding its typical disposal?

A. Irrigation

B. Drinking

C. Industrial processes

D. Filling swimming pools

5. What is the sustainable fraction of a salmon run that can be harvested?

A. 10%

B. 30%

C. 50%

D. 70%

6. What is a primary environmental concern regarding the use of reclaimed water?

A. Excessive nutrient loading
B. Increased costs of treatment
C. Reduced agricultural yields
D. High energy consumption

7. Which characteristic is essential for defining a confined aquifer?

A. Presence of sediment
B. Pressure from overlying materials
C. Location above sea level
D. Proximity to rivers

8. Why is the monitoring of dissolved oxygen important in water bodies?

A. It indicates the presence of toxins
B. It is necessary for fish and other aquatic organisms
C. It helps to assess temperature changes
D. It measures water clarity

9. How does the size of a tube impact water discharge as per Darcy's Law?

A. Smaller tubes increase water discharge
B. Larger tubes decrease water discharge
C. Larger tubes enhance water discharge
D. Tube size does not affect water discharge

10. Where is most of the Earth's freshwater stored?

A. In rivers and lakes
B. In glaciers and ice caps
C. In the ocean
D. In the atmosphere

Answers

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

Explanations

1. What was a key lesson learned about water resource management from 1890 to 1960?

A. Water scarcity was considered a myth

B. Water should be conserved at all costs

C. Dependence on technology is essential for water issues

D. Water should only be shared equally

The assertion that water scarcity was considered a myth reflects a significant historical context regarding water resource management during the period from 1890 to 1960. During this era, rapid industrialization and population growth in many regions led to increasing concerns about water availability. However, many policymakers and communities initially underestimated the severity of water scarcity, often viewing it as an issue that could be addressed with technological advancements and expansion of supply rather than acknowledging it as a pressing and finite resource. This perspective has evolved over time as water scarcity became more apparent due to over-extraction, pollution, and changing climate patterns. As populations grew and demands on water resources intensified, the realization that water scarcity is a real and pressing challenge began to take hold, shaping subsequent policies and approaches to water management. In contrast, the other options address concepts that did not necessarily resonate during that time frame. While technology has played a significant role in addressing water issues, it did not imply an inherent dependence at that time. The notions of conservation and equitable sharing of water resources became more prominent in later decades as awareness of environmental and social impacts grew.

2. What is defined as a "dead pool" in reservoir management?

A. The level at which a reservoir can still supply water

B. The level that has dropped below the output area

C. The level where flooding becomes critical

D. The level at which water quality is compromised

A "dead pool" in reservoir management refers to the level that has dropped below the output area, meaning that at this point, the reservoir is unable to discharge water through its normal outlets. When the water level falls to this critical point, the water becomes inaccessible for practical uses such as irrigation, hydropower generation, or municipal supply. This condition can significantly impact water management strategies, as it limits the reservoir's functionality. Understanding the concept of a dead pool is essential for planning and managing water resources effectively, particularly in drought-prone areas or during periods of low precipitation, where maintaining adequate water levels is crucial for meeting demands.

3. What does stormwater management aim to control?

A. High rates of water evaporation

B. Runoff from rainfall

C. The temperature of water bodies

D. Groundwater depletion

Stormwater management primarily aims to control runoff from rainfall. When precipitation occurs, especially in urban areas, surfaces such as roads, roofs, and pavements can prevent water from soaking into the ground. Instead, this water runs off into storm drains and waterways, which can lead to various issues including flooding, erosion, and water quality degradation. Effective stormwater management practices are designed to mitigate these impacts by implementing systems such as detention basins, green roofs, permeable pavements, and other techniques that allow for better absorption and management of rainwater. This helps in preventing pollution, managing flood risks, and replenishing local aquifers where possible.

4. What is a common use for greywater, excluding its typical disposal?

A. Irrigation

B. Drinking

C. Industrial processes

D. Filling swimming pools

Greywater refers to the relatively clean wastewater generated from activities such as washing dishes, laundry, and bathing. One of the most common uses for greywater is irrigation. This is because greywater often contains nutrients that can benefit plants, making it a resourceful option for watering gardens and landscaping. Utilizing greywater for irrigation helps conserve fresh water, reduces the demand on water supply systems, and promotes environmental sustainability. Many regions that experience water scarcity implement greywater recycling systems specifically for this purpose, highlighting its practicality and benefits in managing water resources effectively. Other options, while they may have specific contexts in which they might apply, do not align as closely with common or practical uses for greywater.

5. What is the sustainable fraction of a salmon run that can be harvested?

A. 10%

B. 30%

C. 50%

D. 70%

The sustainable fraction of a salmon run that can be harvested is typically considered to be around 50%. This figure is based on scientific assessments of fish populations, reproduction rates, and the overall health of the aquatic ecosystem. When managing salmon fisheries, it's crucial to leave enough of the population in the water to ensure that they can successfully reproduce and maintain a stable population over time. Harvesting at the 50% level allows for significant utilization of the resource while also promoting sustainability, as it provides a balance between economic benefits from fishing and the ecological need for sufficient fish numbers to ensure future runs. In this context, if more than 50% were harvested, it might lead to population declines, making recovery difficult for the salmon. This underscores the importance of a sustainable approach to harvesting natural resources, particularly for species like salmon that have critical ecological roles and are economically important.

6. What is a primary environmental concern regarding the use of reclaimed water?

A. Excessive nutrient loading

B. Increased costs of treatment

C. Reduced agricultural yields

D. High energy consumption

The primary environmental concern regarding the use of reclaimed water is excess nutrient loading. When reclaimed water is used for irrigation and other purposes, it often contains higher levels of nutrients such as nitrogen and phosphorus. These nutrients can lead to unintended consequences if they are released into the environment in excess. For instance, when these nutrients enter rivers, lakes, or oceans, they can stimulate algal blooms, which can deplete oxygen levels in water bodies, harming aquatic life and disrupting ecosystems. This process, known as eutrophication, often leads to ecological imbalance, fish kills, and can affect water quality, making it hazardous for both wildlife and human activities. While increased costs of treatment, reduced agricultural yields, and high energy consumption are relevant factors in the broader discussion about the use of reclaimed water, they do not directly capture the significant environmental impact that excess nutrient loading can have on ecosystems. Thus, the concern regarding nutrient loading stands out as a critical issue associated with reclaimed water use.

7. Which characteristic is essential for defining a confined aquifer?

A. Presence of sediment

B. Pressure from overlying materials

C. Location above sea level

D. Proximity to rivers

A confined aquifer is characterized by the presence of impermeable layers above and below it, which creates pressure within the aquifer. This pressure is often what differentiates a confined aquifer from an unconfined one, as the overlying materials, often composed of clay or other tough geological materials, can restrict the movement of water. When water within a confined aquifer is under pressure, it can result in artesian wells, where water naturally rises to the surface without the need for pumping. This distinction is crucial when considering water resources, groundwater management, and geohydrology. Other characteristics like sediment presence, elevation, or proximity to rivers do not inherently define a confined aquifer. For instance, while sediment presence can influence aquifer characteristics, it is not a defining factor. Elevation may affect the placement of aquifers but does not relate specifically to the confinement of the aquifer itself. Lastly, proximity to rivers has no direct impact on whether an aquifer is confined; rather, it pertains more to water table dynamics and surrounding geology. Thus, pressure from overlying materials is the essential feature that determines the nature of confined aquifers.

8. Why is the monitoring of dissolved oxygen important in water bodies?

A. It indicates the presence of toxins

B. It is necessary for fish and other aquatic organisms

C. It helps to assess temperature changes

D. It measures water clarity

Monitoring dissolved oxygen is critical in water bodies because it is essential for the survival of fish and other aquatic organisms. Oxygen is vital for the respiration of aerobic organisms, including most fish species, invertebrates, and microorganisms. When the concentration of dissolved oxygen in water is too low, it can lead to hypoxia, which stresses aquatic life, impairs their ability to thrive, and can result in significant die-offs. This makes it an important indicator of the health of aquatic ecosystems. The significance of dissolved oxygen extends beyond just supporting aquatic life. It also plays a key role in biochemical processes in the water, influencing nutrient cycling and the overall productivity of aquatic environments. Understanding levels of dissolved oxygen is therefore crucial for managing and protecting water quality in rivers, lakes, and oceans.

9. How does the size of a tube impact water discharge as per Darcy's Law?

A. Smaller tubes increase water discharge

B. Larger tubes decrease water discharge

C. Larger tubes enhance water discharge

D. Tube size does not affect water discharge

The size of a tube significantly impacts water discharge as per Darcy's Law, which describes the flow of fluid through porous media. According to this principle, the discharge (or flow rate) is influenced by the hydraulic gradient and the cross-sectional area of the medium through which the fluid is flowing. When considering larger tubes, they provide a greater cross-sectional area for water movement. This means that as the diameter of a tube increases, the volume of water that can flow through it at any given time also increases, resulting in an enhanced water discharge. A larger diameter reduces the frictional forces that oppose flow, allowing water to move more freely and efficiently, thus increasing the overall discharge. In comparison, smaller tubes would restrict flow due to their limited cross-sectional area and increased friction. Therefore, the larger the tube, the easier it is for water to be discharged, which aligns with the principles outlined in Darcy's Law.

10. Where is most of the Earth's freshwater stored?

A. In rivers and lakes

B. In glaciers and ice caps

C. In the ocean

D. In the atmosphere

Most of the Earth's freshwater is stored in glaciers and ice caps. This significant reserve of freshwater is primarily found in polar regions and high mountain ranges, where the accumulation of snow and ice occurs over many years. As the ice builds up, it compresses and forms glaciers, effectively trapping vast amounts of freshwater in a solid state. Rivers and lakes, while important sources of freshwater, contain only a fraction of the Earth's total supply, generally less than 1%. The ocean, on the other hand, is primarily saline water and does not contribute to the global freshwater supply. The atmosphere contains some moisture, but again, this quantity is minuscule when compared to the massive storage capabilities of glaciers and ice caps. Thus, glaciers and ice caps are crucial in understanding Earth's hydrology and the impact of climate change, as melting ice affects sea levels and freshwater availability.

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://asu-glg108midterm2.examzify.com

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