SSI Decompression Diving Practice Test (Sample)

Study Guide

BY EXAMZIFY

Everything you need from our exam experts!

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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. **How can divers minimize their risk of decompression sickness?**
   - A. Dive within limits of training and equipment
   - B. Dive only when using enriched air
   - C. Limit dives to below 40 feet
   - D. Always dive alone

2. **What is the principal function of a buoyancy compensator in decompression diving?**
   - A. To store additional gas supplies
   - B. To regulate dive depth and buoyancy
   - C. To attach stage cylinders safely
   - D. To provide navigational support

3. **What feature of a dive computer requires wireless communication with the first stage of a regulator?**
   - A. Depth measurement
   - B. Gas integration
   - C. Navigation features
   - D. Temperature tracking

4. **What are the signs and symptoms of nitrogen narcosis?**
   - A. Severe headaches and dizziness
   - B. Euphoria, slowed response, memory loss
   - C. Extreme fatigue and shortness of breath
   - D. Increased heart rate and sweating

5. **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

6. What is the partial pressure of nitrogen in air at 132 feet of salt water?

- **A. 2.5 ppN2**
- **B. 3.95 ppN2**
- **C. 4.5 ppN2**
- **D. 5.0 ppN2**

7. What is a key feature of modern-day dive computers?

- **A. They only track time underwater**
- **B. They may include algorithms and data analysis**
- **C. They operate without requiring user input**
- **D. They are limited to recreational diving**

8. What was the first dive computer by Dacor capable of determining?

- **A. Inflation of buoyancy control devices**
- **B. Water salinity levels**
- **C. Saturation levels**
- **D. Dive durations only**

9. What is the maximum minutes of decompression allowed in the Decompression Diving program?

- **A. 10 minutes**
- **B. 15 minutes**
- **C. 20 minutes**
- **D. 25 minutes**

10. What does the "Stop" column in a dive profile indicate?

- **A. The maximum depth of dive**
- **B. The expected water temperature**
- **C. The required time spent at each depth**
- **D. The total duration of the dive**

Answers

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

Explanations

1. How can divers minimize their risk of decompression sickness?

A. Dive within limits of training and equipment

B. Dive only when using enriched air

C. Limit dives to below 40 feet

D. Always dive alone

Divers can minimize their risk of decompression sickness by adhering to their training and the capabilities of their equipment. This includes following established dive tables or dive computer guidelines, which take into account factors such as depth, time spent at depth, and ascent rates. By diving within these limits, divers ensure they remain within the safe operating boundaries that are designed to mitigate the risk of decompression sickness, which can occur when nitrogen absorbed in the body during the dive forms bubbles if a diver ascends too quickly. The other options, while they may seem plausible, do not address the comprehensive approach necessary for ensuring safe diving practices. For instance, using enriched air (option B) can be beneficial in some scenarios, but it is not a universal solution to prevent decompression sickness, particularly if divers do not understand how to use it properly or exceed the limits associated with its use. Limiting dives to below 40 feet (option C) may offer a perception of safety, but depth alone does not guarantee safety without considering time, ascent rates, and dive profiles. Diving alone (option D) significantly increases risk because it eliminates the critical support and emergency assistance that a buddy system provides, which is essential in case of physical issues or emergency decompression procedures. By focusing on

2. What is the principal function of a buoyancy compensator in decompression diving?

A. To store additional gas supplies

B. To regulate dive depth and buoyancy

C. To attach stage cylinders safely

D. To provide navigational support

The principal function of a buoyancy compensator in decompression diving is to regulate dive depth and buoyancy. This device allows divers to achieve neutral buoyancy at various depths, making it easier to control their ascent and descent in the water. By adjusting the air volume within the buoyancy compensator, divers can fine-tune their buoyancy, which is critical for managing safety during decompression stops and while exploring underwater environments. This control is essential, as it helps prevent rapid ascents that can lead to decompression sickness and allows divers to maintain stability and comfort underwater. The other options, while related to diving, do not directly address the primary role of a buoyancy compensator in decompression diving. For example, while storing additional gas supplies is important during a dive, that function is primarily managed by tanks rather than the buoyancy device. Similarly, attaching stage cylinders is a task related to carrying extra gas supplies rather than buoyancy control itself. Navigational support involves tools and methods specifically designed for finding direction underwater and does not relate to the buoyancy adjustments needed for safe diving practices.

3. What feature of a dive computer requires wireless communication with the first stage of a regulator?

A. Depth measurement

B. Gas integration

C. Navigation features

D. Temperature tracking

The feature of a dive computer that requires wireless communication with the first stage of a regulator is gas integration. This capability allows the dive computer to receive real-time data about the diver's tank pressure and remaining air supply directly from the regulator. By integrating this information, the dive computer can calculate and display important data, such as remaining dive time based on the diver's air consumption rate and current depth. Gas integration enhances the safety and efficiency of dive planning and execution by providing the diver with continuous updates on gas levels, helping to prevent situations like running low on air. This function is particularly valuable in multi-gas diving scenarios, as it can manage and switch between different gas supplies. Other features like depth measurement, navigation, and temperature tracking do not require this type of real-time communication, as they rely on different sensors and do not involve the actual tank pressure data necessary for gas management.

4. What are the signs and symptoms of nitrogen narcosis?

A. Severe headaches and dizziness

B. Euphoria, slowed response, memory loss

C. Extreme fatigue and shortness of breath

D. Increased heart rate and sweating

Nitrogen narcosis, sometimes referred to as "the rapture of the deep," is a condition that divers may experience when they descend to depths typically greater than 30 meters (100 feet). It results from the inhalation of nitrogen at higher partial pressures, which can lead to a range of neurological effects. The signs and symptoms associated with nitrogen narcosis prominently include euphoria, which can create a false sense of well-being and confidence. Divers may also experience slowed response times, making it difficult to react quickly to underwater situations. Additionally, memory loss can occur, where divers may struggle to remember tasks or safety protocols, significantly impacting their ability to dive safely. Understanding these symptoms is crucial for divers as they can lead to impaired judgment and decision-making underwater, potentially resulting in dangerous situations. Recognizing and responding to these symptoms can help divers avert the risks associated with nitrogen narcosis.

5. 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.

6. What is the partial pressure of nitrogen in air at 132 feet of salt water?

A. 2.5 ppN2

B. 3.95 ppN2

C. 4.5 ppN2

D. 5.0 ppN2

To determine the partial pressure of nitrogen in air at a specific depth, we need to understand the relationship between depth, pressure, and gas composition in air. At sea level, the atmospheric pressure is approximately 1 atmosphere (atm), and air is made up of about 78% nitrogen. When diving, pressure increases with depth. For every 33 feet of salt water, the pressure increases by about 1 atm due to the water above. At 132 feet, you would experience a total pressure of approximately 4 atm (1 atm for surface pressure and 3 atm for the depth). The partial pressure of nitrogen can be calculated using the formula: Partial pressure of nitrogen (ppN2) = Total pressure (atm) × Fraction of nitrogen in air. Using the known fraction of nitrogen in air (0.78), the calculation at 132 feet would be: Total pressure = 4 atm (atmospheric pressure at 132 feet) ppN2 = 4 atm × 0.78 = 3.12 atm Now, converting this value into partial pressure of nitrogen in units of partial pressure for practical diving calculations, we typically express ppN2 in units that reflect the depth-specific pressures. At 132

7. What is a key feature of modern-day dive computers?

A. They only track time underwater

B. They may include algorithms and data analysis

C. They operate without requiring user input

D. They are limited to recreational diving

A key feature of modern-day dive computers is their ability to include advanced algorithms and data analysis. This functionality allows divers to track not only their time underwater but also to monitor depth, ascent rate, and nitrogen absorption levels based on dive profiles. These algorithms help in managing decompression schedules and minimizing the risk of decompression sickness, tailored to the specific dive conditions and diver's individual physiology. In contrast, other features such as only tracking time underwater, lacking user input, or being limited to recreational diving do not accurately represent the comprehensive capabilities that modern dive computers offer. They are designed to provide detailed insights and continuous monitoring, significantly enhancing safety and efficiency during diving activities across various types of dives, not just recreational ones.

8. What was the first dive computer by Dacor capable of determining?

A. Inflation of buoyancy control devices

B. Water salinity levels

C. Saturation levels

D. Dive durations only

The first dive computer developed by Dacor was capable of determining saturation levels. This functionality is crucial for divers, as it allows them to monitor their nitrogen absorption and manage their ascent profiles to prevent decompression sickness. Saturation levels indicate how much nitrogen has been taken up by the body's tissues while diving, which is vital information for safe diving practices. While other options may seem relevant, they do not pertain to the primary function of this early dive computer. For instance, buoyancy control devices are important for maintaining position during dives, but they involve equipment outside the scope of what a dive computer measures. Water salinity levels, while potentially useful for various marine assessments, are not typically a function of dive computers and do not directly influence diver safety in terms of nitrogen levels. Similarly, while dive duration is a key aspect of diving, the pioneering dive computer's primary focus on saturation levels represents a significant advancement in dive safety technologies. So, while monitoring dive durations is important, the ability to track saturation levels is fundamental for improving safety in diving activities.

9. What is the maximum minutes of decompression allowed in the Decompression Diving program?

A. 10 minutes

B. 15 minutes

C. 20 minutes

D. 25 minutes

In the Decompression Diving program, the maximum allowable decompression time is 15 minutes. This limit is established based on the physiological understanding of nitrogen absorption and elimination in the body during and after dives. Decompression stops are essential for allowing the dissolved nitrogen that has accumulated in divers' tissues during ascent to safely off-gas, thereby preventing decompression sickness, also known as "the bends." Limiting decompression time to 15 minutes helps in planning safe dives while also ensuring that divers can adhere to these safety protocols under various dive profiles. Exceeding this duration could increase the risk of complications from nitrogen narcosis or other related diving disorders, which is why the strict limit is enforced in the program. Keeping the decompression within established protocols ensures the safety and well-being of divers as they ascend from greater depths.

10. What does the "Stop" column in a dive profile indicate?

A. The maximum depth of dive

B. The expected water temperature

C. The required time spent at each depth

D. The total duration of the dive

The "Stop" column in a dive profile indicates the required time spent at each depth during a dive. This is vital for safe ascent and managing decompression, as it helps divers avoid the risk of decompression sickness. When a diver ascends, they may need to spend specific periods at certain depths to allow excess nitrogen absorbed in the body's tissues to safely dissipate. This controlled ascent, including designated stops, is essential for reducing the likelihood of bubbles forming in the tissues. Understanding this column is crucial for divers because it guides them on how long to pause at specific depths before continuing to ascend to the surface. Each depth may have different recommended stop times depending on the dive profile, dive duration, and the depths reached. This systematic approach to ascent is an essential part of diving safety practices outlined in training courses like SSI.

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://ssidecompressiondiving.examzify.com

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