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

Study Guide

Everything you need from our exam experts!

This is a sample study guide. To access the full version with hundreds of questions,

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Table of Contents

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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. Don't worry about getting everything right, 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, and take breaks to retain information better.

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.

7. Use Other Tools

Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.

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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. **Which of the following findings is most closely associated with increased airway resistance?**

   A. reduced SpO2

   B. accessory muscle use

   C. altered P50

   D. increased PetCO2

2. **When monitoring a patient's respiratory status, what is a sign of respiratory distress that requires immediate attention?**

   A. Diminished breath sounds

   B. Difficulty speaking between breaths

   C. Increased respiratory rate

   D. Use of accessory muscles to breathe

3. **What assessment can help determine if a patient's FIO2 is adequate?**

   A. Respiratory rate monitoring

   B. Chest x-ray interpretation

   C. Arterial blood gas analysis

   D. Patient oxygen saturation via pulse oximetry

4. **A patient complains of shortness of breath during a nebulizer treatment with hypertonic saline. What should the respiratory therapist do first?**

   A. Discontinue therapy and notify the physician

   B. Add Albuterol to the nebulizer treatment

   C. Switch to normal saline

   D. Switch to hypotonic saline

5. **What medication would be ineffective when attempting to accommodate a cough reflex during bronchoscopy?**

   A. Lidocaine

   B. Aprocaine

   C. Anectine

   D. Mezocaline

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6. What could the respiratory therapist conclude from inaccurate results using a calibrated syringe for pulmonary function testing?

A. A. The syringe requires recalibration.

B. B. The room temperature should be raised before retesting.

C. C. The PFT equipment requires calibration or maintenance.

D. D. The equipment is acceptable for patient testing.

7. How many milliliters of a bronchodilator would be needed to deliver 10 mg of a drug at a strength of 0.5%?

A. 1 mL

B. 2 mL

C. 3 mL

D. 5 mL

8. What is the function of a non-rebreathing mask in heliox therapy?

A. To provide high flow oxygen

B. To reduce the work of breathing

C. To minimize carbon dioxide retention

D. To ensure delivery of helium and oxygen mix

9. What should be the first step for a patient on VC, A/C ventilation with poor laboratory data?

A. Increase FIO2 to 1.0

B. Administer Dopamine, IV

C. Flush the PA catheter

D. Decrease PEEP

10. What is indicated by a high arterial carbon dioxide (PCO2) level in an ABG analysis?

A. Respiratory alkalosis

B. Metabolic alkalosis

C. Respiratory acidosis

D. Metabolic acidosis

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Answers

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

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Explanations

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1. Which of the following findings is most closely associated with increased airway resistance?

A. reduced SpO2

B. accessory muscle use

C. altered P50

D. increased PetCO2

Increased airway resistance is primarily characterized by the difficulty of airflow through the airways, which can lead to various physiological adaptations and clinical signs. Accessory muscle use is a direct response to increased airway resistance, as patients may struggle to breathe efficiently. When the airways are obstructed or narrowed, the body compensates by recruiting additional muscle groups, such as the sternocleidomastoid and scalene muscles, to facilitate breathing. This is especially evident during expiration, which can become labored in the presence of obstructive airway diseases such as asthma or chronic obstructive pulmonary disease (COPD). The other findings do not directly indicate increased airway resistance. Reduced SpO2, for instance, may result from various conditions including but not limited to airway resistance—it signifies hypoxemia but does not specifically implicate it. Altered P50, on the other hand, refers to changes in hemoglobin's affinity for oxygen, and while it can be affected by various physiological factors or conditions, it does not correlate directly with airway resistance. Increased PetCO2 reflects issues related to ventilation and may occur with inadequate gas exchange, potentially in the context of compromised ventilation but does not specifically point to increased airway resistance. Thus, the use of accessory muscles is the

2. When monitoring a patient’s respiratory status, what is a sign of respiratory distress that requires immediate attention?

A. Diminished breath sounds

B. Difficulty speaking between breaths

C. Increased respiratory rate

D. Use of accessory muscles to breathe

Difficulty speaking between breaths is a significant indicator of respiratory distress that necessitates immediate attention. When a patient has trouble completing sentences or speaking in a normal rhythm because they are struggling to catch their breath, it suggests that their respiratory system is severely compromised. This increased work of breathing may indicate a significant obstruction or distress in gas exchange, which can be life-threatening if not addressed promptly. Diminished breath sounds can suggest an underlying issue but may not immediately reflect the gravity of the situation compared to the inability to speak comfortably. An increased respiratory rate is a common response to many conditions, and while it is a sign of respiratory distress, it can vary based on multiple factors, thus requiring further evaluation. The use of accessory muscles to breathe is concerning and indicates increased work of breathing, but it does not always correlate directly with the patient's ability to communicate their distress effectively. Overall, difficulty in speaking between breaths indicates a heightened level of respiratory distress that requires swift intervention to prevent further complications.

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3. What assessment can help determine if a patient's FIO2 is adequate?

A. Respiratory rate monitoring

B. Chest x-ray interpretation

C. Arterial blood gas analysis

D. Patient oxygen saturation via pulse oximetry

Arterial blood gas (ABG) analysis is a vital assessment tool for determining whether a patient's fraction of inspired oxygen (FIO2) is adequate. This test measures various parameters in the blood, including oxygen levels, carbon dioxide levels, blood pH, and bicarbonate concentration. Specifically, the arterial oxygen tension (PaO2) obtained from the ABG provides crucial information about how well oxygen is being transferred from the lungs to the blood, thus reflecting the effectiveness of the FIO2 administered. When evaluating FIO2 adequacy, clinicians particularly look at the PaO2 in relation to the FIO2 to ensure that oxygenation is sufficient. For example, if a patient is receiving a high FIO2 but has a low PaO2, this may indicate inadequate oxygenation and necessitate further intervention. Conversely, a high PaO2 in relation to FIO2 would suggest that the oxygen therapy is effective. Other assessment methods, while useful for various clinical indications, do not directly provide the same specific information regarding FIO2 adequacy. Monitoring respiratory rate can indicate changes in a patient's respiratory effort or distress but does not measure gas exchange directly. Chest x-ray interpretation can reveal issues such as consolidation or fluid, which

4. A patient complains of shortness of breath during a nebulizer treatment with hypertonic saline. What should the respiratory therapist do first?

A. Discontinue therapy and notify the physician

B. Add Albuterol to the nebulizer treatment

C. Switch to normal saline

D. Switch to hypotonic saline

When a patient experiences shortness of breath during nebulizer treatment with hypertonic saline, the priority is to ensure the patient's safety and address their immediate symptoms. Discontinuing the therapy is the appropriate first step because hypertonic saline can cause bronchospasm or irritation in some patients, leading to increased airway resistance and shortness of breath. By stopping the treatment, the respiratory therapist can prevent further exacerbation of the patient's symptoms and assess the situation more thoroughly. It is crucial to monitor the patient's condition and determine whether additional interventions, such as notifying the physician or administering bronchodilators, are necessary after the immediate issue is addressed. Other options, while they may seem relevant, are not the immediate priority. Adding Albuterol could help open the airways, but it does not address the situation of ongoing distress directly. Switching to normal saline or hypotonic saline also does not take into account the fact that the patient is currently in distress; instead, the first action should be to stop the treatment and evaluate the patient's response further. Therefore, prioritizing the patient's safety by discontinuing the therapy is the correct action.

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5. What medication would be ineffective when attempting to accommodate a cough reflex during bronchoscopy?

A. Lidocaine

B. Aprocaine

C. Anectine

D. Mezocaline

Anectine, known generically as succinylcholine, is a neuromuscular blocker that induces muscle paralysis. It works by binding to nicotinic acetylcholine receptors at the neuromuscular junction, preventing muscle contractions. During a procedure like bronchoscopy, which involves visualizing and performing interventions in the airways, it's essential that the cough reflex remains intact to protect the airway from aspiration and other complications. By using a neuromuscular blocker like Anectine, the cough reflex would be suppressed, making it ineffective for accommodating the cough reflex during bronchoscopy. This is critical because maintaining an active cough reflex can help clear secretions and prevent complications during the procedure. In contrast, local anesthetics like lidocaine and aprocaine would numb the mucosal surfaces without affecting the patient's ability to cough, preserving the protective airway reflexes needed during bronchoscopy.

6. What could the respiratory therapist conclude from inaccurate results using a calibrated syringe for pulmonary function testing?

A. A. The syringe requires recalibration.

B. B. The room temperature should be raised before retesting.

C. C. The PFT equipment requires calibration or maintenance.

D. D. The equipment is acceptable for patient testing.

When results from pulmonary function testing (PFT) using a calibrated syringe are inaccurate, the respiratory therapist would conclude that the equipment itself requires calibration or maintenance. This is because a calibrated syringe is designed to deliver a known volume of air accurately; therefore, if the readings obtained are not aligning with expected values, it indicates a problem with the testing equipment. Calibration of PFT equipment is crucial for ensuring accurate measurements of lung function. Regular maintenance and calibration help detect any potential issues that could lead to incorrect readings, which can subsequently affect patient diagnosis or treatment. Therefore, identifying that equipment calibration or maintenance is required reflects an understanding of the importance of reliability in diagnostic tools used in respiratory care. The other options suggest alternative factors that may impact testing but do not directly address the root cause of inaccurate results derived from the syringe itself. The focus on equipment precision is key in any clinical testing scenario, especially in pulmonary assessments.

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7. How many milliliters of a bronchodilator would be needed to deliver 10 mg of a drug at a strength of 0.5%?

A. 1 mL

B. 2 mL

C. 3 mL

D. 5 mL

To determine how many milliliters of a bronchodilator are needed to deliver 10 mg of a drug at a strength of 0.5%, it is essential to first understand what a 0.5% solution means. A 0.5% solution indicates there are 0.5 grams of the drug in 100 mL of solution. This means for every mL of the solution, there are 5 mg of the drug (since 0.5 grams equals 500 mg, and dividing that by 100 mL gives 5 mg/mL). Now, to find out how many milliliters are necessary to provide 10 mg of the drug, we can set up a simple calculation. Since each milliliter contains 5 mg of the bronchodilator, we need to divide the desired dosage (10 mg) by the concentration (5 mg/mL): 10 mg ÷ 5 mg/mL = 2 mL. Thus, to deliver a total of 10 mg from a 0.5% solution, you would need 2 mL of the bronchodilator. This confirms that the answer is indeed 2 mL.

8. What is the function of a non-rebreathing mask in heliox therapy?

A. To provide high flow oxygen

B. To reduce the work of breathing

C. To minimize carbon dioxide retention

D. To ensure delivery of helium and oxygen mix

The function of a non-rebreathing mask in heliox therapy is primarily to ensure the delivery of a helium and oxygen mix. In heliox therapy, the combination of helium and oxygen helps to reduce the density of the gas mixture, making it easier for patients to breathe, especially in conditions causing airway obstruction or increased work of breathing. The non-rebreathing mask, designed with one-way valves, allows the patient to inhale this specialized gas mixture while preventing the exhaled gas from entering the reservoir bag. This setup helps maintain a consistent mixture of helium and oxygen, optimizing the therapeutic benefits of heliox by allowing for efficient gas exchange and improved airflow. While the mask also contributes to reducing the work of breathing and minimizing carbon dioxide retention by providing a high flow of gas, its primary purpose in this context is facilitating the effective delivery of the helium-oxygen blend, which is crucial for treating specific respiratory conditions.

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9. What should be the first step for a patient on VC, A/C ventilation with poor laboratory data?

A. Increase FIO2 to 1.0

B. Administer Dopamine, IV

C. Flush the PA catheter

D. Decrease PEEP

When managing a patient on volume control (VC) assist/control (A/C) ventilation, especially when faced with poor laboratory data, the first step should ideally focus on optimizing the patient's respiratory mechanics and oxygenation. In this case, decreasing PEEP (positive end-expiratory pressure) could be the appropriate initial action when lung compliance is compromised or if there are significant ventilation-perfusion (V/Q) mismatches. High levels of PEEP can inadvertently cause over-distension of the lungs and further impair oxygenation if the patient has poor lung mechanics, which could exacerbate pre-existing issues resulting in the laboratory data being suboptimal. By decreasing PEEP, it can help to improve hemodynamics and enhance venous return, while also promoting better ventilation-perfusion matching. While increasing FIO2 may be an immediate solution for hypoxemia, it is critical to optimize the mechanical support the patient is receiving first. Administering Dopamine may be appropriate in certain contexts (like addressing hypotension), but it is not a primary intervention for poor respiratory parameters. Flushing the PA catheter is a procedural action that won't influence ventilation or oxygenation levels in the acute setting as it relates more to monitoring than treatment. Thus, adjusting P

10. What is indicated by a high arterial carbon dioxide (PCO2) level in an ABG analysis?

A. Respiratory alkalosis

B. Metabolic alkalosis

C. Respiratory acidosis

D. Metabolic acidosis

A high arterial carbon dioxide level (PCO2) in an arterial blood gas (ABG) analysis indicates respiratory acidosis. This condition occurs when there is an accumulation of carbon dioxide in the bloodstream, which typically results from inadequate ventilation or respiratory failure. When the body is unable to adequately remove carbon dioxide, the pH of the blood decreases, leading to acidosis. In cases of respiratory acidosis, the body's mechanisms for compensation may include increasing renal bicarbonate retention to buffer the excess carbonic acid formed from the dissolved carbon dioxide. These physiological responses aim to stabilize the acid-base balance but may take time to develop. Understanding this process is essential for interpreting ABG results and determining appropriate treatment. Conditions that can lead to respiratory acidosis include chronic obstructive pulmonary disease (COPD), asthma exacerbations, pneumonia, or any condition that impairs effective gas exchange.

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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://nbrctmc.examzify.com

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

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