

NBRC Therapist Multiple-Choice (TMC) Practice Exam (Sample)

Study Guide



Everything you need from our exam experts!

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Table of Contents

Copyright	1
Table of Contents	2
Introduction	3
How to Use This Guide	4
Questions	5
Answers	8
Explanations	10
Next Steps	16

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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 is the primary purpose of a CBC performed on a patient suspected of internal organ trauma?**
 - A. Evaluate the blood for certain proteins**
 - B. Assess for internal hemorrhaging**
 - C. Calculate oxygen delivery potential**
 - D. Examine the patient for infection**

- 2. What is the optimal tidal volume for a pediatric patient suspected of having impaired gas exchange?**
 - A. 100 ml**
 - B. 200 ml**
 - C. 300 ml**
 - D. 400 ml**

- 3. While providing manual ventilation, the respiratory therapist notices little chest movement and a "hissing" sound during manual inspiratory attempts. What should the therapist do?**
 - A. A. Obtain another bag-valve device**
 - B. B. Remove the inlet valve on the resuscitation bag device**
 - C. C. Increase the oxygen flow to the bag-valve device**
 - D. D. Extubate and begin bag-valve ventilation with an inflatable mask**

- 4. What is the primary function of digitalis in patient care?**
 - A. Lowers blood pressure**
 - B. Increases heart rate**
 - C. Increases blood pressure**
 - D. Increases strength of cardiac contractility**

- 5. Which statement regarding non-invasive ventilation is correct?**
 - A. It is used primarily in patients with pulmonary barotrauma.**
 - B. It should not be utilized in patients with obstructive sleep apnea.**
 - C. It can help to improve oxygenation in patients with respiratory failure.**
 - D. It requires intubation for effective treatment.**

- 6. What likely condition is indicated by elevated CVP and mPAP values in a patient?**
- A. Fluid overload**
 - B. Congestive heart failure**
 - C. Cor pulmonale**
 - D. Pulmonary embolism**
- 7. BID is a common frequency order for which of the following respiratory medications?**
- A. A. Albuterol**
 - B. B. Flovent**
 - C. C. Ativan**
 - D. D. Xopenex**
- 8. For a patient experiencing an acute on chronic episode with known COPD, which ABG results would be expected?**
- A. pH 7.28, PaCO₂ 62 mm Hg, PaO₂ 49 mm Hg, HCO₃⁻ 33 mEq/L**
 - B. pH 7.33, PaCO₂ 55 mm Hg, PaO₂ 52 mm Hg, HCO₃⁻ 30 mEq/L**
 - C. pH 7.48, PaCO₂ 50 mm Hg, PaO₂ 51 mm Hg, HCO₃⁻ 34 mEq/L**
 - D. pH 7.51, PaCO₂ 35 mm Hg, PaO₂ 60 mm Hg, HCO₃⁻ 29 mEq/L**
- 9. What postural drainage position is most conducive to draining the basal, anterior, and lateral segments?**
- A. Prone**
 - B. Supine**
 - C. Lateral side, quarter turn**
 - D. Trendelenburg - head down 30 degrees**
- 10. What is expected to decrease if inspiratory flow is reduced but the respiratory rate remains unchanged?**
- A. Expiratory time**
 - B. Inspiratory time**
 - C. Gas distribution**
 - D. I:E ratio**

Answers

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

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Explanations

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1. What is the primary purpose of a CBC performed on a patient suspected of internal organ trauma?

- A. Evaluate the blood for certain proteins**
- B. Assess for internal hemorrhaging**
- C. Calculate oxygen delivery potential**
- D. Examine the patient for infection**

The primary purpose of a Complete Blood Count (CBC) in a patient suspected of internal organ trauma is to assess for internal hemorrhaging. When there is trauma to internal organs, one of the most critical concerns is the possibility of bleeding that can lead to shock or other serious complications. A CBC provides valuable information regarding the patient's hematocrit and hemoglobin levels, which can indicate whether there is significant blood loss. An abnormally low hemoglobin level can suggest that the patient has lost a notable volume of blood, prompting further investigation and management for potential hemorrhagic complications. This assessment is essential in an emergency setting to determine the urgency of interventions required. Other aspects of a CBC, such as white blood cell counts, may provide insight into infection, but the immediate priority in cases of suspected trauma is often to identify and manage any internal bleeding.

2. What is the optimal tidal volume for a pediatric patient suspected of having impaired gas exchange?

- A. 100 ml**
- B. 200 ml**
- C. 300 ml**
- D. 400 ml**

In pediatric patients, determining the optimal tidal volume is critical, especially when addressing conditions that can impair gas exchange. The typical recommendation for tidal volume in mechanically ventilated children is about 6 to 8 ml/kg of the patient's ideal body weight. To apply this to your scenario, consider that tidal volume should strike a balance between ensuring adequate ventilation and avoiding potential lung injury associated with over-distension. The choice of 200 ml is often within the reasonable range for a pediatric patient, as it reflects a volume that supports adequate alveolar ventilation while helping to prevent barotrauma or volutrauma. The selected 200 ml tidal volume would typically be suitable for a pediatric patient weighing approximately 25-30 kg, ensuring that the ventilation is sufficient without exceeding safe limits. Tidal volumes that are too low (like 100 ml) would not effectively ventilate the patient, risking hypoventilation and further gas exchange impairment. Similarly, larger tidal volumes (300 ml or 400 ml) could lead to over-distension of alveoli and increased peak pressures in the lungs, which could compromise further gas exchange and lead to lung injury. Thus, 200 ml represents a balanced approach considering both gas exchange needs and the protection of lung integrity.

3. While providing manual ventilation, the respiratory therapist notices little chest movement and a "hissing" sound during manual inspiratory attempts. What should the therapist do?

A. A. Obtain another bag-valve device

B. B. Remove the inlet valve on the resuscitation bag device

C. C. Increase the oxygen flow to the bag-valve device

D. D. Extubate and begin bag-valve ventilation with an inflatable mask

In this situation, the presence of little chest movement along with a "hissing" sound during manual ventilation indicates that there may be a problem with the bag-valve device being used. The "hissing" sound often suggests that there is leakage within the system, which can be due to a defective or poorly fitting bag-valve device. Obtaining another bag-valve device is the most appropriate action because it allows for a reassessment of the equipment being used. A functioning bag-valve device is crucial for effective ventilation. If the current device is compromised, switching to a new one can help ensure proper sealing and effective delivery of breaths to the patient. While the other options may seem plausible in different contexts, they do not address the immediate concern of ensuring adequate ventilation effectively. For example, removing the inlet valve may lead to more complications or exacerbate the issue. Increasing the oxygen flow might not resolve the leakage, and extubating the patient could further jeopardize the patient's respiratory status. Therefore, obtaining another bag-valve device directly addresses the underlying issue of ineffective manual ventilation.

4. What is the primary function of digitalis in patient care?

A. Lowers blood pressure

B. Increases heart rate

C. Increases blood pressure

D. Increases strength of cardiac contractility

Digitalis, which is derived from the foxglove plant, primarily functions by increasing the strength of cardiac contractility. This effect is particularly beneficial for patients with heart failure or certain types of arrhythmias. The enhanced contractility—also known as positive inotropic effect—enables the heart to pump more efficiently, thereby improving cardiac output and overall circulation. This mechanism helps alleviate symptoms associated with decreased heart function, such as fatigue and shortness of breath, and can contribute to better exercise tolerance in patients with heart failure. By directly impacting myocardial cell function through the inhibition of the sodium-potassium ATPase pump, digitalis influences intracellular calcium levels, resulting in stronger heart contractions. This attribute makes digitalis a critical component in the management of heart failure and other cardiac conditions. The other options provided do not encapsulate the primary function of digitalis in patient care, focusing instead on effects that digitalis does not primarily achieve.

5. Which statement regarding non-invasive ventilation is correct?

- A. It is used primarily in patients with pulmonary barotrauma.**
- B. It should not be utilized in patients with obstructive sleep apnea.**
- C. It can help to improve oxygenation in patients with respiratory failure.**
- D. It requires intubation for effective treatment.**

The statement that non-invasive ventilation can help to improve oxygenation in patients with respiratory failure is correct because non-invasive ventilation (NIV) is designed to support patients who are experiencing respiratory distress without the need for invasive procedures like intubation. NIV uses the patient's own airway and delivers positive pressure ventilation to maintain or improve ventilation and oxygenation. NIV can effectively address various forms of respiratory failure, including conditions such as chronic obstructive pulmonary disease (COPD) exacerbations, acute cardiogenic pulmonary edema, and in some cases, hypoxic respiratory failure. By providing ventilatory support and improving alveolar ventilation, non-invasive methods can enhance oxygenation and also reduce the work of breathing for patients who are struggling to breathe effectively. This contrasts with the other statements. For instance, non-invasive ventilation is not indicated for pulmonary barotrauma (as mentioned in option A), and it is often utilized in patients with obstructive sleep apnea—contradicting what is stated in option B. It also is specifically designed to avoid the need for intubation (which relates to option D), carrying the additional benefit of reducing the risks and complications associated with endotracheal tubes.

6. What likely condition is indicated by elevated CVP and mPAP values in a patient?

- A. Fluid overload**
- B. Congestive heart failure**
- C. Cor pulmonale**
- D. Pulmonary embolism**

Elevated Central Venous Pressure (CVP) and mean Pulmonary Artery Pressure (mPAP) values are indicative of increased volume in the right side of the heart or increased resistance in the pulmonary circulation. Congestive heart failure (CHF) is characterized by the heart's inability to pump effectively, leading to increased pressures in the venous system and the pulmonary circulation. In CHF, fluid overload occurs as the heart struggles to manage the body's demands, resulting in congestion. Elevated CVP reflects increased pressure in the venous return system due to the heart's compromised ability to manage blood flow, while elevated mPAP indicates stress placed upon the pulmonary arteries, often seen in left-sided heart failure where back pressure is exerted into the lungs. The other conditions may present elevated pressures to some extent, but they do not consistently indicate the same systemic volume overload and heart inefficiency characterized specifically by congestive heart failure. For instance, cor pulmonale and pulmonary embolism might lead to increased pressures in the pulmonary artery, but they are typically associated with distinct underlying pathophysiological mechanisms that do not account for systemic fluid overload in the same way as CHF does.

7. BID is a common frequency order for which of the following respiratory medications?

- A. A. Albuterol
- B. B. Flovent**
- C. C. Ativan
- D. D. Xopenex

BID stands for "twice daily," which is a common dosing frequency for several respiratory medications, particularly inhaled corticosteroids and some long-acting agents. Flovent, which contains the active ingredient fluticasone propionate, is an inhaled corticosteroid used for the management of persistent asthma and chronic obstructive pulmonary disease (COPD). Administering Flovent twice daily helps maintain effective control of airway inflammation, making it appropriate for chronic use. While other medications mentioned may have different dosing schedules, Flovent's recommended usage aligns well with the BID frequency to ensure steady plasma levels of the medication, contributing to its efficacy in reducing asthma attacks or exacerbations in patients with chronic respiratory conditions. This consistent dosing is vital for chronic management rather than as a rescue or acute treatment, which differentiates it from medications used more sporadically.

8. For a patient experiencing an acute on chronic episode with known COPD, which ABG results would be expected?

- A. pH 7.28, PaCO₂ 62 mm Hg, PaO₂ 49 mm Hg, HCO₃⁻ 33 mEq/L
- B. pH 7.33, PaCO₂ 55 mm Hg, PaO₂ 52 mm Hg, HCO₃⁻ 30 mEq/L
- C. pH 7.48, PaCO₂ 50 mm Hg, PaO₂ 51 mm Hg, HCO₃⁻ 34 mEq/L**
- D. pH 7.51, PaCO₂ 35 mm Hg, PaO₂ 60 mm Hg, HCO₃⁻ 29 mEq/L

For a patient with chronic obstructive pulmonary disease (COPD) experiencing an acute on chronic episode, the expected arterial blood gas (ABG) results would reflect a combination of respiratory acidosis and potential metabolic compensation. In the context of COPD, patients are often in a state of respiratory acidosis due to retained carbon dioxide (PaCO₂), especially during acute exacerbations. In this scenario, the normal range for pH is approximately 7.35 to 7.45. A pH lower than 7.35 indicates acidemia, while a pH above 7.45 indicates alkalemia. COPD patients typically retain CO₂, leading to increased PaCO₂ levels, which can exacerbate acidosis. The correct choice shows a pH of 7.48, which indicates a slight alkalosis. The PaCO₂ level is 50 mm Hg, somewhat elevated but not extremely high, suggesting that there is some respiratory compensation taking place, possibly as the body tries to manage the CO₂ retention often seen in COPD. The HCO₃⁻ level is 34 mEq/L, which is elevated, indicating a metabolic compensation that may develop over time in response to chronic respiratory acidosis. Thus, the selected results

9. What postural drainage position is most conducive to draining the basal, anterior, and lateral segments?

- A. Prone**
- B. Supine**
- C. Lateral side, quarter turn**
- D. Trendelenburg - head down 30 degrees**

The Trendelenburg position, where the patient is positioned with their head down by 30 degrees, is particularly effective in promoting drainage of the basal, anterior, and lateral segments of the lungs. This inclination enhances the gravitational pull on secretions located in the lower lobes, facilitating their movement toward the central airways where they can be cleared more easily through coughing or suctioning. In this position, the body's alignment allows the bronchial tree's anatomy to favor drainage from these specific segments. The basal segments, being located at the bottom of the lungs, benefit significantly from this downward angle, as secretions can move more readily into the mainstem bronchi. Other positions such as prone or supine do not utilize gravity to the same advantage for these segments. Lateral positioning can help with draining specific segments of the lung, but a quarter turn may not effectively target every segment required for complete drainage, particularly in comparison to the significant effectiveness of a calculated tilt in the Trendelenburg position. Thus, the Trendelenburg position is most conducive to draining the targeted pulmonary segments effectively.

10. What is expected to decrease if inspiratory flow is reduced but the respiratory rate remains unchanged?

- A. Expiratory time**
- B. Inspiratory time**
- C. Gas distribution**
- D. I:E ratio**

When inspiratory flow is reduced but the respiratory rate remains unchanged, the amount of time allotted for inspiration will increase, leading to a proportional decrease in the time available for expiration. This is a direct consequence of the relationship between inspiratory and expiratory phases in breathing. By maintaining the same respiratory rate, the total cycle time of breathing remains constant. Thus, if the inspiratory flow decreases, it takes longer to deliver the same volume of air into the lungs during the inspiration phase, which ultimately compresses the expiratory phase to fit into the same total time frame. This results in a decrease in expiratory time, as the breathing cycle is stretched out due to the slower inspiratory flow. Understanding this relationship is fundamental to respiratory mechanics and illustrates how changes in one aspect of breathing can significantly affect the overall pattern and timing of ventilation.

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://nbrctmc.examzify.com>

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

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