OXYGEN THERAPY DEVICES PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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. What happens to room air during NRB use?

A. No room air is entrained

B. Some room air is entrained through the non one-way valve and sides of the mask

C. Room air completely replaces inspired air

D. Only pure oxygen is delivered

2. What is a true statement about a simple oxygen mask?

A. It includes a reservoir bag.

B. Exhaled gas is vented through holes in the side (exhalation ports) and spaces around the edges of the mask.

C. It cannot deliver oxygen.

D. It is permanently fitted to the face.

3. Which statement best describes high-flow oxygen therapy devices?

A. They deliver FiO2 using only oxygen

B. They blend oxygen and air to reach a precise FiO2

C. They do not require humidification

D. They cannot achieve FiO2 above 40%

4. What FiO2 range does the yellow top nebulizer produce, and what patient population is it typically used for?

A. 65-96% for acutely ill patients

B. 28-96%; used for chronically ill patients to wean to lower FiO2

C. 10-40% for daytime oxygen therapy

D. 50-80% for surgical prep

5. What is the approximate FiO2 with nasal prongs at 1 liter per minute?

A. 0.20

B. 0.24

C. 0.28

D. 0.32

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6. What are the primary types of large-volume nebulizers used clinically?

A. Cold nebs (yellow top, Misty Ox) and heated nebs

B. Small-volume and mid-volume nebulizers

C. Ultrasonic and atomizing nebulizers

D. Plastic and glass nebulizers

7. Why do transtracheal catheters require lower oxygen flows than nasal prongs?

A. Because body metabolism is lower.

B. Because O2 is delivered directly into the URT, reducing room air dilution.

C. Because they use a larger cannula.

D. Because humidification increases efficiency.

8. The Venti mask uses which principle to mix entrained air with oxygen?

A. Bernoulli principle

B. Charles' law

C. Boyle's law

D. Venturi principle

9. What is the approximate FiO2 with nasal prongs at 2 liters per minute?

A. 0.24

B. 0.28

C. 0.32

D. 0.36

10. Jet nozzle size in entrainment systems can be fixed or interchangeable.

A. It can be fixed or interchangeable

B. It is fixed only

C. It is interchangeable only

D. It has no effect on entrainment

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Answers

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

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Explanations

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1. What happens to room air during NRB use?

A. No room air is entrained

B. Some room air is entrained through the non one-way valve and sides of the mask

C. Room air completely replaces inspired air

D. Only pure oxygen is delivered

During NRB use, room air is drawn in because the mask and reservoir system aren't perfectly sealed. The NRB delivers oxygen from the reservoir bag and the oxygen source, but there are openings around the mask and a one-way valve setup that can still allow ambient air to blend in during inhalation. If the seal isn't tight or the flow isn't enough to meet the patient's inspiratory demand, room air leaks in through the sides of the mask and through the valve paths, diluting the oxygen concentration reaching the lungs. That's why some room air is entrained rather than delivered as pure oxygen. Higher flow rates and a good mask seal can minimize entrainment, but they never eliminate it entirely.

2. What is a true statement about a simple oxygen mask?

A. It includes a reservoir bag.

B. Exhaled gas is vented through holes in the side (exhalation ports) and spaces around the edges of the mask.

C. It cannot deliver oxygen.

D. It is permanently fitted to the face.

A simple oxygen mask is a loose-fitting, low-flow delivery device. It relies on exhalation ports to vent the wearer's exhaled gas, preventing buildup of carbon dioxide and allowing room air to mix with the oxygen being delivered. That's why the true statement is that exhaled gas is vented through holes on the sides and around the edges of the mask. This type of mask does not include a reservoir bag—that feature is found in masks designed to deliver higher concentrations of oxygen (like partial or non-rebreather masks). It can deliver oxygen, but not at a fixed high concentration, and its fit is not permanent; it's held on with a strap and can be removed easily.

3. Which statement best describes high-flow oxygen therapy devices?

A. They deliver FiO2 using only oxygen

B. They blend oxygen and air to reach a precise FiO2

C. They do not require humidification

D. They cannot achieve FiO2 above 40%

High-flow oxygen therapy works by precisely controlling the mix of gases you deliver. The device blends oxygen with room air in a controlled ratio to reach a specific FiO2, rather than just pushing pure oxygen at whatever flow you set. That blending lets you target exact oxygen levels while meeting the patient's high inspiratory demands with a high total flow. In practice, this approach is paired with heated, humidified gas delivered at high flow, which improves comfort and helps keep airways hydrated. Because of the blending, you can achieve a wide range of FiO2, including values well above 40%, depending on the setup and oxygen source. So the best description is that high-flow devices blend oxygen and air to reach a precise FiO2. The other statements don't fit: the system does not rely on oxygen alone, humidification is required, and FiO2 can exceed 40%.

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4. What FiO2 range does the yellow top nebulizer produce, and what patient population is it typically used for?

A. 65-96% for acutely ill patients

B. 28-96%; used for chronically ill patients to wean to lower FiO2

C. 10-40% for daytime oxygen therapy

D. 50-80% for surgical prep

The key idea is that this nebulizer can deliver a wide range of oxygen concentrations by blending oxygen with room air through its reservoir. The FiO2 can be adjusted roughly from 28% up to about 96%, depending on the oxygen flow and setup. That wide range makes it useful for chronically ill patients who are being slowly weaned off higher oxygen levels—you can start closer to higher FiO2 and gradually step down to lower FiO2 as the patient's condition improves, all while delivering humidified aerosol therapy. It isn't typically used for acute, high-demand situations, daytime low-flow therapy, or surgical prep, which is why the other options don't fit.

5. What is the approximate FiO2 with nasal prongs at 1 liter per minute?

A. 0.20

B. 0.24

C. 0.28

D. 0.32

Nasal prongs deliver FiO2 that rises in roughly 4% increments for each additional liter per minute of flow, starting near room air (about 21%). At 1 L/min, you'd expect about 25% oxygen (0.25), which clinicians often approximate as 24–26%. Among common choices, 0.24 best matches this 1 L/min estimate. The other values are not consistent with the typical 1 L/min delivery: 0.20 would be too low for nasal prongs at this flow, while 0.28 and 0.32 correspond to higher flows (around 2–3 L/min) rather than 1 L/min.

6. What are the primary types of large-volume nebulizers used clinically?

A. Cold nebs (yellow top, Misty Ox) and heated nebs

B. Small-volume and mid-volume nebulizers

C. Ultrasonic and atomizing nebulizers

D. Plastic and glass nebulizers

The main idea is that large-volume nebulizers are classified by how much solution they can hold and deliver in one session. The two most commonly used clinical types are small-volume and mid-volume nebulizers. This distinction matters because it affects how long a treatment can run before a refill is needed and how much medication or humidification you can deliver at once. The other ways people describe nebulizers—by how the mist is produced (such as ultrasonic versus atomizing), whether they're heated or cold, or what material they're made from—don't define the standard clinical categories for large-volume devices.

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7. Why do transtracheal catheters require lower oxygen flows than nasal prongs?

A. Because body metabolism is lower.

B. Because O2 is delivered directly into the URT, reducing room air dilution.

C. Because they use a larger cannula.

D. Because humidification increases efficiency.

The main idea is delivery efficiency: when oxygen is delivered directly into the trachea, it faces less mixing with room air before reaching the lungs. Transtracheal catheters place O2 closer to the lower airways, so a larger fraction of the inspired gas is oxygen, and you don't have to push as much flow to achieve the same oxygen level in the blood. In contrast, nasal prongs deliver O2 into the nasal passages where it quickly mixes with room air during inspiration, so higher flow is needed to overcome dilution and reach the target oxygen concentration. Metabolic rate doesn't change with the device, the cannula size isn't the main factor, and humidification mainly affects comfort and mucosal health rather than the fundamental requirement for higher flow.

8. The Venti mask uses which principle to mix entrained air with oxygen?

A. Bernoulli principle

B. Charles' law

C. Boyle's law

D. Venturi principle

Venturi effect explains how a fast-moving gas creates a low-pressure zone that pulls in surrounding air to mix with the oxygen. In the Venti mask, oxygen is pushed through a narrow jet; as it speeds up in the constricted passage, the pressure drops and entrainment ports draw in room air. This entrains and blends with the oxygen to give a specific, adjustable oxygen concentration set by the adapter. While Bernoulli's principle underpins the relationship between speed and pressure, the device is described by the Venturi effect because the key feature is controlled entrainment through a constriction. Charles' law and Boyle's law describe gas behavior with temperature or volume changes and aren't about how the mask mixes air into the flow.

9. What is the approximate FiO2 with nasal prongs at 2 liters per minute?

A. 0.24

B. 0.28

C. 0.32

D. 0.36

A nasal cannula delivers oxygen mixed with surrounding air, so the FiO2 rises as you increase the flow, roughly about 4 percentage points for each extra liter per minute up to around 6 L/min. At two liters per minute, the typical FiO2 is about 28% (roughly 0.28). This reflects the balance between the oxygen you're supplying and the ambient air you're breathing in with each breath. Real-world factors like how you breathe (nose vs. mouth), how well the prongs fit, and your inspiratory effort can shift the exact value a bit. For reference, 1 L/min is usually around 24%, 3 L/min around 32%, and 4 L/min around 36%.

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10. Jet nozzle size in entrainment systems can be fixed or interchangeable.

A. It can be fixed or interchangeable

B. It is fixed only

C. It is interchangeable only

D. It has no effect on entrainment

In jet entrainment systems, the size of the nozzle determines how much ambient air gets drawn into the oxygen jet. That entrained air changes both the total output flow and the fraction of oxygen delivered (FiO2). If the nozzle is fixed, the entrainment is set and the FiO2/flow relationship remains constant. If nozzles are interchangeable, you can swap in different sizes to tailor FiO2 and total flow for the patient's needs. The total output is the sum of the oxygen flow plus the entrained air, so a larger nozzle increases total flow and lowers FiO2, while a smaller nozzle reduces total flow and raises FiO2. Some systems use fixed jets, others use interchangeable jets, so the statement is correct.

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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:

https://oxygentherapydevices.examzify.com

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

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