

# Nitrox Certification Practice Exam (Sample)

## Study Guide



**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

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- 1. Which condition is described as oxygen toxicity?**
  - A. A reaction to breathing low-pressure mixtures**
  - B. A physiological reaction to high partial pressures of oxygen**
  - C. A type of decompression sickness**
  - D. A normal reaction to diving at any depth**
  
- 2. What is the correct action to take if a diver experiences symptoms of DCS?**
  - A. Ignore it and continue diving**
  - B. Ascend to the surface rapidly**
  - C. Begin controlled ascent and seek medical attention**
  - D. Spend more time underwater to test symptoms**
  
- 3. Which of the following diving practices can help prevent decompression sickness?**
  - A. Deep dives without planning**
  - B. Using mixed gas without monitoring**
  - C. Following dive computer recommendations**
  - D. Ascending quickly to avoid fatigue**
  
- 4. Which part of diving physics becomes more critical when diving with Nitrox?**
  - A. Understanding buoyancy regulations**
  - B. Understanding partial pressures of gases**
  - C. Understanding thermal dynamics of water**
  - D. Understanding sound transmission underwater**
  
- 5. Which factors influence the choice of Nitrox blend for a dive?**
  - A. Depth, dive time, and the diver's profile**
  - B. Temperature, location, and weather conditions**
  - C. Time of day, visibility, and surface current**
  - D. Experience level, equipment brand, and dive buddies**

- 6. At what depth is it recommended to use 100 percent oxygen?**
- A. 10 m / 30 ft**
  - B. 20 m / 60 ft**
  - C. 6 m / 20 ft**
  - D. 40 m / 132 ft**
- 7. What should divers always carry when using Nitrox?**
- A. A dive knife and underwater camera**
  - B. An oxygen analyzer and logbook**
  - C. A spare tank of air**
  - D. A first aid kit and emergency whistle**
- 8. Which of the following is a common symptom of decompression sickness?**
- A. Nausea**
  - B. Pain in the joints**
  - C. Dizziness**
  - D. Itching**
- 9. Why is it important to calibrate the oxygen analyzer with a reference gas?**
- A. To ensure accurate readings**
  - B. To save time during the analysis**
  - C. To reduce gas flow**
  - D. To increase analyzer sensitivity**
- 10. What is a crucial setting to adjust on your Nitrox computer before every dive?**
- A. The water temperature**
  - B. The percentage of oxygen in the mix**
  - C. The total dive time**
  - D. The depth of the dive**

## Answers

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

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## **Explanations**

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**1. Which condition is described as oxygen toxicity?**

- A. A reaction to breathing low-pressure mixtures**
- B. A physiological reaction to high partial pressures of oxygen**
- C. A type of decompression sickness**
- D. A normal reaction to diving at any depth**

Oxygen toxicity refers specifically to the adverse physiological effects that occur when the body is exposed to high partial pressures of oxygen, typically occurring during deep dives when divers use enriched oxygen mixes like Nitrox or when they are at depths that exceed certain limits when breathing pure oxygen. When oxygen is inhaled at high concentrations or under high pressure, it can lead to central nervous system effects such as convulsions and other neurological symptoms, as well as lung irritation and damage. Understanding the specific thresholds and conditions under which oxygen toxicity occurs is crucial for divers, as it informs safe diving practices and the management of gas mixes. This knowledge helps in preventing dangerous situations that can arise from exposure to excessive oxygen pressures. Other options may mention low-pressure mixtures or decompression sickness, but they do not pertain to the physiological reactions caused by high partial pressures specifically linked to oxygen toxicity.

**2. What is the correct action to take if a diver experiences symptoms of DCS?**

- A. Ignore it and continue diving**
- B. Ascend to the surface rapidly**
- C. Begin controlled ascent and seek medical attention**
- D. Spend more time underwater to test symptoms**

When a diver experiences symptoms of decompression sickness (DCS), the most appropriate action is to begin a controlled ascent to the surface and seek medical attention. DCS occurs when nitrogen bubbles form in the body due to changes in pressure, typically from ascending too quickly after a dive. Symptoms can include joint pain, dizziness, fatigue, and other serious conditions. Performing a controlled ascent mitigates the risk of worsening the situation, as a rapid ascent can increase the risk of additional gas bubbles forming and further complicate the diver's health. Controlled ascents follow safe diving practices by allowing for decompression stops if needed, which can help minimize the risks associated with DCS. Once safely at the surface, immediate medical attention is crucial. Treatment for DCS often involves hyperbaric oxygen therapy, which is most effective when administered promptly after symptoms arise. Therefore, seeking medical help after an appropriate ascent is vital for the diver's recovery. The other actions listed, such as ignoring symptoms or attempting to ascend rapidly, do not align with safe diving practices and can lead to further health complications.

**3. Which of the following diving practices can help prevent decompression sickness?**

- A. Deep dives without planning**
- B. Using mixed gas without monitoring**
- C. Following dive computer recommendations**
- D. Ascending quickly to avoid fatigue**

Following dive computer recommendations is crucial in preventing decompression sickness because diving computers are specifically designed to calculate and manage safe ascent rates and no-decompression limits based on various factors such as depth, time spent at that depth, and the specific gas mixture being used. These devices take the guesswork out of diving, provide real-time data during the dive, and help divers adhere to safe practices by indicating when they need to ascend, how long to stay at safety stops, and ensuring that they do not exceed their limits. By following these recommendations, divers can effectively manage their ascent and avoid rapid changes in pressure, which can lead to the formation of nitrogen bubbles in the body, a primary cause of decompression sickness. Using proper ascent rates and pauses as guided by the dive computer enables the body to safely eliminate excess nitrogen absorbed during the dive. In contrast, deep dives without planning or using mixed gas without monitoring can greatly increase the risk of decompression sickness due to inadequate preparation and the potential for incorrect gas usage. Ascending quickly is also counterproductive as it disregards safe ascent protocols, which can heighten the chances of developing decompression sickness. Thus, adhering to the guidelines provided by a dive computer is the most effective practice to mitigate the risks associated with decompression sickness.

**4. Which part of diving physics becomes more critical when diving with Nitrox?**

- A. Understanding buoyancy regulations**
- B. Understanding partial pressures of gases**
- C. Understanding thermal dynamics of water**
- D. Understanding sound transmission underwater**

When diving with Nitrox, understanding the partial pressures of gases is crucial due to the relationship between the gas mixture and the physiological effects on the diver's body. Nitrox is a blend of nitrogen and oxygen, usually with a higher percentage of oxygen than that found in regular air. The partial pressure of each gas component becomes significant as divers go deeper; the deeper the dive, the higher the partial pressures. As the partial pressure of oxygen increases, the risk of oxygen toxicity also escalates, particularly beyond certain depth limits that vary based on the specific mix of Nitrox used. For example, diving with a Nitrox mix of 32% oxygen and 68% nitrogen is commonly utilized, but this mix introduces an important consideration regarding the maximum operating depth to avoid the onset of toxic effects from oxygen. Additionally, divers must carefully plan their ascent and the use of safety stops to manage the inert gas (nitrogen) absorbed during the dive. In summary, mastering the concepts related to partial pressures is key for safe Nitrox diving, enabling divers to prevent potential health risks associated with increased oxygen levels in their breathing mix.

**5. Which factors influence the choice of Nitrox blend for a dive?**

- A. Depth, dive time, and the diver's profile**
- B. Temperature, location, and weather conditions**
- C. Time of day, visibility, and surface current**
- D. Experience level, equipment brand, and dive buddies**

Depth, dive time, and the diver's profile are critical factors that influence the choice of Nitrox blend for a dive because they directly affect the diver's exposure to nitrogen and oxygen. The depth of the dive plays a significant role in determining the partial pressures of gases in the blend. As depth increases, the partial pressure of nitrogen also increases, which can lead to a higher risk of nitrogen narcosis and decompression sickness. Using a Nitrox blend with a lower percentage of nitrogen helps mitigate these risks, allowing divers to extend their bottom time safely at greater depths. Dive time is another vital factor because longer bottom times can lead to increased nitrogen absorption. Athletes often utilize Nitrox to extend their no-decompression limits and reduce the risk associated with longer dives. By selecting an appropriate blend tailored to the planned dive time, divers can manage their nitrogen exposure more effectively. The diver's profile, which includes factors such as their experience level, physical condition, and past dive history, plays an essential role as well. More experienced divers often have a better understanding of gas management and may be able to use specific Nitrox blends with confidence based on their comfort and familiarity with the parameters involved. Therefore, selecting the right Nitrox blend requires consideration of

**6. At what depth is it recommended to use 100 percent oxygen?**

- A. 10 m / 30 ft**
- B. 20 m / 60 ft**
- C. 6 m / 20 ft**
- D. 40 m / 132 ft**

Using 100 percent oxygen is recommended at depths of up to 6 m (20 ft) because at this shallow depth, the partial pressure of oxygen remains at safe levels for recreational diving. Oxygen becomes toxic when its partial pressure exceeds certain limits, which can occur at deeper depths. At 6 m, the partial pressure of oxygen is about 1.2 ATA (atmospheres absolute), which is generally considered safe for breathing 100 percent oxygen. This allows divers to benefit from the advantages of oxygen, such as improved visibility and accelerated off-gassing of nitrogen, without the risk of oxygen toxicity that increases with depth. In contrast, using 100 percent oxygen at depths greater than this, as suggested by the other choices, can lead to oxygen toxicity, increasing the risk of serious neurological and pulmonary issues. Therefore, it's crucial to adhere to the depth limitation to ensure diver safety while utilizing pure oxygen.

## 7. What should divers always carry when using Nitrox?

- A. A dive knife and underwater camera
- B. An oxygen analyzer and logbook**
- C. A spare tank of air
- D. A first aid kit and emergency whistle

When using Nitrox, divers should always carry an oxygen analyzer and a logbook. The oxygen analyzer is crucial for verifying the exact oxygen percentage of the gas mixture being used. Since Nitrox can have varying mixes of nitrogen and oxygen, ensuring the correct mix avoids the risks of oxygen toxicity or unintentional use of a gas with a higher percentage of oxygen than intended for the dive profile. The logbook serves an important function in tracking dive profiles, including depth, time, and the specific gas mixtures used. This documentation is essential for both safe diving practices and for planning future dives, particularly when considering residual nitrogen and oxygen exposure from previous dives. It helps in adhering to safe no-decompression limits and managing cumulative gas load effectively. Having an accurate understanding of the gas mixture and maintaining detailed records are integral components of safe diving practices when using Nitrox, which are specifically aligned with the training divers receive.

## 8. Which of the following is a common symptom of decompression sickness?

- A. Nausea
- B. Pain in the joints**
- C. Dizziness
- D. Itching

The common symptom of decompression sickness known as joint pain, or "the bends," arises due to the formation of nitrogen bubbles within the body's tissues and bloodstream after a diver surfaces too quickly. When divers are exposed to high-pressure environments, nitrogen is absorbed into their bodies. If ascent occurs too rapidly, nitrogen can come out of solution, leading to bubble formation. These bubbles can lodge in various tissues, including joints, causing significant pain and discomfort, often described as severe joint pain. While nausea, dizziness, and itching can occur for various reasons during diving or after a dive, they are not specific to decompression sickness in the same way that joint pain is. Nausea might indicate issues such as seasickness or other physiological responses to pressure changes, dizziness could be related to various factors including hypoxia or inner ear issues, and itching may result from skin reactions or other conditions, but none of these are definitive indicators of decompression sickness like joint pain. Thus, joint pain is the hallmark symptom that helps identify this serious condition requiring immediate attention and treatment.

**9. Why is it important to calibrate the oxygen analyzer with a reference gas?**

- A. To ensure accurate readings**
- B. To save time during the analysis**
- C. To reduce gas flow**
- D. To increase analyzer sensitivity**

Calibrating the oxygen analyzer with a reference gas is critical for ensuring accurate readings. When an oxygen analyzer is calibrated, it establishes a baseline or reference point that the device uses to determine the percentage of oxygen in a gas mixture. This process involves exposing the analyzer to a gas with a known concentration of oxygen, allowing it to adjust its internal parameters and confirm that the measurements it provides will be reliable and valid. Accurate readings are essential for divers using nitrox because even small inaccuracies in oxygen levels can significantly impact safety and performance. For example, incorrect oxygen levels could lead to either hypoxia (not enough oxygen) or oxygen toxicity (too much oxygen), both of which pose serious risks during diving operations. Other options do not effectively capture the primary purpose of calibration. Saving time, reducing gas flow, or increasing analyzer sensitivity are not the main objectives when calibrating an oxygen analyzer. The primary focus during calibration is to ensure that the instrument consistently provides precise and trustworthy measurements of oxygen concentrations necessary for safe diving practices.

**10. What is a crucial setting to adjust on your Nitrox computer before every dive?**

- A. The water temperature**
- B. The percentage of oxygen in the mix**
- C. The total dive time**
- D. The depth of the dive**

The percentage of oxygen in the mix is a crucial setting to adjust on your Nitrox computer before every dive because Nitrox blends can vary significantly in their oxygen content, usually ranging from 32% to 40% oxygen for recreational diving. This composition affects the maximum operating depth for the specific blend, as higher oxygen levels increase the risk of oxygen toxicity. By correctly setting the percentage of oxygen in the Nitrox computer, it allows for accurate calculations of the dive's allowable limits, monitoring of no-decompression limits, and safe ascent profiles. Adjusting this setting helps ensure that divers can safely enjoy their dives within the parameters of their specific gas mixture.

# 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](mailto:hello@examzify.com).**

**Or visit your dedicated course page for more study tools and resources:**

**<https://nitroxcert.examzify.com>**

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

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