

Certified Respiratory Therapist 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. What should be your first action if a flow-resistor expiratory airway pressure (PEP) device does not generate pressure during expiration?**
 - A. Replace the device**
 - B. Recheck and tighten all connections**
 - C. Adjust the patient's position**
 - D. Change the tubing**
- 2. Which aspect of a patient's social history is most significant in diagnosing lung disease?**
 - A. Smoking history**
 - B. Occupational history**
 - C. Family history**
 - D. Travel history**
- 3. What is the primary ingredient in inhaled anticholinergic medications?**
 - A. Ipratropium bromide**
 - B. Albuterol sulfate**
 - C. Tiotropium**
 - D. Formoterol**
- 4. What is a common outcome for patients with chronic obstructive pulmonary disease (COPD)?**
 - A. Complete recovery of lung function**
 - B. Progressive lung damage**
 - C. Inflammation of lung tissue**
 - D. Overproduction of mucus**
- 5. Which type of lung sounds are typically present in patients diagnosed with pneumonia?**
 - A. Wheezes**
 - B. Stridor**
 - C. Crackles or rales**
 - D. Rhonchi**

6. What condition can cause the use of accessory muscles during breathing?

- A. Normal exercise**
- B. Respiratory distress**
- C. Sleep apnea**
- D. Hypoventilation**

7. Under ideal conditions, what is the accuracy range of electrochemical oxygen analyzers?

- A. +/- 1%**
- B. +/- 2%**
- C. +/- 5%**
- D. +/- 10%**

8. Which of the following would indicate a restrictive disorder in lung function testing?

- A. Decreased FEV1 and increased FEV1%**
- B. Normal FVC and decreased FEV1%**
- C. Decreased FVC with normal FEV1**
- D. Increased FVC and decreased FEV1**

9. How frequently should a Ptco2 electrode be moved for neonate patients?

- A. Every hour**
- B. Every 2 hours**
- C. Every 4 hours**
- D. Every 6 hours**

10. If an anterior-posterior chest radiograph shows an elevated left hemidiaphragm, what is the most likely cause?

- A. Pneumonia**
- B. Hepatomegaly**
- C. Right phrenic nerve paralysis**
- D. Subcutaneous emphysema**

Answers

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

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Explanations

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1. What should be your first action if a flow-resistor expiratory airway pressure (PEP) device does not generate pressure during expiration?

- A. Replace the device**
- B. Recheck and tighten all connections**
- C. Adjust the patient's position**
- D. Change the tubing**

When a flow-resistor expiratory airway pressure (PEP) device fails to generate pressure during expiration, the first action should be to recheck and tighten all connections. This is because inadequate pressure generation can often be attributed to loose or poorly connected components. Ensuring that all connections are secure is a straightforward and effective troubleshooting step. If the connections are not tight, air can leak from the system, preventing the device from creating the necessary resistance and pressure during expiration, thus rendering it ineffective. By addressing this potential issue first, the clinician can eliminate a common and easily correctable problem before considering more drastic actions, such as replacing the device or changing the tubing.

2. Which aspect of a patient's social history is most significant in diagnosing lung disease?

- A. Smoking history**
- B. Occupational history**
- C. Family history**
- D. Travel history**

In diagnosing lung disease, smoking history holds particular significance because it is one of the most common risk factors associated with various respiratory conditions, including chronic obstructive pulmonary disease (COPD), lung cancer, and interstitial lung diseases. Understanding a patient's smoking habits—such as whether they are current smokers, former smokers, or have never smoked—provides valuable information about their overall lung health and risk factors for disease. While occupational history can also be important, especially in identifying exposure to harmful substances like asbestos or toxins, smoking history often provides a more direct link to many prevalent lung diseases. Family history may highlight genetic predispositions to certain conditions but does not typically change the immediate assessment of lung disease in a patient. Travel history can aid in identifying infectious diseases but is less relevant to chronic lung diseases compared to smoking. Each aspect of social history can contribute important context, but smoking history is particularly influential due to its strong association with lung disease.

3. What is the primary ingredient in inhaled anticholinergic medications?

- A. Ipratropium bromide**
- B. Albuterol sulfate**
- C. Tiotropium**
- D. Formoterol**

The primary ingredient in inhaled anticholinergic medications is Ipratropium bromide. This medication is widely used in the management of respiratory conditions such as chronic obstructive pulmonary disease (COPD) and asthma. Anticholinergics work by blocking the action of acetylcholine, a neurotransmitter that can cause bronchoconstriction when activated. By inhibiting this action, Ipratropium bromide leads to bronchodilation, making it easier for patients to breathe. Ipratropium bromide is often preferred for patients who may not tolerate beta-agonists and is effective in providing quick relief of bronchospasm. Understanding the role of Ipratropium bromide as a primary ingredient emphasizes its significance in respiratory therapy, particularly in patients who require long-term management of their conditions. In contrast, other medications mentioned, such as Albuterol sulfate, Tiotropium, and Formoterol, are different classes of bronchodilators, primarily beta-agonists or long-acting muscarinic antagonists (LAMAs), and serve distinct roles in therapy. While they may also be used in similar conditions, their mechanism of action and suitability for specific patient needs can vary significantly from that of I

4. What is a common outcome for patients with chronic obstructive pulmonary disease (COPD)?

- A. Complete recovery of lung function**
- B. Progressive lung damage**
- C. Inflammation of lung tissue**
- D. Overproduction of mucus**

Patients with chronic obstructive pulmonary disease (COPD) typically experience progressive lung damage as a defining characteristic of the condition. COPD is primarily caused by long-term exposure to harmful substances, such as cigarette smoke and air pollutants, leading to the irreversible decline in lung function over time. As the disease progresses, the lung tissue and airways become increasingly damaged, resulting in obstructed airflow and difficulty in breathing. This progressive nature of the disease makes it crucial for patients to receive appropriate treatment and management strategies to slow the progression and improve quality of life, but it does not lead to a complete recovery of lung function. While inflammation of lung tissue and overproduction of mucus can occur in COPD and contribute to symptoms and exacerbations, they are not as definitive in characterizing the long-term trajectory of the disease as the progressive lung damage is. Understanding these outcomes can help in recognizing the importance of preventive measures and the need for continuous care in managing COPD.

5. Which type of lung sounds are typically present in patients diagnosed with pneumonia?

- A. Wheezes**
- B. Stridor**
- C. Crackles or rales**
- D. Rhonchi**

Crackles, also known as rales, are typically present in patients diagnosed with pneumonia due to the accumulation of fluid in the alveoli and the small airways. This fluid can result from the inflammatory process associated with the infection. When air moves through the fluid-filled or consolidated areas of the lungs during inhalation or exhalation, it creates the characteristic popping or crackling sounds. These sounds are often more pronounced during certain phases of respiration and can indicate the presence of secretions or fluid in the lungs, which is common in pneumonia. The presence of crackles can help healthcare providers assess the severity of the condition and monitor changes over time. Understanding this relationship between crackles and pneumonia is essential for proper diagnosis and treatment.

6. What condition can cause the use of accessory muscles during breathing?

- A. Normal exercise**
- B. Respiratory distress**
- C. Sleep apnea**
- D. Hypoventilation**

The use of accessory muscles during breathing is a significant indicator of respiratory distress. In a state of respiratory distress, the body requires more effort to achieve adequate ventilation. Accessory muscles, which include muscles in the neck (such as the sternocleidomastoid and scalene) and the abdominal muscles, are recruited to assist with the work of breathing when the diaphragm and other primary muscles are insufficient to meet the demands of the respiratory system. When an individual is experiencing respiratory distress, conditions such as asthma, chronic obstructive pulmonary disease (COPD), or pneumonia can lead to increased work of breathing. This heightened demand forces the body to engage accessory muscles in an attempt to maintain adequate oxygenation and ventilation. Observing the use of these muscles in a clinical setting serves as a clear signal of a patient's compromised respiratory status that requires immediate attention. Normal exercise and other conditions, such as sleep apnea and hypoventilation, may also alter breathing patterns but typically do not lead to the same level of reliance on accessory muscles as seen in significant respiratory distress. In normal exercise, the body efficiently uses primary muscles with increased ventilation that is usually temporary and resolves quickly. Sleep apnea involves episodes of breathing cessation during sleep, while hypoventilation refers to reduced

7. Under ideal conditions, what is the accuracy range of electrochemical oxygen analyzers?

- A. +/- 1%
- B. +/- 2%**
- C. +/- 5%
- D. +/- 10%

Electrochemical oxygen analyzers are designed to measure the concentration of oxygen in a gas mixture accurately. The ideal accuracy range for these devices is typically around +/- 2%. This level of precision is significant in clinical and laboratory settings, where knowing the exact concentration of oxygen is essential for patient care and safety. Maintaining an accuracy of +/- 2% allows healthcare professionals to make informed decisions regarding oxygen therapy, ventilatory support, and other respiratory interventions that depend on precise oxygen measurements. Recognizing this accuracy level is critical for interpreting results and ensuring that patients receive the optimal oxygen concentrations needed for their specific conditions. Other accuracy ranges mentioned, such as +/- 1%, +/- 5%, and +/- 10%, do not align with the standard performance capabilities of electrochemical oxygen analyzers under ideal conditions. They may refer to other types of analyzers or be less suitable for clinical applications where accuracy is paramount.

8. Which of the following would indicate a restrictive disorder in lung function testing?

- A. Decreased FEV1 and increased FEV1%
- B. Normal FVC and decreased FEV1%
- C. Decreased FVC with normal FEV1**
- D. Increased FVC and decreased FEV1

A decreased forced vital capacity (FVC) combined with a normal forced expiratory volume in one second (FEV1) is a hallmark indicator of restrictive lung disorders. In restrictive lung diseases, the lung volumes are reduced due to conditions that limit lung expansion, such as pulmonary fibrosis or pleural diseases. In this scenario, the normal FEV1 suggests that the airflow is not obstructed, which often remains intact in restrictive disorders, but the reduction in FVC implies that the total lung capacity is compromised. This pattern is characteristic of restrictive lung function as it reflects an inability of the lungs to fully expand rather than a blockage of airflow, enabling clear differentiation from obstructive disorders where FEV1 would typically be decreased alongside a lower FEV1%. Other options would not appropriately represent a restrictive pattern. For instance, a decreased FEV1 with an increased FEV1% may indicate an obstructive process, while a normal FVC combined with a decreased FEV1% does not suggest restriction, as it implies that total lung capacity is unaffected. An increased FVC coupled with a decreased FEV1 is inconsistent with both restrictive and obstructive patterns, further underscoring why the choice indicating decreased FVC with normal FEV1 is the representative

9. How frequently should a Ptco2 electrode be moved for neonate patients?

- A. Every hour**
- B. Every 2 hours**
- C. Every 4 hours**
- D. Every 6 hours**

The recommendation to move a Ptco2 electrode every 2 hours for neonate patients is based on the vital need to prevent local tissue damage and to ensure accurate readings. The skin of neonates, being particularly delicate, is susceptible to irritation and pressure sores caused by prolonged contact with the electrode. Frequent repositioning helps minimize these risks while ensuring that the measurements obtained from the electrode remain reliable and representative of the patient's respiratory status. Additionally, maintaining accurate monitoring is crucial in neonates, as they can decompensate quickly due to respiratory distress or changes in metabolic demands. Therefore, moving the electrode every 2 hours strikes a balance between patient safety and the necessity for continuous and accurate monitoring.

10. If an anterior-posterior chest radiograph shows an elevated left hemidiaphragm, what is the most likely cause?

- A. Pneumonia**
- B. Hepatomegaly**
- C. Right phrenic nerve paralysis**
- D. Subcutaneous emphysema**

An elevated left hemidiaphragm on a chest radiograph is most commonly associated with right phrenic nerve paralysis. The phrenic nerve is the primary nerve that controls the diaphragm, which is essential for proper breathing. When there is paralysis of the right phrenic nerve, the corresponding diaphragm on the left side may appear elevated due to the loss of downward movement during inspiration. This condition can result from various causes, including surgery, trauma, or a mass effect that impacts the phrenic nerve. When the diaphragm does not contract as it should, it leads to the appearance of elevation on imaging. Other conditions, such as pneumonia or hepatomegaly, might contribute to diaphragm elevation in certain scenarios but are less likely to result in a consistently elevated left hemidiaphragm compared to phrenic nerve paralysis. Similarly, subcutaneous emphysema is characterized by air accumulation in subcutaneous tissues and does not typically cause isolated diaphragm elevation.

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://certifiedrespiratorytherapist.examzify.com>

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

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