EMT AIRWAY AND BREATHING 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.

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

1. What is a critical reading of a pulse oximeter used for?

A. Assessing the patient's respiratory rate

B. Measuring arterial blood carbon dioxide levels

C. Determining oxygen saturation in the blood

D. Detecting lung sounds

2. Which intervention would most likely result in passive ventilation?

A. Positive pressure ventilation

B. Chest recoil during chest compressions

C. Inhalation with supplemental oxygen

D. Use of an oropharyngeal airway

3. Which of the following is a contraindication for using a nasopharyngeal airway?

A. Severe facial injuries

B. Suspected skull fracture

C. Conscious patient

D. Patient with a tracheostomy

4. Which of the following is a common symptom of respiratory distress?

A. Increased appetite

B. Fatigue

C. Excessive sweating

D. Elevated blood pressure

5. In a patient with a barrel-shaped chest and pursed lip breathing, what is likely the underlying pathophysiology?

A. Decrease in lung capacity

B. Increase in residual volume

C. Airway inflammation

D. Bronchial narrowing

6. Assuming a dead space volume of 150 mL, which scenario would yield the lowest minute alveolar ventilation?

A. Respiratory rate, 16 breaths/min; tidal volume, 300 mL

B. Respiratory rate, 12 breaths/min; tidal volume, 500 mL

C. Respiratory rate, 20 breaths/min; tidal volume, 250 mL

D. Respiratory rate, 15 breaths/min; tidal volume, 400 mL

7. Which of the following interventions is NOT appropriate for a patient with a complete airway obstruction?

A. Chest thrusts

B. Back blows

C. Deep breathing exercises

D. Abdominal thrusts

8. Which clinical finding is commonly associated with emphysema but not with congestive heart failure?

A. Peripheral edema

B. Pursed-lip breathing

C. Shortness of breath

D. Weight gain

9. How do you recognize a patient in respiratory failure?

A. Presence of wheezing sounds alone

B. Abnormal respiratory patterns along with altered mental status

C. Increased heart rate

D. Ceasing all respiratory efforts

10. What does shallow breathing indicate?

A. Increased tidal volume

B. Decreased tidal volume

C. Normal respiratory function

D. Obstructed airway

Answers

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

Explanations

1. What is a critical reading of a pulse oximeter used for?

A. Assessing the patient's respiratory rate

B. Measuring arterial blood carbon dioxide levels

C. Determining oxygen saturation in the blood

D. Detecting lung sounds

A pulse oximeter is a non-invasive device designed to measure the oxygen saturation of a patient's blood. The primary function of this device is to assess how well oxygen is being transported throughout the body by hemoglobin. The readings provided by a pulse oximeter reflect the percentage of hemoglobin that is saturated with oxygen, which is vital for evaluating a patient's respiratory efficiency and determining how much oxygen is available to the body's tissues. When assessing a patient's condition, knowing the oxygen saturation level is critical, especially in cases of respiratory distress or potential hypoxia. This information guides healthcare providers in making informed decisions about interventions, such as the need for supplemental oxygen or further respiratory support. While assessing the respiratory rate, measuring arterial blood carbon dioxide levels, and detecting lung sounds are important components of a comprehensive respiratory assessment, they do not relate directly to the function of a pulse oximeter. Thus, the determination of oxygen saturation is the primary focus of this device, making it the correct answer to the question.

2. Which intervention would most likely result in passive ventilation?

A. Positive pressure ventilation

B. Chest recoil during chest compressions

C. Inhalation with supplemental oxygen

D. Use of an oropharyngeal airway

Passive ventilation refers to the process of air movement that occurs in the lungs without any active effort from the patient or healthcare provider. This typically occurs when a patient's chest expands and contracts, allowing air to flow in and out of the lungs due to changes in pressure, rather than through any forceful action like positive pressure ventilation. The chest recoil during chest compressions is a prime example of passive ventilation. When compressions are applied to the chest during CPR, the heart and lungs are compressed, which forces air out of the lungs. Upon releasing the compression, the chest wall recoils, creating a negative pressure that allows air to enter the lungs. This natural cycle facilitates passive ventilation, enabling oxygen to enter the lungs without active inhalation. In contrast, methods like positive pressure ventilation actively push air into the lungs, and inhalation with supplemental oxygen involves the patient inhaling air, both of which are not examples of passive ventilation. The use of an oropharyngeal airway assists in maintaining an open airway, but alone it doesn't facilitate any form of ventilation without an added effort—making chest recoil during compressions the most accurate choice for passive ventilation.

3. Which of the following is a contraindication for using a nasopharyngeal airway?

A. Severe facial injuries

B. Suspected skull fracture

C. Conscious patient

D. Patient with a tracheostomy

A nasopharyngeal airway (NPA) is a device used to secure an airway in patients who are unable to maintain their own. However, certain conditions make its use inadvisable, and one of these is the presence of a suspected skull fracture. When there is a suspected skull fracture, particularly involving the base of the skull, the risk of entering the cranial cavity increases significantly if the NPA is improperly inserted. The NPA can potentially travel into the brain through a fracture, leading to serious complications such as intracranial hemorrhage or infection. Therefore, the presence of a suspected skull fracture is a critical contraindication for the use of a nasopharyngeal airway. The other scenarios mentioned do not carry the same level of risk associated with the use of an NPA. For instance, severe facial injuries might suggest caution, but do not necessarily rule out its use if the pathway is clear. Likewise, a conscious patient may actually benefit from an NPA if they cannot protect their airway, providing they do not otherwise have contraindications. Lastly, a patient with a tracheostomy would typically require a different method for airway management, but it does not preclude the use of an NPA since it would not typically

4. Which of the following is a common symptom of respiratory distress?

A. Increased appetite

B. Fatigue

C. Excessive sweating

D. Elevated blood pressure

Fatigue is a common symptom of respiratory distress because the body must work harder to breathe when airflow is compromised or oxygen levels are low. The increased effort in breathing can lead to a feeling of tiredness or exhaustion since the respiratory muscles are overworked and the rest of the body may not be receiving adequate oxygen. Fatigue in this context serves as a signal of the body's struggle to maintain adequate oxygenation and metabolic function in the face of respiratory challenges. In contrast, while excessive sweating can occur in some cases, it is more typically associated with other conditions rather than being a direct indicator of respiratory distress specifically. Elevated blood pressure may not necessarily be a reliable sign of respiratory distress; it can result from various other factors, including anxiety or pain. Increased appetite does not correlate with respiratory distress, as individuals typically experience a decrease in appetite due to the strain of poor respiratory function.

5. In a patient with a barrel-shaped chest and pursed lip breathing, what is likely the underlying pathophysiology?

A. Decrease in lung capacity

B. Increase in residual volume

C. Airway inflammation

D. Bronchial narrowing

In a patient with a barrel-shaped chest and pursed lip breathing, the underlying pathophysiology is likely an increase in residual volume. This condition is often associated with chronic obstructive pulmonary disease (COPD), particularly emphysema, where the alveoli become damaged, causing air to be trapped in the lungs. As a result, the lungs are unable to fully exhale, leading to an increase in the amount of air that remains in the lungs after exhalation, which is categorized as residual volume. The barrel-shaped chest reflects the overinflation of the lungs, while pursed lip breathing is a compensatory mechanism the patient employs to help control their breathing and improve airflow. This breathing technique prolongs the expiration phase, allowing for better elimination of trapped air, thereby helping to relieve the symptoms associated with overinflation. Thus, the increase in residual volume directly contributes to the characteristic physical findings and respiratory patterns observed in such patients.

6. Assuming a dead space volume of 150 mL, which scenario would yield the lowest minute alveolar ventilation?

A. Respiratory rate, 16 breaths/min; tidal volume, 300 mL

B. Respiratory rate, 12 breaths/min; tidal volume, 500 mL

C. Respiratory rate, 20 breaths/min; tidal volume, 250 mL

D. Respiratory rate, 15 breaths/min; tidal volume, 400 mL

To determine which scenario yields the lowest minute alveolar ventilation, it's essential to first understand the components involved in calculating minute alveolar ventilation. This calculation factors in the respiratory rate and tidal volume while subtracting the dead space volume from the tidal volume to obtain the effective ventilation contributing to alveolar gas exchange. In the specified scenario, a respiratory rate of 16 breaths per minute with a tidal volume of 300 mL results in a total minute ventilation of 4,800 mL (16 breaths/min × 300 mL/breath). However, since there is a dead space of 150 mL, the effective tidal volume contributing to alveolar ventilation is 150 mL (300 mL - 150 mL). Consequently, the minute alveolar ventilation in this case would be: \[16 \text{ breaths/min} \times (300 \text{ mL} - 150 \text{ mL}) = 16 \times 150 = 2,400 \text{ mL/min} \] This calculated value indicates how much volume effectively participates in gas exchange. In contrast, when looking at the other scenarios, despite having different combinations of respiratory rates and tidal volumes, they all yield greater minute alveolar

7. Which of the following interventions is NOT appropriate for a patient with a complete airway obstruction?

A. Chest thrusts

B. Back blows

C. Deep breathing exercises

D. Abdominal thrusts

Deep breathing exercises are not an appropriate intervention for a patient with a complete airway obstruction. In this scenario, the patient's airway is fully blocked, meaning they cannot breathe or make any sounds. Performing deep breathing exercises requires some level of airflow; thus, it would not assist the patient in clearing the obstruction or restoring their ability to breathe. In contrast, interventions such as chest thrusts, back blows, and abdominal thrusts are designed specifically to create enough pressure or movement to dislodge an object causing the blockage, thereby reinstating the patient's airway. Understanding the situation and the nature of the obstruction are key to selecting the proper response, with deep breathing exercises being clearly ineffective in a case where the airway is completely obstructed.

8. Which clinical finding is commonly associated with emphysema but not with congestive heart failure?

A. Peripheral edema

B. Pursed-lip breathing

C. Shortness of breath

D. Weight gain

Pursed-lip breathing is a clinical finding that is commonly associated with emphysema due to its role in helping patients manage their breathing. Individuals with emphysema often experience difficulty exhaling fully due to damaged alveoli and loss of elastic recoil in the lungs. To counteract this, they may naturally adopt pursed-lip breathing, which creates a smaller opening for air to escape, thereby helping to maintain pressure in the airways and preventing the collapse of small air passages. This technique enhances ventilation and facilitates more effective breathing, especially during exertion. In contrast, pursed-lip breathing is not a typical finding in congestive heart failure. While patients with congestive heart failure may experience shortness of breath and exhibit other symptoms related to fluid overload (such as peripheral edema), the mechanism affecting their breathing does not necessitate this particular technique. Therefore, pursed-lip breathing serves as a key distinction between these two conditions, highlighting the unique physiological challenges faced by patients with emphysema compared to those with congestive heart failure.

9. How do you recognize a patient in respiratory failure?

A. Presence of wheezing sounds alone

B. Abnormal respiratory patterns along with altered mental status

C. Increased heart rate

D. Ceasing all respiratory efforts

Recognizing a patient in respiratory failure primarily involves assessing both respiratory function and the patient's overall condition. The presence of abnormal respiratory patterns, such as irregular breathing rates or difficulties in breathing (e.g., gasping or using accessory muscles), is a critical indicator of respiratory distress. When these abnormal patterns accompany an altered mental status—such as confusion, lethargy, or decreased responsiveness—it signals that the body is not adequately oxygenating, which is a hallmark of respiratory failure. This combination is essential for understanding the severity of the situation and determining the need for immediate intervention. While wheezing can indicate bronchospasm or airway obstruction, it is not sufficient on its own to confirm respiratory failure. Similarly, an increased heart rate may signify stress or compensatory mechanisms but does not directly indicate respiratory failure without other supporting signs. Finally, if a patient has ceased all respiratory efforts, they would be in respiratory arrest, which is a distinct and more severe condition than respiratory failure, thus requiring different priorities in management.

10. What does shallow breathing indicate?

A. Increased tidal volume

B. Decreased tidal volume

C. Normal respiratory function

D. Obstructed airway

Shallow breathing refers to a situation where a person takes shorter and less effective breaths, which results in a decreased tidal volume. Tidal volume is the amount of air that is inhaled and exhaled with each breath, and shallow breathing means that less air is being moved in and out of the lungs. This can occur due to various reasons such as respiratory muscle fatigue, pain or discomfort that limits deep inhalation, or conditions that affect lung function. In contrast, increased tidal volume would indicate deeper breaths, which is not consistent with shallow breathing. Normal respiratory function typically involves a range of tidal volumes, not just shallow breaths. An obstructed airway could lead to ineffective breaths, but it does not specifically define shallow breathing, as a person may exhibit various breathing patterns when their airway is obstructed. Therefore, the correct understanding of shallow breathing directly relates to decreased tidal volume.

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://emtairwaybreathing.examzify.com

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