

Kettering Registered Respiratory 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 the respiratory therapist monitor in a patient who has been started on lasix and has a nasogastric tube inserted?**
 - A. Cardiac enzymes**
 - B. Serum electrolytes**
 - C. Arterial blood gases**
 - D. Cell hydration level**

- 2. What is the primary complication from mechanical ventilation?**
 - A. Pneumothorax**
 - B. Ventilator-associated lung injury (VALI)**
 - C. Barotrauma**
 - D. Ventilator-induced lung disease**

- 3. What type of oxygen delivery system has a fixed oxygen concentration?**
 - A. Non-rebreather mask**
 - B. Nasal cannula**
 - C. Simple face mask**
 - D. Venturi mask**

- 4. What might be indicated in the initial assessment of a post-operative patient with sudden chest pain and difficulty breathing?**
 - A. ECG**
 - B. CBC**
 - C. Serum electrolytes**
 - D. Lateral decubitus radiograph**

- 5. What is the purpose of incentive spirometry?**
 - A. To measure lung volume**
 - B. To encourage voluntary deep breathing to prevent atelectasis**
 - C. To assess respiratory muscle strength**
 - D. To improve oxygen delivery**

- 6. What should a respiratory therapist do if a patient develops dyspnea and crepitus after a tracheostomy tube change?**
- A. Suction the patient**
 - B. Insert a larger tracheostomy tube**
 - C. Reposition the tracheostomy tube**
 - D. Administer an antihistamine**
- 7. Which patient parameter is crucial for initiating a successful smoking cessation program?**
- A. Previous quit attempts**
 - B. Familial history of lung disease**
 - C. Current medication list**
 - D. Occupation**
- 8. During initial auscultation, the presence of an S4 and a murmur suggests that which diagnostic test should be recommended?**
- A. Electrocardiogram**
 - B. Lateral decubitus radiogram**
 - C. Echocardiogram**
 - D. Ventilation-perfusion scan**
- 9. What is the primary function of surfactant in the lungs?**
- A. To increase oxygen uptake**
 - B. To reduce surface tension and prevent alveolar collapse**
 - C. To assist in gas exchange**
 - D. To facilitate airflow into the lungs**
- 10. A patient develops a cough while receiving aerosol therapy. What should the therapist monitor for?**
- A. Respiratory rate**
 - B. Oxygen saturation**
 - C. Airway resistance**
 - D. Signs of bronchospasm**

Answers

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

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Explanations

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1. What should the respiratory therapist monitor in a patient who has been started on lasix and has a nasogastric tube inserted?

- A. Cardiac enzymes**
- B. Serum electrolytes**
- C. Arterial blood gases**
- D. Cell hydration level**

Monitoring serum electrolytes is crucial for a patient who has been started on lasix (furosemide), especially when they have a nasogastric tube inserted. Lasix is a loop diuretic commonly used to manage fluid overload conditions such as heart failure, and it influences electrolyte balance by inhibiting the reabsorption of sodium and chloride in the kidneys. This can lead to significant losses of electrolytes such as potassium and magnesium. When a patient has a nasogastric tube, it may also cause losses of electrolytes and other nutrients due to gastric drainage, compounding the risk of electrolyte imbalance. Regular monitoring of serum electrolytes helps ensure that levels remain within normal ranges, allowing for timely interventions if abnormalities are detected, which is vital for patient safety and overall health. While cardiac enzymes, arterial blood gases, and cell hydration levels may be important in certain clinical situations, they are not as directly relevant to the immediate effects of lasix in the context of electrolyte management in this scenario. Thus, the focus on serum electrolytes is particularly pertinent for ensuring optimum patient care under these conditions.

2. What is the primary complication from mechanical ventilation?

- A. Pneumothorax**
- B. Ventilator-associated lung injury (VALI)**
- C. Barotrauma**
- D. Ventilator-induced lung disease**

The primary complication from mechanical ventilation is ventilator-associated lung injury (VALI). This term encompasses various forms of lung damage that can occur due to mechanical ventilation, primarily arising from inappropriate ventilatory settings or excessive tidal volumes and pressures. VALI can lead to the development of conditions like acute respiratory distress syndrome (ARDS), contributing to lung inflammation, atelectasis, and even pulmonary edema. Mechanical ventilation can be a life-saving intervention, but it requires careful monitoring and management to minimize the risk of VALI. This form of injury emphasizes the need for lung-protective strategies, such as low tidal volume ventilation, to prevent harm to lung tissue while still providing adequate ventilation and oxygenation. Other complications like pneumothorax, barotrauma, and ventilator-induced lung disease are indeed associated with mechanical ventilation, but they tend to occur less frequently compared to VALI. They are typically considered specific events or injuries rather than the broader category of complications highlighted by VALI, which represents the overall risk of lung injury that can arise from mechanical ventilation practices.

3. What type of oxygen delivery system has a fixed oxygen concentration?

- A. Non-rebreather mask**
- B. Nasal cannula**
- C. Simple face mask**
- D. Venturi mask**

A non-rebreather mask is designed to provide a high concentration of oxygen to a patient. It consists of a mask connected to an oxygen source, with a reservoir bag that fills with oxygen. During inhalation, the patient receives nearly pure oxygen from the bag while the one-way valves prevent exhaled air from entering the bag. This setup allows for the delivery of a consistent and high concentration of oxygen, making it a reliable source in emergency situations or for patients requiring intensive oxygen therapy. However, it's important to note that the other devices mentioned do not deliver a fixed oxygen concentration as effectively. A nasal cannula provides variable oxygen concentrations based on the patient's breathing pattern and flow rate. A simple face mask also offers a variable concentration since it relies on the patient's exhaled air mixing with the oxygen supplied. The Venturi mask, while known for its ability to deliver predetermined oxygen concentrations, achieves this by using different-sized adapters to mix room air with oxygen, yet it still permits modulation of the delivered concentration based on airflow and other factors. Thus, the non-rebreather mask stands out for its ability to supply a high and consistent oxygen concentration, making it the correct answer in this context.

4. What might be indicated in the initial assessment of a post-operative patient with sudden chest pain and difficulty breathing?

- A. ECG**
- B. CBC**
- C. Serum electrolytes**
- D. Lateral decubitus radiograph**

In the initial assessment of a post-operative patient experiencing sudden chest pain and difficulty breathing, an electrocardiogram (ECG) is a crucial diagnostic tool. The ECG is essential for evaluating the heart's electrical activity and can help identify any acute cardiac conditions such as myocardial infarction or arrhythmias, which may present with similar symptoms. The urgency of sudden chest pain and respiratory distress in a post-operative setting necessitates prompt assessment for cardiac complications, making the ECG a priority. While other diagnostic tests such as a complete blood count (CBC), serum electrolytes, or lateral decubitus radiographs can provide valuable information in a broader clinical context, they are not as immediately pertinent in ruling out acute cardiac issues. An ECG provides rapid feedback about the patient's cardiac status, which is vital for timely medical intervention and management of the situation.

5. What is the purpose of incentive spirometry?

- A. To measure lung volume
- B. To encourage voluntary deep breathing to prevent atelectasis**
- C. To assess respiratory muscle strength
- D. To improve oxygen delivery

Incentive spirometry is primarily designed to encourage patients to engage in voluntary deep breathing exercises. This practice is crucial in preventing atelectasis, which is the collapse of part or all of a lung. By using an incentive spirometer, patients are motivated to inhale deeply and hold their breath, allowing for the expansion of lung tissue and improving ventilation. This is particularly important postoperatively or in patients with conditions that may predispose them to respiratory complications. Deep breathing helps to re-inflate collapsed alveoli, increases lung compliance, and enhances gas exchange. The device often includes visual feedback, which encourages patients to achieve and maintain a target inspiratory volume, further promoting lung expansion and preventing the stasis of pulmonary secretions. While measuring lung volume, assessing respiratory muscle strength, and improving oxygen delivery are important aspects of respiratory care, they are not the primary focus of incentive spirometry. The device is not intended for direct measurement of lung volumes or strength assessment, nor is it designed specifically to enhance oxygen delivery—its main role is to support respiratory health by preventing complicating factors associated with shallow breathing.

6. What should a respiratory therapist do if a patient develops dyspnea and crepitus after a tracheostomy tube change?

- A. Suction the patient
- B. Insert a larger tracheostomy tube
- C. Reposition the tracheostomy tube**
- D. Administer an antihistamine

When a patient develops dyspnea (difficulty breathing) and crepitus (a crackling sound or sensation under the skin) after a tracheostomy tube change, the primary concern is often related to the proper positioning and placement of the tracheostomy tube. Repositioning the tracheostomy tube may help alleviate any obstruction or irritation that could be causing the dyspnea. Crepitus can indicate subcutaneous emphysema or air escaping into surrounding tissues, which may also be affecting the airway's patency. By carefully repositioning the tracheostomy tube, a respiratory therapist can ensure that the airway is clear and that the tube is properly placed in the trachea, thus improving the patient's ability to breathe comfortably. Suctioning the patient might be appropriate if there is an obvious issue with airway secretions, but considering the recent tube change and the presence of crepitus, repositioning is more critical at this moment. Inserting a larger tube could pose further complications if it's not warranted or appropriate for the patient, and administering an antihistamine is unlikely to address the immediate airway concerns related to the mechanical aspects of the tracheostomy tube. Therefore, repositioning the tracheost

7. Which patient parameter is crucial for initiating a successful smoking cessation program?

- A. Previous quit attempts**
- B. Familial history of lung disease**
- C. Current medication list**
- D. Occupation**

Initiating a successful smoking cessation program often hinges on understanding a patient's previous quit attempts. This parameter provides valuable insights into the individual's experiences with past cessation efforts, including what strategies they used, the challenges they faced, and their motivation levels at the time of those attempts. Such information can help healthcare providers tailor a more effective and personalized approach to support the patient in their current quit attempt. Factors like familiarity with various cessation methods and knowledge about triggers from previous attempts can empower the patient and enhance the chances of success. While familial history of lung disease, current medication list, and occupation may provide some context about a patient's health and lifestyle, they do not directly inform the strategies necessary for quitting smoking as comprehensively as prior quit attempts do. Prior attempts reveal behavioral patterns and may guide the selection of interventions that are more likely to resonate with the patient's unique circumstances, making this parameter particularly crucial in designing an effective cessation program.

8. During initial auscultation, the presence of an S4 and a murmur suggests that which diagnostic test should be recommended?

- A. Electrocardiogram**
- B. Lateral decubitus radiogram**
- C. Echocardiogram**
- D. Ventilation-perfusion scan**

The presence of an S4 heart sound and a murmur during auscultation indicates potential issues with heart function or structure. An S4 heart sound is often associated with conditions such as left ventricular hypertrophy due to hypertension or ischemic heart disease, suggesting that the heart is under strain or has reduced compliance. Additionally, the presence of a murmur can indicate a variety of conditions, including valvular heart disease or other structural heart abnormalities. Given this context, an echocardiogram is the most appropriate diagnostic test to recommend. It provides a detailed visual assessment of heart structure and function, allowing for the evaluation of chamber sizes, wall motion, and the presence of any valvular abnormalities. This imaging modality can help diagnose conditions such as aortic stenosis, mitral regurgitation, or hypertrophic cardiomyopathy, which could be contributing to the S4 sound and murmur noted during auscultation. Other diagnostic tests, while useful in different contexts, do not provide the same level of detail regarding cardiac structure and function. An electrocardiogram primarily assesses electrical activity rather than structural abnormalities, a lateral decubitus radiogram is not standard for evaluating heart conditions, and a ventilation-perfusion scan is focused on pulmonary function rather

9. What is the primary function of surfactant in the lungs?

- A. To increase oxygen uptake
- B. To reduce surface tension and prevent alveolar collapse**
- C. To assist in gas exchange
- D. To facilitate airflow into the lungs

Surfactant plays a crucial role in lung function by reducing surface tension in the alveoli, which are the small air sacs in the lungs where gas exchange occurs. By lowering the surface tension, surfactant helps keep the alveoli open and prevents them from collapsing, especially during exhalation when the volume of air is lower. This property is essential for maintaining proper lung function and effective ventilation, as collapsed alveoli would hinder gas exchange and lead to decreased oxygenation of the blood. While oxygen uptake, gas exchange, and airflow are vital aspects of respiratory function, they rely on the structural integrity and stability of the alveoli, which is directly supported by the function of surfactant. Therefore, the primary role of surfactant centers on reducing surface tension and ensuring that the alveoli remain patent and functional, which facilitates efficient gas exchange and overall respiratory mechanics.

10. A patient develops a cough while receiving aerosol therapy. What should the therapist monitor for?

- A. Respiratory rate
- B. Oxygen saturation
- C. Airway resistance
- D. Signs of bronchospasm**

When a patient develops a cough during aerosol therapy, it is important for the therapist to monitor for signs of bronchospasm. This is because aerosolized medications can sometimes trigger bronchospasm, especially in sensitive individuals or those with reactive airway conditions such as asthma. Bronchospasm may present as an increase in coughing, wheezing, or shortness of breath. Recognizing these signs early allows for timely intervention, which can include adjusting the therapy or administering bronchodilators to relieve the spasm. While monitoring respiratory rate, oxygen saturation, and airway resistance are also important during aerosol therapy, they don't specifically address the acute response that could be indicative of bronchospasm. Increased respiratory rate may occur due to various factors, oxygen saturation provides information about the patient's overall oxygenation status, and airway resistance can indicate changes in airflow but does not directly reflect the patient's immediate reaction to the aerosol treatment. In this context, monitoring for bronchospasm is the most relevant and critical response to the patient's developing cough.

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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