

COMPREHENSIVE RESPIRATORY AND INFECTIOUS DISEASE NURSING PRACTICE TEST (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. Which option is NOT a mechanism by which bronchodilators improve COPD symptoms?**
 - A. They relax airway smooth muscle
 - B. They increase FEV1
 - C. They narrow the airways
 - D. They improve ventilation

- 2. In a respiratory patient, what might an increase in restlessness signal?**
 - A. Increasing hypoxemia
 - B. Worsening hypercapnia
 - C. Stabilizing oxygenation
 - D. Improved ventilation

- 3. Which statement about the timeframe for TB exposure-related symptoms is accurate?**
 - A. Symptoms typically develop within 2 to 3 weeks after exposure.
 - B. Symptoms always appear within 24 hours.
 - C. Symptoms never develop after exposure.
 - D. Symptoms appear only after several years.

- 4. Which ABG result is most consistent with metabolic acidosis?**
 - A. High pH and high HCO₃
 - B. High pH and low HCO₃
 - C. Normal pH with normal HCO₃
 - D. Low pH and low HCO₃

- 5. Which factor increases the diagnostic yield of sputum cultures in suspected pneumonia?**
 - A. Collecting a sample after antibiotics started
 - B. Collecting a deep cough sample early in the morning before antibiotics
 - C. Collecting only saliva
 - D. Collecting from a nonsterile container

- 6. What is the significance of polycythemia in COPD?**
- A. It reduces blood viscosity and improves flow
 - B. It has no clinical significance
 - C. It results from chronic hypoxia and increases blood viscosity, leading to complications
 - D. It decreases RBC mass
- 7. In low-risk individuals, what induration size on a Mantoux test indicates a positive result?**
- A. 5 mm or more
 - B. 10 mm or more
 - C. 15 mm or more
 - D. 20 mm or more
- 8. Which of the following best describes cor pulmonale?**
- A. Left-sided heart failure due to valvular disease
 - B. A type of right-sided heart failure caused by lung conditions, leading to right ventricle enlargement and failure.
 - C. Pulmonary embolism
 - D. Myocardial infarction
- 9. What does a chest x-ray show in pneumonia?**
- A. Consolidation of lung tissue
 - B. Hyperinflation
 - C. No abnormalities
 - D. Pleural effusion only
- 10. Why is early detection and treatment of TB important?**
- A. It is vital as TB has a slow onset, and patients may not be aware until the disease is advanced.
 - B. TB progresses quickly to death in 24 hours
 - C. Early treatment is not important
 - D. There is no benefit to early detection

Answers

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

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Explanations

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1. Which option is NOT a mechanism by which bronchodilators improve COPD symptoms?

- A. They relax airway smooth muscle
- B. They increase FEV1
- C. They narrow the airways**
- D. They improve ventilation

Bronchodilators help COPD symptoms by relaxing airway smooth muscle, which widens the airways, lowers airway resistance, and improves airflow. This increase in caliber translates to a higher FEV1 and better ventilation, meaning gas exchange improves and dyspnea can lessen. They do not narrow the airways; in fact, narrowing would worsen airflow. So the statement that bronchodilators narrow the airways is not a mechanism by which they improve symptoms.

2. In a respiratory patient, what might an increase in restlessness signal?

- A. Increasing hypoxemia**
- B. Worsening hypercapnia
- C. Stabilizing oxygenation
- D. Improved ventilation

Restlessness signals the brain isn't getting enough oxygen. In a patient with a respiratory problem, a rise in restlessness most often points to increasing hypoxemia, meaning oxygen delivery to tissues is falling. Because the brain is highly sensitive to low oxygen levels, agitation, anxiety, and irritability can appear early as oxygenation worsens. This is why a sudden increase in restlessness should prompt an immediate check of oxygen saturation and, if needed, ABG results and a reassessment of oxygen therapy or airway status. By contrast, worsening hypercapnia tends to produce headache, confusion, or somnolence rather than acute restlessness, and improving ventilation or oxygenation would typically reduce restlessness rather than increase it.

3. Which statement about the timeframe for TB exposure-related symptoms is accurate?

- A. Symptoms typically develop within 2 to 3 weeks after exposure.
- B. Symptoms always appear within 24 hours.**
- C. Symptoms never develop after exposure.
- D. Symptoms appear only after several years.

TB infection doesn't cause immediate illness. After exposure and infection, there's a lag before symptoms can appear, and many people harbor the bacteria without symptoms (latent TB). If active TB develops, the onset of symptoms typically takes weeks to months, not hours or days. Testing for infection (like a tuberculin skin test or IGRA) can become positive within about 2–8 weeks after exposure, even if no symptoms are present. So saying that symptoms always show up within 24 hours isn't accurate—the disease has a much longer and variable timeline.

4. Which ABG result is most consistent with metabolic acidosis?

- A. High pH and high HCO_3^-
- B. High pH and low HCO_3^-
- C. Normal pH with normal HCO_3^-
- D. Low pH and low HCO_3^-**

Metabolic acidosis is defined by a decrease in bicarbonate (HCO_3^-) with a resulting drop in blood pH, reflecting an accumulation of acid or loss of base. The body tries to compensate by increasing ventilation to blow off CO_2 , so the pCO_2 tends to fall as adjustment occurs. The ABG result that shows both a lower pH and a lower HCO_3^- fits this pattern: acidemia with reduced bicarbonate, indicating metabolic acidosis. The other patterns do not reflect this primary metabolic disturbance: a high pH indicates alkalemia; a normal pH with normal HCO_3^- shows no acid-base disorder; a low pH with high HCO_3^- would imply a different or mixed disorder rather than metabolic acidosis.

5. Which factor increases the diagnostic yield of sputum cultures in suspected pneumonia?

- A. Collecting a sample after antibiotics started
- B. Collecting a deep cough sample early in the morning before antibiotics**
- C. Collecting only saliva
- D. Collecting from a nonsterile container

The main idea is that the chance of identifying the pneumonia-causing organism from a sputum culture is highest when you obtain a true lower-respiratory sample before any antibiotics are started. A deep cough sample collected first thing in the morning tends to contain more sputum from the lower airways and less contamination from oral bacteria, so the lab is more likely to recover the pathogen. If antibiotics have already been started, their effect can reduce or eliminate viable bacteria, lowering the likelihood of a positive culture. Similarly, samples that are just saliva or collected in a nonsterile container are more contaminated with oral or environmental organisms, which makes it harder to pinpoint the actual pathogen.

6. What is the significance of polycythemia in COPD?

- A. It reduces blood viscosity and improves flow
- B. It has no clinical significance
- C. It results from chronic hypoxia and increases blood viscosity, leading to complications**
- D. It decreases RBC mass

In COPD, chronic low blood oxygen levels trigger the kidneys to make more erythropoietin, increasing red blood cell production and causing polycythemia. This raises the hematocrit and makes the blood thicker (higher viscosity). When blood is more viscous, flow through the microcirculation slows, oxygen delivery to tissues can actually worsen despite more red cells, and the risk of clotting rises. That means polycythemia has real clinical consequences, including higher chances of thrombosis, potential strain on the heart, and progression toward right-sided heart problems. So the significance is that polycythemia is a compensatory response to hypoxia that can lead to hyperviscosity and its complications. The other statements conflict with the physiology (viscosity does not decrease; it's not clinically insignificant; RBC mass does not decrease).

7. In low-risk individuals, what induration size on a Mantoux test indicates a positive result?

- A. 5 mm or more
- B. 10 mm or more
- C. 15 mm or more**
- D. 20 mm or more

In interpreting a Mantoux tuberculin skin test, the key idea is that the induration size is read against the person's risk category. The test measures delayed-type hypersensitivity to purified protein derivative, and you read the size of the induration in millimeters 48 to 72 hours after administration. For individuals with no known risk factors, a larger induration is needed to indicate true infection and to avoid false positives from prior BCG vaccination or exposure to non-tuberculous mycobacteria. Therefore, an induration of 15 mm or more is considered positive in low-risk people. Smaller indurations are less specific in this group and could reflect non-TB factors, which is why the threshold is higher here. In higher-risk groups, smaller thresholds are used (5 mm for the highest risk, 10 mm for moderate risk), and a 20 mm threshold is not the standard cut-off for this population.

8. Which of the following best describes cor pulmonale?

- A. Left-sided heart failure due to valvular disease
- B. A type of right-sided heart failure caused by lung conditions, leading to right ventricle enlargement and failure.**
- C. Pulmonary embolism
- D. Myocardial infarction

Cor pulmonale is a form of right-sided heart failure driven by lung disease. When chronic lung conditions (such as COPD, interstitial lung disease, or other diseases that cause hypoxia) lead to persistent low oxygen levels, the pulmonary vessels constrict and remodel, raising pulmonary vascular resistance. The right ventricle must pump against this higher afterload, so it undergoes hypertrophy to cope. Over time, the right ventricle can enlarge and eventually fail, producing the signs of right-sided heart failure like peripheral edema, jugular venous distension, and liver congestion. This process is linked to the lung condition itself and the resulting pulmonary hypertension, not to left-sided heart disease, a single pulmonary embolism, or a myocardial infarction.

9. What does a chest x-ray show in pneumonia?

- A. Consolidation of lung tissue**
- B. Hyperinflation
- C. No abnormalities
- D. Pleural effusion only

In pneumonia, the chest radiograph shows consolidation of lung tissue. This happens because the air spaces (alveoli) fill with inflammatory exudate, pus, and fluid, making the affected area appear denser on the film. The consolidation can be in a single lobe or be patchy across multiple areas, and you may sometimes see air bronchograms—air-filled bronchi visible against the surrounding opaque tissue—which helps confirm alveolar filling. Hyperinflation is more typical of obstructive processes like asthma or COPD, not pneumonia. A normal X-ray would not fit pneumonia, since radiographic changes usually accompany the infection. Pleural effusion can occur with pneumonia but is not the defining feature; when present, it shows as fluid around the lung rather than the primary alveolar consolidation.

10. Why is early detection and treatment of TB important?

- A. It is vital as TB has a slow onset, and patients may not be aware until the disease is advanced.
- B. TB progresses quickly to death in 24 hours
- C. Early treatment is not important
- D. There is no benefit to early detection

Early detection matters because TB often starts slowly and with vague symptoms, so people may not realize they are infected until the disease is advanced. Catching active TB early and starting treatment reduces the bacterial load sooner, which lowers the risk of transmission to others and improves the chances of a complete cure. Prompt treatment also helps prevent complications like extensive lung damage and reduces the risk of developing drug resistance that can occur with delays. In contrast, saying TB progresses to death within 24 hours is not accurate for typical cases, and statements that early treatment or early detection have no benefit contradict the substantial evidence that earlier care improves both individual outcomes and public health.

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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:

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

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