

SCUBA DIVING INTERNATIONAL (SDI) COMPUTER NITROX PRACTICE EXAM (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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. Why is it essential to monitor oxygen exposure during Nitrox dives?**
 - A. To prevent equipment failure
 - B. To ensure no one stays underwater too long
 - C. To prevent oxygen toxicity
 - D. To maintain optimal buoyancy
- 2. How do no-decompression limits change with Nitrox compared to air?**
 - A. Nitrox typically decreases no-decompression limits
 - B. Nitrox has no effect on no-decompression limits
 - C. Nitrox typically increases no-decompression limits
 - D. Nitrox is irrelevant to no-decompression limits
- 3. What is the main goal during a dive with Nitrox?**
 - A. To go deeper than regular air dives.
 - B. To enhance energy and reduce nitrogen buildup.
 - C. To minimize oxygen exposure.
 - D. To extend bottom time without limits.
- 4. What does the term 'blender' refer to in Nitrox diving?**
 - A. A tool for mixing gases
 - B. A technician trained to fill dive cylinders with specific gas
 - C. A device that analyzes oxygen levels
 - D. A software for dive planning
- 5. Why is it important to analyze the oxygen content in a Nitrox cylinder?**
 - A. To ensure the mix supports deeper dives
 - B. To ensure the mix is safe for planned diving and to avoid oxygen toxicity
 - C. To determine the right buoyancy levels
 - D. To measure the water temperature
- 6. Can Nitrox be mixed at home without proper equipment?**
 - A. Yes, it can be done safely
 - B. No, it should be mixed in a controlled environment
 - C. Only if you have prior experience
 - D. Yes, using standard diving tanks

- 7. When using a dive computer, what must you ensure when diving with Nitrox?**
- A. The computer is set to the correct pressure
 - B. The computer is set to the correct oxygen percentage
 - C. The dive computer is calibrated for cold water
 - D. The computer is fully charged
- 8. What is the recommended practice for using Nitrox during repetitive dives?**
- A. Use air for the second dive
 - B. Plan dives to stay within your no-decompression limits
 - C. Dive deeper on the second dive
 - D. Dive longer than the first dive
- 9. True or False: Dive computers work by monitoring the presence of so-called 'silent bubbles' using ultrasound.**
- A. True
 - B. False
 - C. Somewhat true
 - D. Not applicable
- 10. What does FO2 represent in scuba diving terminology?**
- A. Fraction of Oxygen in the gas mixture
 - B. Frequency of Operation for dives
 - C. Field Oxygenization rate
 - D. Final Output of the dive computer

Answers

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

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Explanations

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1. Why is it essential to monitor oxygen exposure during Nitrox dives?

- A. To prevent equipment failure
- B. To ensure no one stays underwater too long
- C. To prevent oxygen toxicity**
- D. To maintain optimal buoyancy

Monitoring oxygen exposure during Nitrox dives is crucial because of the potential risk of oxygen toxicity, which can have serious and even life-threatening consequences. Nitrox is a gas mixture enriched with oxygen, and while it allows for extended bottom times and reduced nitrogen absorption, it also increases the risk of oxygen toxicity as the partial pressure of oxygen rises with depth. Oxygen toxicity can manifest through various symptoms, including visual disturbances, tinnitus, nausea, and in severe cases, convulsions. These symptoms can dramatically impair a diver's ability to respond and manage their situation underwater, potentially leading to dangerous scenarios. Therefore, it's essential to track the maximum partial pressure of oxygen being breathed to stay within safe limits and mitigate these risks. While the other options touch on important aspects of diving, they do not address the specific and critical need to manage oxygen exposure directly linked to safety in Nitrox diving. Proper monitoring directly influences the diver's health and safety by minimizing the chances of experiencing oxygen toxicity, making it the priority for divers employing Nitrox.

2. How do no-decompression limits change with Nitrox compared to air?

- A. Nitrox typically decreases no-decompression limits
- B. Nitrox has no effect on no-decompression limits
- C. Nitrox typically increases no-decompression limits**
- D. Nitrox is irrelevant to no-decompression limits

Using Nitrox can increase no-decompression limits compared to air because Nitrox has a higher percentage of oxygen and a lower percentage of nitrogen. When divers breathe a gas mix with a higher oxygen content, their nitrogen uptake is reduced. This is due to the fact that the presence of oxygen allows for a safer ascent to the surface, as it reduces the overall nitrogen load on the body. In practical terms, this means that divers using Nitrox can stay at a depth longer without having to perform mandatory decompression stops compared to if they were using regular air. Increased no-decompression limits can enhance safety during dives, allowing for longer dive times and a wider range of dive profiles. This is especially beneficial for deep dives where nitrogen narcosis and decompression sickness are greater concerns. Therefore, Nitrox provides a significant advantage in mitigating these risks and allows divers to extend their no-decompression limits effectively.

3. What is the main goal during a dive with Nitrox?

- A. To go deeper than regular air dives.
- B. To enhance energy and reduce nitrogen buildup.**
- C. To minimize oxygen exposure.
- D. To extend bottom time without limits.

The primary objective during a dive with Nitrox is to enhance energy and reduce nitrogen buildup. By using a gas mixture that has a higher proportion of oxygen and a lower concentration of nitrogen than regular air, divers benefit from several physiological advantages. The increased oxygen fraction helps improve the diver's overall energy levels and can lead to a more efficient oxygen exchange in the lungs. This can improve circulation and reduce fatigue during and after the dive. Furthermore, with the reduced nitrogen percentage in the gas mix, the body absorbs less nitrogen, which decreases the chances of nitrogen narcosis and reduces the risk of decompression sickness upon ascent. This understanding of gas mixtures reinforces the importance of managing nitrogen exposure and promotes safer diving practices while also emphasizing the efficiency and well-being of the diver during the activity.

4. What does the term 'blender' refer to in Nitrox diving?

- A. A tool for mixing gases
- B. A technician trained to fill dive cylinders with specific gas**
- C. A device that analyzes oxygen levels
- D. A software for dive planning

The term 'blender' in Nitrox diving specifically refers to a technician trained to fill dive cylinders with specific gas mixtures, including Nitrox. This role is crucial in ensuring that the gas composition meets the appropriate specifications for safe diving practices. A blender must know how to calculate the correct proportions of oxygen and other gases in order to produce Nitrox mixtures that can be used for various types of dives. While other options like tools for mixing gases or devices that analyze oxygen levels may be related to the broader context of gas management in diving, they do not capture the specific training and responsibilities associated with the blender role. A software for dive planning, although useful for calculating dive profiles and managing dive plans, is not directly related to the act of filling dive cylinders with the correct gas mixtures for Nitrox diving. Thus, identifying the role of the blender as a trained technician reflects the importance of safety and precision in preparing gases for divers.

5. Why is it important to analyze the oxygen content in a Nitrox cylinder?

- A. To ensure the mix supports deeper dives
- B. To ensure the mix is safe for planned diving and to avoid oxygen toxicity**
- C. To determine the right buoyancy levels
- D. To measure the water temperature

Analyzing the oxygen content in a Nitrox cylinder is crucial primarily to ensure that the gas mix is safe for the planned diving activities and to prevent the risk of oxygen toxicity. Different Nitrox mixtures have varying proportions of oxygen and nitrogen, which affects the maximum operating depth and the potential for oxygen toxicity due to higher concentrations of oxygen at increased pressures underwater. When divers plan their dives, they must match their gas mix to the specific depths and profiles they intend to explore. If the oxygen content is too high for the depth planned, it can lead to oxygen toxicity, which can cause serious health issues, including seizures and other life-threatening situations. Therefore, accurately analyzing the oxygen content helps divers stay within safe limits, ensuring a safer diving experience. The other options, while related to diving, do not address the fundamental safety aspect that comes with analyzing the oxygen content in a Nitrox cylinder. Ensuring a mix supports deeper dives does not encompass the safety concerns associated with oxygen levels, while buoyancy levels pertain to equipment adjustments and water temperature measurement does not relate to gas analysis at all.

6. Can Nitrox be mixed at home without proper equipment?

- A. Yes, it can be done safely
- B. No, it should be mixed in a controlled environment**
- C. Only if you have prior experience
- D. Yes, using standard diving tanks

Nitrox should be mixed in a controlled environment because this process requires precise handling and measurement of gases to ensure safety. Mixing Nitrox involves the use of oxygen and nitrogen, and improper mixing can lead to unsafe gas mixtures that could pose serious risks, such as oxygen toxicity or fire hazards. In professional settings, specialized equipment is used to accurately mix the gases while monitoring their proportions. This controlled environment not only involves the right tools but also adheres to safety protocols to manage the risks associated with high concentrations of oxygen. Mixing at home, without this specialized equipment and control, can lead to dangerous situations and is not recommended. This understanding reinforces the importance of training and proper equipment when working with gases for scuba diving, emphasizing safety as the top priority in diving practices.

7. When using a dive computer, what must you ensure when diving with Nitrox?

- A. The computer is set to the correct pressure
- B. The computer is set to the correct oxygen percentage**
- C. The dive computer is calibrated for cold water
- D. The computer is fully charged

When diving with Nitrox, it is essential to set the dive computer to the correct oxygen percentage. This is crucial because the specific mixture of oxygen and nitrogen in the gas you will be breathing affects your dive's no-decompression limits, ascent rates, and overall safety. Each Nitrox blend has a different oxygen content, which influences the partial pressures of oxygen that the dive computer will calculate during your dive. If the computer is not set to the correct percentage of oxygen, it could lead to an increased risk of oxygen toxicity or insufficient dive planning, which may compromise your safety. In contrast, ensuring the computer is set to the correct pressure, calibrated for cold water, or fully charged does not specifically pertain to the unique considerations of diving with Nitrox. While those aspects are important for safe diving in general, they do not directly relate to the specific need to manage the oxygen content in your breathing gas when using Nitrox.

8. What is the recommended practice for using Nitrox during repetitive dives?

- A. Use air for the second dive
- B. Plan dives to stay within your no-decompression limits**
- C. Dive deeper on the second dive
- D. Dive longer than the first dive

Utilizing Nitrox effectively during repetitive dives revolves around monitoring and adhering to no-decompression limits. Planning dives to remain within these limits is essential because it ensures diver safety by minimizing the risk of decompression sickness. Nitrox, which contains a higher concentration of oxygen than air, alters the way nitrogen is absorbed and off-gassed in the body. While it can extend bottom time at certain depths, it's critical to strategize subsequent dives to comply with established limits. By planning dives that keep you within your no-decompression limits, divers can safely manage their exposure to nitrogen and the risks associated with increased depths or extended dive durations. This practice also enables divers to utilize their Nitrox mix efficiently, optimizing the benefits of using a blend with less nitrogen. In contrast, using air for the second dive might not take full advantage of the benefits of Nitrox, while diving deeper or extending the duration of the second dive could significantly increase the risk of nitrogen narcosis and decompression sickness. Staying within no-decompression limits is the safest and most strategically sound approach for repetitive diving with Nitrox.

9. True or False: Dive computers work by monitoring the presence of so-called 'silent bubbles' using ultrasound.

- A. True
- B. False**
- C. Somewhat true
- D. Not applicable

Dive computers do not use ultrasound or monitor 'silent bubbles' to function. Instead, they are designed to track the diver's depth, time underwater, and nitrogen absorption based on established algorithms, which consider how decompression and saturation work. These algorithms help prevent decompression sickness by calculating no-decompression limits and required safety stops based on the diver's profile. Silent bubbles, often referred to in discussions about decompression sickness, are the nitrogen bubbles that may form in the body tissues if a diver ascends too quickly. However, dive computers do not have the capability to detect these actual bubbles; rather, they operate based on theoretical models and dive profiles to help manage nitrogen loading and ensure safety during and after a dive. This makes the correct response to the statement that dive computers work by monitoring 'silent bubbles' using ultrasound as false.

10. What does FO2 represent in scuba diving terminology?

A. Fraction of Oxygen in the gas mixture

B. Frequency of Operation for dives

C. Field Oxygenization rate

D. Final Output of the dive computer

FO2 stands for the Fraction of Oxygen in the gas mixture. This term is crucial in scuba diving, especially when discussing nitrox mixtures, which contain a higher percentage of oxygen than standard air. The FO2 value indicates the proportion of oxygen present in a given gas mixture, which can affect a diver's planning, exposure limits, and decompression needs during a dive. Understanding FO2 is vital for divers using nitrox because it helps them to set their dive computers correctly, plan their dives more effectively, and mitigate the risks associated with oxygen toxicity or hypoxia. In nitrox diving, divers often use gas mixtures with varying levels of oxygen (e.g., 32% or 36% oxygen), and knowing the FO2 helps to determine the maximum operating depth and safe ascent profiles based on the oxygen content of the mixture. In contrast, the other choices refer to concepts that are not standard terminology or relevant to the measurement of oxygen in diving gas mixtures. This underlines the significance of knowing FO2 in relation to both safety and optimizing dive performance.

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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