CERTIFIED RESPIRATORY THERAPIST PRACTICE EXAM (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 L/S (lecithin/sphingomyelin) ratio indicates the onset of mature surfactant production in a fetus?**

   A. 1:1

   B. 2:1

   C. 3:1

   D. 4:1

2. **Which of the following is NOT a symptom of tuberculosis?**

   A. Persistent cough

   B. Weight gain

   C. Night sweats

   D. Fever

3. **What findings suggest air leaks significantly impact a transcutaneous monitoring reading?**

   A. Elevated PtCO2 with normal PO2

   B. Low PtCO2 with PO2 around 150 torr

   C. Consistent high readings in both PtCO2 and PtCCO2

   D. All readings are within normal limits

4. **When assessing a patient with asthma, which type of asthma is triggered predominantly by allergens?**

   A. Intrinsic asthma

   B. Extrinsic asthma

   C. Chronic asthma

   D. Acute asthma

5. **What type of device should be used for each patient in an ICU to prevent contamination during respiratory support?**

   A. Reusable nasal cannulas

   B. Disposable face masks

   C. Single-use filters and valves

   D. Multiple-use nebulizers

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6. What population is especially recommended to undergo tuberculosis screening?

A. Children under five

B. Individuals with asthma

C. Healthcare workers

D. Elderly above 65

7. In terms of infection control in a hospital setting, what is the main reason for changing suction collection systems between patients?

A. To reduce costs

B. To prevent cross-contamination

C. To use up supplies efficiently

D. To comply with hospital policy

8. During CPAP titration, how should the pressure be adjusted if a patient exhibits three obstructive apnea events in a 5-minute interval at 8 cm H2O?

A. Decrease the CPAP to 6 cm H2O

B. Maintain the CPAP at 8 cm H2O

C. Increase the CPAP to 10 cm H2O

D. Increase the CPAP to 12 cm H2O

9. What is the consequence of using a suction catheter that is too large for the ET tube?

A. Increased suction pressure

B. Decreased airflow

C. Potential blockage of the ET tube

D. Temporary loss of ventilatory support

10. What condition is most often associated with hypercapnia?

A. Hypoventilation

B. Hyperventilation

C. Pneumothorax

D. Asthma exacerbation

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Answers

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

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Explanations

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1. What L/S (lecithin/sphingomyelin) ratio indicates the onset of mature surfactant production in a fetus?

A. 1:1

B. 2:1

C. 3:1

D. 4:1

The lecithin/sphingomyelin (L/S) ratio is a significant measure used to assess fetal lung maturity and the production of surfactant, which is critical for proper lung function at birth. A ratio of 2:1 indicates that the fetus is beginning to produce mature surfactant in sufficient quantities to help reduce surface tension in the alveoli. This is vital for preventing atelectasis (lung collapse) after birth. Surfactant production begins to increase significantly around the end of the second trimester and into the third trimester; however, a ratio of 2:1 or higher is typically used as a clinical marker indicating that the risk of respiratory distress syndrome (RDS) is reduced and that the fetus is likely ready for delivery. A ratio lower than 2:1 suggests that the lungs may not yet be mature enough to function effectively at birth, increasing the risk of complications associated with prematurity. Thus, the identification of a 2:1 ratio serves as a critical threshold in assessing fetal lung maturity and guiding clinical decisions regarding the timing of delivery.

2. Which of the following is NOT a symptom of tuberculosis?

A. Persistent cough

B. Weight gain

C. Night sweats

D. Fever

Weight gain is not a symptom typically associated with tuberculosis (TB). Instead, individuals suffering from TB often experience weight loss, which can be attributed to several factors related to the disease, including decreased appetite, increased energy expenditure due to fever, and the body's response to chronic infection. In contrast, the other options are classic symptoms of tuberculosis. A persistent cough is one of the hallmark signs, often worsening over time, and it may bring up blood or phlegm. Night sweats are also a common symptom, reflecting the body's attempt to fight off the infection. Additionally, fever is a frequent manifestation, particularly in the evening, and is part of the systemic inflammatory response to the TB bacteria. Understanding these symptoms is crucial for early detection and treatment, emphasizing why weight gain is not aligned with the typical clinical presentation of TB.

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3. What findings suggest air leaks significantly impact a transcutaneous monitoring reading?

A. Elevated PtCO2 with normal PO2

B. Low PtCO2 with PO2 around 150 torr

C. Consistent high readings in both PtCO2 and PtCCO2

D. All readings are within normal limits

The correct option indicates a situation where there is a low transcutaneous carbon dioxide (PtCO2) reading, while the arterial or transcutaneous partial pressure of oxygen (PO2) is significantly elevated, around 150 torr. This discrepancy can suggest that there is an air leak affecting the transcutaneous monitoring. Transcutaneous monitoring relies on the integrity of the skin sensor to accurately reflect the gas exchange occurring in the body. An air leak can disrupt the sensor's ability to measure carbon dioxide levels accurately, leading to a PtCO2 reading that does not correlate with the arterial or expected values. A low PtCO2 in the presence of a high PO2 indicates that the monitor may not be capturing the true CO2 levels, possibly due to external air entering the system. This finding highlights the importance of maintaining a closed system in transcutaneous monitoring to ensure reliable results. When air leaks disrupt this balance, it often results in misleading readings, particularly where CO2 levels are concerned, as CO2 is more soluble and affected by the presence of air compared to oxygen. The other answer choices do not suggest significant impact from air leaks as clearly. High readings in PtCO2 and PtCCO2 (the option describing consistent high readings) could indicate adequate

4. When assessing a patient with asthma, which type of asthma is triggered predominantly by allergens?

A. Intrinsic asthma

B. Extrinsic asthma

C. Chronic asthma

D. Acute asthma

The type of asthma that is primarily triggered by allergens is known as extrinsic asthma. This form of asthma occurs when the immune system overreacts to specific environmental triggers, such as pollen, dust mites, pet dander, or mold. In individuals with extrinsic asthma, these allergens provoke an inflammatory response in the airways, leading to symptoms such as wheezing, coughing, chest tightness, and shortness of breath. Extrinsic asthma is often associated with a personal or family history of allergic conditions, such as hay fever or eczema, making the connection between allergens and the onset of asthma symptoms significant. Understanding this type of asthma is crucial for effective management, as avoiding allergens and implementing appropriate pharmacotherapy can help mitigate symptoms and reduce the frequency of asthma attacks.

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5. What type of device should be used for each patient in an ICU to prevent contamination during respiratory support?

A. Reusable nasal cannulas

B. Disposable face masks

C. Single-use filters and valves

D. Multiple-use nebulizers

In the context of preventing contamination during respiratory support in an ICU setting, using single-use filters and valves is the most appropriate choice. These devices are designed to be used one time for each patient, minimizing the risk of cross-contamination that can occur when devices are reused. The single-use nature ensures that any potential pathogens from one patient do not transfer to another, which is crucial in a critical care environment where patients often have compromised immune systems. Furthermore, single-use filters and valves can effectively filter out airborne contaminants and help maintain a sterile environment for respiratory support. They are specifically engineered to provide high protection against the transmission of respiratory pathogens, making them essential for infection control in intensive care. In contrast, other options such as reusable nasal cannulas and multiple-use nebulizers pose a higher risk of contamination since they are designed for repeated use and may not always be adequately sterilized between patients. Disposable face masks can provide some degree of protection but do not have the specific filtration characteristics that single-use filters and valves offer for respiratory support. Thus, single-use filters and valves represent the best practice for maintaining patient safety in an ICU setting.

6. What population is especially recommended to undergo tuberculosis screening?

A. Children under five

B. Individuals with asthma

C. Healthcare workers

D. Elderly above 65

The recommendation for tuberculosis screening among healthcare workers is driven by their unique exposure risks. Healthcare workers frequently come into contact with patients who may have active infectious diseases, including tuberculosis. This population is at a higher risk for both contracting and transmitting the disease, making regular screening essential for early detection and management. Healthcare facilities often implement screening protocols to ensure the safety of both healthcare workers and the patients they serve. By identifying and addressing potential tuberculosis cases through screening, the healthcare environment can mitigate the risk of outbreaks, ensuring that proper preventive measures are in place. The other populations mentioned also have certain health concerns or risks associated with tuberculosis, but they generally do not experience the same level of exposure as healthcare workers.

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7. In terms of infection control in a hospital setting, what is the main reason for changing suction collection systems between patients?

A. To reduce costs

B. To prevent cross-contamination

C. To use up supplies efficiently

D. To comply with hospital policy

Changing suction collection systems between patients is primarily essential to prevent cross-contamination. This practice is critical in maintaining infection control within a healthcare environment. Suction collection systems can become contaminated with pathogens from a patient's secretions, and reusing the same system on another patient poses a significant risk of transmitting infections. Ensuring that each patient has a fresh, sterile collection system helps to protect them from potential infections that could arise from the transfer of bacteria or viruses that may remain in the suction apparatus. Infection control is a fundamental aspect of patient safety, making this practice vital in reducing the incidence of healthcare-associated infections. It's not just about compliance with protocols or efficient supplies management; it's about safeguarding each patient's health by eliminating pathways for infection.

8. During CPAP titration, how should the pressure be adjusted if a patient exhibits three obstructive apnea events in a 5-minute interval at 8 cm H2O?

A. Decrease the CPAP to 6 cm H2O

B. Maintain the CPAP at 8 cm H2O

C. Increase the CPAP to 10 cm H2O

D. Increase the CPAP to 12 cm H2O

In the context of CPAP titration, when a patient exhibits obstructive apnea events, it is crucial to increase the pressure in order to prevent the collapse of the airway during sleep. The goal of CPAP therapy is to maintain a patent airway and eliminate episodes of apnea or hypopnea. In this scenario, since the patient has shown three obstructive apnea events in a 5-minute interval while at 8 cm H2O, this indicates that the current pressure is inadequate to keep the airway open. Increasing the CPAP pressure to 10 cm H2O helps to provide additional pneumatic support that is required to overcome the obstruction and to keep the airway unobstructed during sleep. Adjusting the CPAP to a higher level, such as to 10 cm H2O, is evidence-based strategy as it aligns with the clinical practice of escalating pressure to alleviate airway obstruction noted during the titration process. This approach is essential in finding an optimal therapeutic pressure that eliminates apnea events and improves the overall efficacy of the treatment. Maintaining the CPAP at the current level or decreasing it would not address the issue of obstruction and could potentially lead to further apnea events, thereby compromising the patient's respiratory function and health during sleep.

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9. What is the consequence of using a suction catheter that is too large for the ET tube?

A. Increased suction pressure

B. Decreased airflow

C. Potential blockage of the ET tube

D. Temporary loss of ventilatory support

Using a suction catheter that is too large for the endotracheal (ET) tube can indeed lead to potential blockage of the ET tube. When the suction catheter's diameter exceeds that of the ET tube, it can create an obstruction within the tube, preventing adequate airflow. This blockage may hinder the passage of air into and out of the patient's lungs, which is critical for maintaining proper ventilation and oxygenation. This scenario can elevate the risk of complications, including hypoxia, as the effective air passage is compromised. In clinical practice, selecting the appropriate size for the suction catheter is key to ensuring effective suctioning while safeguarding unobstructed airflow through the ET tube. Therefore, understanding the relationship between catheter size and ET tube diameter is essential for respiratory therapists to prevent potential airway management issues during suctioning procedures.

10. What condition is most often associated with hypercapnia?

A. Hypoventilation

B. Hyperventilation

C. Pneumothorax

D. Asthma exacerbation

Hypercapnia, which is an elevated level of carbon dioxide (CO_2) in the blood, is most commonly associated with hypoventilation. In this condition, the respiratory rate is reduced, leading to inadequate ventilation and insufficient removal of CO_2 from the body. When ventilation is compromised, CO_2 accumulates in the bloodstream, resulting in hypercapnia. Hypoventilation can occur due to various factors, including central nervous system depression, neuromuscular disorders, obesity hypoventilation syndrome, or airway obstruction, all of which hinder the body's ability to expel CO_2 effectively. Understanding this relationship is vital for respiratory therapists, as it can guide appropriate interventions to restore normal gas exchange and neurophysiological function.

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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://certifiedrespiratorytherapist.examzify.com

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

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