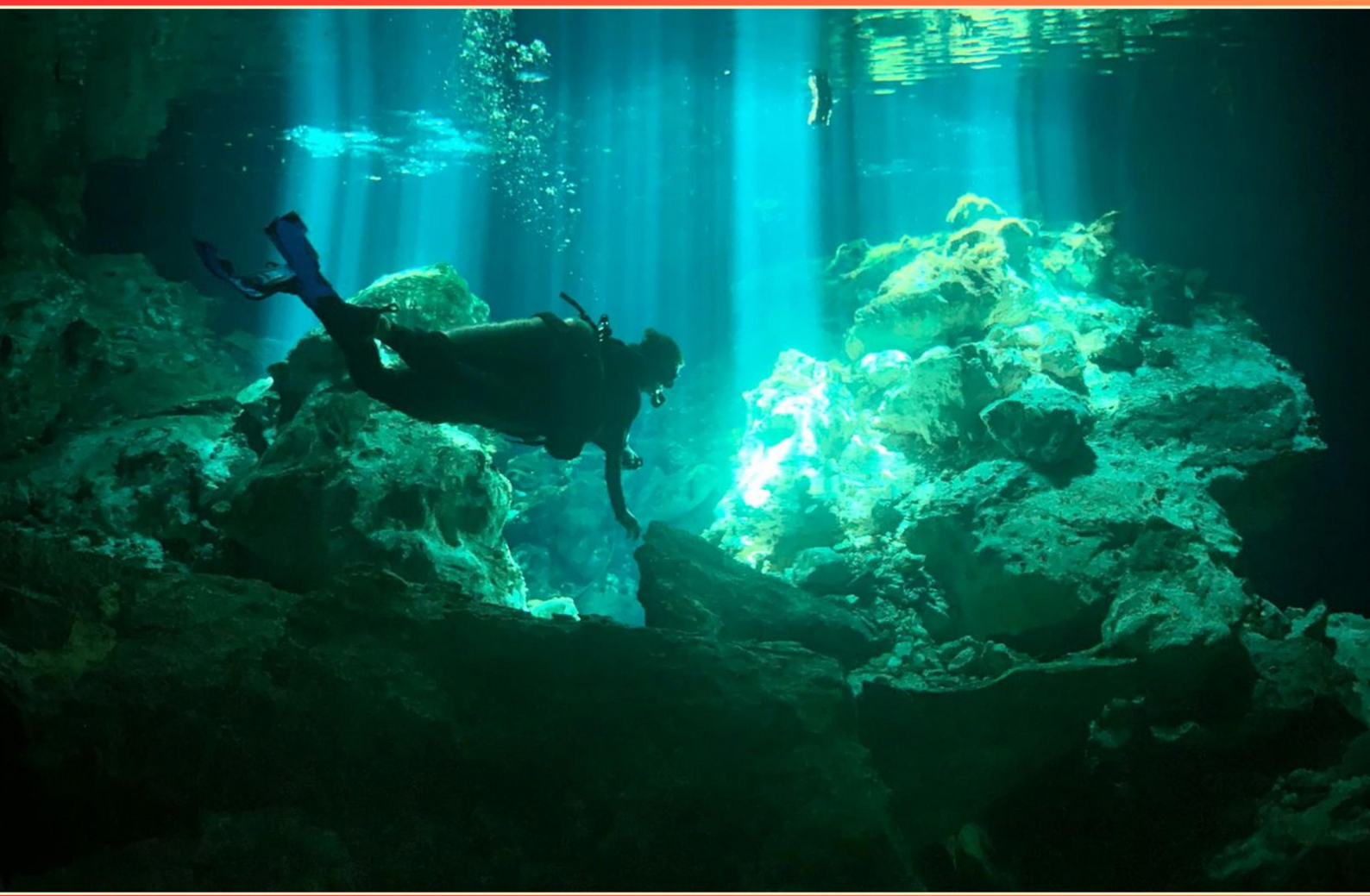
SSI DECOMPRESSION DIVING PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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

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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. Which cylinder size is most appropriate for a dive requiring 90 cuft of breathing gas?

A. S80 cylinder filled to 3000 psi

B. S100 cylinder filled to 2800 psi

C. S120 cylinder filled to 3500 psi

D. S40 cylinder filled to 2500 psi

2. What is the term used for the time required for a tissue to absorb half of the total amount of inert gas?

A. Half-time

B. Saturation time

C. Decompression time

D. Inert gas absorption

3. What is one reason for properly analyzing a stage cylinder's contents?

A. To ensure compatibility with the diver's equipment

B. To determine the weight of the cylinder

C. To check for visual damage

D. To ensure proper buoyancy

4. What should a diver do if the dive computer fails during a dive?

A. Continue without any device

B. Signal for help immediately

C. All answers are correct

D. Return to the surface instantly

5. A faster descent rate will increase:

A. Risk of nitrogen narcosis

B. Chances of decompression sickness

C. All answers are correct

D. Air consumption

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6. What does a downward pointing triangle above an upward pointing triangle indicate on a dive computer?

A. The diver should surface immediately

B. The diver is in the appropriate decompression range

C. The diver is in the open water phase

D. The diver needs to ascend quickly

7. What gas mixture is recommended for a dive to 125 feet with oxygen partial pressure limit of 1.40?

A. EAN 32

B. EAN 29

C. EAN 36

D. EAN 34

8. What should divers do if they experience symptoms of decompression sickness after a dive?

A. Rest and see if symptoms go away

B. Immediately ascend to the surface

C. Seek medical attention

D. Continue diving

9. Which recommended preventive measure aids in reducing the likelihood of decompression sickness?

A. Immediate cold water immersion

B. Surface swamping

C. Proper ascent times and stops

D. Increased dive durations

10. What is a significant risk associated with high oxygen levels during diving?

A. Dehydration

B. Oxygen toxicity

C. Barotrauma

D. Hypothermia

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Answers

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

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Explanations

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1. Which cylinder size is most appropriate for a dive requiring 90 cuft of breathing gas?

A. S80 cylinder filled to 3000 psi

B. S100 cylinder filled to 2800 psi

C. S120 cylinder filled to 3500 psi

D. S40 cylinder filled to 2500 psi

To determine the most appropriate cylinder size for a dive requiring 90 cubic feet of breathing gas, one must consider both the size of the cylinder and the pressure it can hold. The S100 cylinder filled to 2800 psi can be calculated to provide sufficient gas by using the formula which relates cylinder volume and pressure to the total amount of gas available. The S100 cylinder, having a capacity of 100 cubic feet, when filled to 2800 psi, would yield: Total gas = Cylinder volume × Pressure Total gas = 100 cuft × (2800 psi / 3000 psi) Total gas = approximately 93.33 cuft This calculation shows that the S100 cylinder can supply more than the required 90 cuft of gas, thus making it suitable for the dive. In contrast, the other choices do not meet the requirement as effectively either due to being smaller in capacity or lower in pressure, resulting in less gas than what is needed for the dive.

2. What is the term used for the time required for a tissue to absorb half of the total amount of inert gas?

A. Half-time

B. Saturation time

C. Decompression time

D. Inert gas absorption

The term that describes the time needed for a tissue to absorb half of the total amount of inert gas is half-time. In diving physiology, different tissues in the body absorb and eliminate inert gases at varying rates. Half-time refers specifically to the point at which the concentration of inert gas in a given tissue decreases to 50% of its maximum level after exposure. This concept is crucial for divers to understand, as it helps in managing nitrogen uptake and release during ascent and descent to prevent decompression sickness. The other terms provided, such as saturation time and decompression time, refer to different aspects of diving and gas absorption but do not specifically denote the half-life for inert gas absorption in tissues. Saturation time typically relates to the period needed for tissues to reach maximum gas saturation following exposure to increased pressures, while decompression time is the duration required for a diver to ascend safely to avoid decompression sickness after completing a dive. Inert gas absorption itself is a broader term that does not quantify the time aspect, which is precisely what half-time indicates.

3. What is one reason for properly analyzing a stage cylinder's contents?

A. To ensure compatibility with the diver's equipment

B. To determine the weight of the cylinder

C. To check for visual damage

D. To ensure proper buoyancy

Properly analyzing a stage cylinder's contents is crucial to ensure compatibility with the diver's equipment because different gases can affect the performance and safety of diving gear. Each type of scuba regulator, for instance, is designed to work optimally with specific gas mixtures. If the gas in the cylinder is not compatible with the equipment being used, it could lead to malfunctions or inefficiencies, potentially jeopardizing the diver's safety underwater. Ensuring that the gas mixture in the stage cylinder matches the requirements for the dive plan is an essential step in pre-dive checks. This prevents complications that could arise from using incorrect or unintended gas mixtures during the dive.

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4. What should a diver do if the dive computer fails during a dive?

A. Continue without any device

B. Signal for help immediately

C. All answers are correct

D. Return to the surface instantly

When a dive computer fails during a dive, it is crucial for divers to take specific actions to ensure their safety. Selecting the option that suggests all answers are correct indicates that a comprehensive approach is warranted in this situation. Continuing without any device may not provide the diver with the necessary information regarding depth, time, and ascent rates, which can lead to potential decompression sickness if not managed correctly. Therefore, simply opting to carry on without the computer is not advisable. Signaling for help might be necessary, particularly if the failure causes confusion or panic, or if the diver is uncertain about their depth and remaining air supply. However, this action alone doesn't address the immediate need to manage ascent and dive safety effectively. Choosing to return to the surface instantly poses significant risks, particularly if the ascent is executed too rapidly. This can lead to decompression sickness, making controlled and gradual ascent essential. The best course of action involves a systematic response, which could include monitoring remaining air supply, analyzing the dive profile while keeping in mind the dive plan, and possibly ascending according to established safety procedures. Selecting the option that encompasses all actions acknowledges that divers should be prepared to respond in a way that assures safety, even when faced with a device malfunction.

5. A faster descent rate will increase:

A. Risk of nitrogen narcosis

B. Chances of decompression sickness

C. All answers are correct

D. Air consumption

A faster descent rate indeed accelerates the overall dive profile, impacting various physiological factors linked to diving. One significant aspect is the rate at which nitrogen is absorbed into the body. When descending quickly, the partial pressure of nitrogen increases rapidly, which can lead to a higher risk of nitrogen narcosis, particularly at greater depths where the effect becomes more pronounced. Additionally, a faster descent increases the risk of decompression sickness. As divers ascend, nitrogen is released from tissues back into the bloodstream. If a diver ascends too quickly after a rapid descent, the nitrogen can form bubbles instead of being eliminated at a safe rate, potentially leading to decompression sickness. Moreover, ascending rapidly can impact air consumption. While descending, exertion levels may increase due to the pressure changes and buoyancy effects, leading to a higher demand for air. Consequently, each of these factors is interconnected with the descent rate, making "all answers" correct as they all represent risks associated with a faster descent. Understanding the implications of descent rates is essential for safe diving practices, emphasizing the need for controlled descent and ascent to mitigate these risks.

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6. What does a downward pointing triangle above an upward pointing triangle indicate on a dive computer?

A. The diver should surface immediately

B. The diver is in the appropriate decompression range

C. The diver is in the open water phase

D. The diver needs to ascend quickly

The symbol of a downward pointing triangle above an upward pointing triangle on a dive computer signifies that the diver is in the appropriate decompression range. This visual cue indicates that the diver is currently at a depth and time where they can safely perform decompression stops, making it essential for avoiding decompression sickness. Understanding this symbol is crucial for maintaining safety during a dive, as it helps the diver adhere to the necessary decompression procedures required after spending time at depths where inert gases can accumulate in the body. Following such procedures minimizes the risks associated with rapid ascents and allows for safe off-gassing of these gases while ascending.

7. What gas mixture is recommended for a dive to 125 feet with oxygen partial pressure limit of 1.40?

A. EAN 32

B. EAN 29

C. EAN 36

D. EAN 34

To determine the appropriate gas mixture for a dive to 125 feet while adhering to an oxygen partial pressure limit of 1.40, it is crucial to understand how to calculate the partial pressure of oxygen based on depth and the mixture's oxygen content. At a depth of 125 feet, the ambient pressure is approximately 4.0 atmospheres absolute (ATA), as deep-sea diving typically adds 1 ATA for every 33 feet of seawater. Given this pressure, you can calculate the partial pressure of oxygen with any gas mixture. For each option, the percentage of oxygen in the gas mixture needs to be converted from a percentage to a decimal. This decimal value is then multiplied by the absolute pressure to find the partial pressure of oxygen. When using EAN 29, which contains 29% oxygen (or 0.29 in decimal), the partial pressure of oxygen is calculated as follows: Partial pressure of O2 = %O2 (as a decimal) × total pressure = 0.29 × 4.0 ATA = 1.16 ATA This value is below the limit of 1.40, making EAN 29 a suitable option for the dive. Analyzing the other options shows

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8. What should divers do if they experience symptoms of decompression sickness after a dive?

A. Rest and see if symptoms go away

B. Immediately ascend to the surface

C. Seek medical attention

D. Continue diving

If divers experience symptoms of decompression sickness (DCS) after a dive, seeking medical attention is the most critical action. Decompression sickness occurs when nitrogen bubbles form in the body due to rapid changes in pressure, which can lead to serious health complications. Symptoms can vary widely and may include joint pain, dizziness, difficulty breathing, or even neurological issues. Immediate medical evaluation is essential, as specialized treatment often involves hyperbaric oxygen therapy. This therapy can help reduce the size of nitrogen bubbles and improve the body's oxygenation, assisting in recovery. Time is of the essence in DCS cases, so prompt action can significantly influence outcomes. Resting and hoping the symptoms will resolve may lead to worsening conditions, while ascending to the surface without professional guidance could exacerbate the situation. Continuing to dive is never appropriate once symptoms are noticed, as this can further increase the risk to health and safety. Thus, the safest and most responsible choice in the face of DCS symptoms is to seek medical attention as soon as possible.

9. Which recommended preventive measure aids in reducing the likelihood of decompression sickness?

A. Immediate cold water immersion

B. Surface swamping

C. Proper ascent times and stops

D. Increased dive durations

Proper ascent times and stops are crucial in reducing the likelihood of decompression sickness, also known as "the bends." When divers ascend too quickly, nitrogen that has been absorbed into their body tissues while diving can come out of solution too rapidly. This can lead to the formation of nitrogen bubbles within the body, resulting in decompression sickness. By adhering to recommended ascent rates and making safety stops at designated depths during the ascent, divers allow more time for the nitrogen to be safely eliminated from their bodies through respiration. These practices help manage the pressure changes that occur as a diver ascends to the surface, significantly lowering the risk of developing decompression sickness. Other preventive measures, such as immediate cold water immersion or surface swamping, do not have a direct correlation with decreasing the risk of decompression sickness. Similarly, increasing dive durations can actually increase the amount of nitrogen absorbed into the body, which could heighten the risk of decompression sickness if ascent protocols are not carefully followed.

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10. What is a significant risk associated with high oxygen levels during diving?

A. Dehydration

B. Oxygen toxicity

C. Barotrauma

D. Hypothermia

High oxygen levels during diving pose a significant risk of oxygen toxicity, which can occur when a diver breathes oxygen at elevated partial pressures. This condition can affect both the central nervous system and the pulmonary system. Symptoms of central nervous system oxygen toxicity include visual changes, nausea, twitching, and convulsions, which can be serious and potentially life-threatening if they occur while diving. Oxygen toxicity results from excessive reactive oxygen species generated at high pressures, leading to oxidative stress within the body. Each dive has specific limits for oxygen levels that divers must adhere to in order to minimize this risk. Maintaining awareness of these limits and understanding the implications of high oxygen concentrations is critical for safe diving practices. Proper training and adherence to guidelines can help mitigate this risk and ensure the safety of divers.

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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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