

KETTERING REGISTERED RESPIRATORY 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 weight gain a common occurrence among participants in a smoking cessation program?**
 - A. Lack of exercise
 - B. A decrease in metabolism
 - C. Increased sense of smell
 - D. Loss of eating control
- 2. What is the correct interpretation of a decreasing cardiac index in a patient receiving mechanical ventilation?**
 - A. Ventilation is increasing
 - B. Oxygenation is excessive
 - C. Cardiac output is increasing
 - D. Cardiac index is decreasing
- 3. In reviewing ventilator settings, if peak pressure is increasing while plateau pressure is stable, what does this indicate?**
 - A. Airway resistance is decreasing
 - B. Lung compliance is increasing
 - C. The patient needs suctioning
 - D. Patient can begin weaning
- 4. In a post-operative patient with a fenestrated tracheostomy tube, what is the most likely reason for a cuff pressure of 32 cmH₂O with a minimal leak?**
 - A. Cuff is overinflated
 - B. Obturator is in place
 - C. Tube is too small
 - D. Tube is in the left mainstem bronchus
- 5. During a home visit for a child with asthma, what is an effective measure to reduce triggers in the home?**
 - A. Place stuffed animals in the freezer for two hours each day
 - B. Provide 60% humidity in the home
 - C. Replace wood flooring with carpet
 - D. Wash bed coverings with hot water

- 6. Which term describes the amount of air exchanged during normal breathing?**
- A. Inspiratory reserve volume
 - B. Tidal volume
 - C. Expiratory reserve volume
 - D. Vital capacity
- 7. In the context of respiratory diseases, the term "PPE" refers to what?**
- A. Patient protective equipment
 - B. Personal protective equipment
 - C. Public health equipment
 - D. Physiological protective equipment
- 8. Which measure indicates how effectively the lungs are delivering oxygen to the cells?**
- A. Partial pressure of oxygen (PaO₂)
 - B. Carbon dioxide level (PaCO₂)
 - C. Arterial oxygen saturation (SaO₂)
 - D. Respiratory rate
- 9. Which lung sound is associated with fluid in the alveoli?**
- A. Wheezes
 - B. Stridor
 - C. Crackles
 - D. Rhonchi
- 10. A patient receiving oxygen via a 35% venturi mask has arterial blood gas results showing a PaO₂ of 150 torr. What action should the therapist take?**
- A. Maintain current therapy
 - B. Discontinue the oxygen therapy
 - C. Change the device to a nasal cannula
 - D. Pull the bed sheets away from the mask

Answers

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

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Explanations

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1. Why is weight gain a common occurrence among participants in a smoking cessation program?

- A. Lack of exercise
- B. A decrease in metabolism**
- C. Increased sense of smell
- D. Loss of eating control

Weight gain is often seen in individuals participating in smoking cessation programs primarily due to a decrease in metabolism. When a person stops smoking, their body may experience changes in metabolic rate as it adapts to functioning without nicotine. Nicotine is known to have a stimulatory effect on metabolism, and when that is removed, metabolic processes can slow down. This reduction in metabolic rate may make it more challenging for individuals to maintain their previous weight as they may not burn calories as efficiently as they did while smoking. In addition to metabolic changes, individuals may also find that their appetite increases after quitting, which can further contribute to weight gain. The combination of a slowed metabolism and potentially increased caloric intake often leads to weight gain among those who are trying to quit smoking.

2. What is the correct interpretation of a decreasing cardiac index in a patient receiving mechanical ventilation?

- A. Ventilation is increasing
- B. Oxygenation is excessive
- C. Cardiac output is increasing
- D. Cardiac index is decreasing**

In the context of a patient receiving mechanical ventilation, a decreasing cardiac index indicates that the efficiency of the heart to pump blood relative to body surface area is declining. The cardiac index is determined by dividing cardiac output (the amount of blood the heart pumps in a minute) by the body surface area. When the cardiac index decreases, it suggests that either the cardiac output is decreasing, the patient's body surface area is relatively stable or growing, or a combination of both. This could occur due to increased intrathoracic pressure from mechanical ventilation, leading to decreased venous return to the heart, diminished stroke volume, and consequently a decreased cardiac output and cardiac index. Understanding the implications of a decreasing cardiac index is crucial for patient management. It typically signals potential issues with circulatory status that may need to be addressed through volume resuscitation, adjusting ventilatory settings, or assessing for further complications. In essence, a decrease in the cardiac index reflects a compromised hemodynamic status rather than improvements in ventilation or oxygenation.

3. In reviewing ventilator settings, if peak pressure is increasing while plateau pressure is stable, what does this indicate?

- A. Airway resistance is decreasing
- B. Lung compliance is increasing
- C. The patient needs suctioning**
- D. Patient can begin weaning

When peak pressure is increasing while plateau pressure remains stable, it suggests that there is a change in the resistance to airflow within the airways. Since the plateau pressure reflects the pressure required to distend the lungs without the influence of airway resistance, a stable plateau pressure indicates that lung compliance is not deteriorating. However, the increase in peak pressure, which encompasses both resistance in the airways and compliance of the lungs, signals an increase in airway resistance. This condition can occur due to several factors, one of which is mucus plugging or secretions in the airways, which would necessitate suctioning to clear these obstructions. Thus, the interpretation of increasing peak pressure with stable plateau pressure points towards the need for suctioning in order to maintain adequate ventilation and relieve any potential obstruction in the airways.

4. In a post-operative patient with a fenestrated tracheostomy tube, what is the most likely reason for a cuff pressure of 32 cmH₂O with a minimal leak?

- A. Cuff is overinflated
- B. Obturator is in place
- C. Tube is too small**
- D. Tube is in the left mainstem bronchus

In a post-operative patient with a fenestrated tracheostomy tube, a cuff pressure of 32 cmH₂O with a minimal leak suggests that the cuff is adequately inflated to provide a seal without excessive pressure that could compromise the trachea. When considering why the cuff pressure is at this level, the size of the tube plays an essential role. A cuff pressure that indicates a minimal leak often signifies that the cuff is working efficiently to prevent air from escaping during ventilation. If the tube were too small, it is possible that the cuff would not be able to achieve adequate sealing characteristics, leading to a more pronounced leak instead of just a minimal one. Thus, having an appropriately sized tube is critical in ensuring that the cuff can maintain the right pressure. A more inflated cuff would not typically result in a minimal leak alongside a measured cuff pressure—instead, it would be more likely to show significant leakage. Furthermore, options regarding the obturator or positioning of the tube in the bronchus would present different clinical signs and implications, rather than influencing cuff pressure in this manner. Therefore, the identification of the tube size as the reason for the cuff pressure aligns with the physiological expectations for cuff function, especially in terms of achieving an appropriate seal in relation

5. During a home visit for a child with asthma, what is an effective measure to reduce triggers in the home?

- A. Place stuffed animals in the freezer for two hours each day
- B. Provide 60% humidity in the home
- C. Replace wood flooring with carpet
- D. Wash bed coverings with hot water**

Washing bed coverings with hot water is an effective measure to reduce asthma triggers in the home, particularly dust mites, which are a common allergen for many individuals with asthma. Dust mites thrive in warm, humid environments and often inhabit bedding, pillows, and other fabric items. By washing bed linens, pillowcases, and other washable bedding in hot water (ideally at temperatures of at least 130°F or 54°C), it helps to kill dust mites and remove their waste products, which can exacerbate asthma symptoms. This method is straightforward and can be easily integrated into regular household cleaning routines, making it a practical solution for asthma management. Keeping bedding clean and free of allergens directly supports the health of the child by minimizing potential triggers in their sleep environment. In contrast, while placing stuffed animals in the freezer can be a part of a strategy to control dust mites, it is less effective overall compared to washing bed coverings frequently. Maintaining 60% humidity can create a comfortable environment for some, but it may also promote dust mite proliferation if humidity levels rise above this threshold. Replacing wood flooring with carpet may unintentionally increase dust accumulation, making it an undesirable option for reducing triggers in the home.

6. Which term describes the amount of air exchanged during normal breathing?

- A. Inspiratory reserve volume
- B. Tidal volume**
- C. Expiratory reserve volume
- D. Vital capacity

Tidal volume refers to the amount of air that is inhaled or exhaled during normal breathing. It is a vital component in assessing pulmonary function because it represents the volume of air that is exchanged with each breath under resting conditions. Understanding tidal volume is essential in respiratory care as it provides insight into a patient's overall respiratory health. In healthy adults, tidal volume typically averages about 500 mL per breath. The other terms, while related to lung volumes and capacities, describe different aspects of respiratory physiology. Inspiratory reserve volume refers to the additional air that can be inhaled after a normal inhalation, whereas expiratory reserve volume is the additional air that can be exhaled after a normal exhalation. Vital capacity, on the other hand, is the total amount of air that can be forcibly exhaled after taking the deepest breath possible, encompassing both inspiratory and expiratory reserve volumes along with tidal volume.

7. In the context of respiratory diseases, the term "PPE" refers to what?

- A. Patient protective equipment
- B. Personal protective equipment**
- C. Public health equipment
- D. Physiological protective equipment

In the context of respiratory diseases, "PPE" stands for personal protective equipment. This term is critical in healthcare, particularly for respiratory therapists and other healthcare professionals who are exposed to infectious agents, airborne pathogens, and harmful chemicals. Personal protective equipment includes items such as masks, respirators, gloves, gowns, and face shields that help minimize the risk of transmission of diseases and protect the health of both the patient and the healthcare worker. The use of appropriate PPE is vital in preventing outbreaks of respiratory infections and ensuring safe care environments. It plays a significant role in personal safety during procedures that can aerosolize infectious material or come into contact with bodily fluids. Therefore, understanding what PPE entails and its importance in the context of respiratory diseases is essential for effective infection control and patient management in healthcare settings.

8. Which measure indicates how effectively the lungs are delivering oxygen to the cells?

- A. Partial pressure of oxygen (PaO₂)
- B. Carbon dioxide level (PaCO₂)
- C. Arterial oxygen saturation (SaO₂)**
- D. Respiratory rate

The measure that indicates how effectively the lungs are delivering oxygen to the cells is arterial oxygen saturation (SaO₂). This value represents the percentage of hemoglobin in the blood that is saturated with oxygen. A high SaO₂ indicates that a sufficient number of hemoglobin molecules are carrying oxygen, thus facilitating oxygen delivery to the tissues and cells in the body. In clinical practice, a normal SaO₂ level typically ranges from 95% to 100%, signifying effective oxygen transport. If the SaO₂ levels drop below this range, it can indicate potential issues with oxygenation that may need to be addressed. While the partial pressure of oxygen (PaO₂) also provides important information about oxygen levels in the blood, it does not directly quantify how well oxygen is being utilized or delivered to the tissues. Instead, it reflects the pressure exerted by oxygen in arterial blood. On the other hand, the carbon dioxide level (PaCO₂) indicates how well carbon dioxide is being eliminated from the body, which is relevant for assessing respiratory function, but does not directly measure oxygen delivery. The respiratory rate indicates how many breaths are taken per minute but does not assess the efficiency of oxygen delivery to the cells. Therefore, arterial oxygen

9. Which lung sound is associated with fluid in the alveoli?

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

The lung sound commonly associated with fluid in the alveoli is crackles, also known as rales. This sound occurs when air passes through fluid-filled alveoli or bronchial passages, creating a characteristic popping or crackling noise. It is most often heard during inhalation and indicates the presence of conditions such as pulmonary edema, pneumonia, or heart failure, where excess fluid accumulation in the lungs is present. In this context, understanding crackles is important because they indicate the presence of fluid where it normally should not be, which can significantly impact respiratory function and efficiency. Recognizing and interpreting this sound during assessment can guide healthcare providers in determining the severity of a patient's condition and the need for further interventions or treatments.

10. A patient receiving oxygen via a 35% venturi mask has arterial blood gas results showing a PaO₂ of 150 torr. What action should the therapist take?

- A. Maintain current therapy
- B. Discontinue the oxygen therapy
- C. Change the device to a nasal cannula
- D. Pull the bed sheets away from the mask**

In this scenario, the arterial blood gas results indicating a PaO₂ of 150 torr suggest that the patient is receiving an adequate or possibly excessive level of oxygen, given that a normal range for PaO₂ at sea level is approximately 75 to 100 torr. While a venturi mask is designed to deliver a specific concentration of oxygen, an unexpectedly high PaO₂ may indicate that the delivery system is functioning properly but that the patient's oxygen consumption or ventilation status has changed. Pulling the bed sheets away from the mask is significant because it ensures that there is no obstruction or interference with the flow of oxygen. Venturi masks rely on a proper fit and unobstructed airflow to maintain the intended delivered oxygen concentration. If bed sheets are crowding the mask, they may limit the effective delivery of oxygen or pose a risk of creating a hypoxic situation by blocking the mask openings. Taking this action enables the therapist to ensure that the patient continues to receive the prescribed oxygen therapy while assessing whether the oxygen delivery system remains effective and safe without compromising the correct function of the mask or the patient's respiratory needs.

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://ketteringregrespiratory.examzify.com>

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

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