NBRC Registered Respiratory Therapist (RRT) Exit 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

1. What is the normal range for white blood cell count per cubic millimeter?

A. 1-2 thousand

B. 3-4 thousand

C. 4-6 thousand

D. 5-10 thousand

2. Normal prothrombin time is within which range?

A. 8-12 seconds

B. 6-9 seconds

C. 12-15 seconds

D. 20-25 seconds

3. Jaundice is defined as?

A. Profuse sweating.

B. Redness due to capillary congestion.

C. Cyanosis caused by reduced oxyhemoglobin.

D. A yellowish appearance of the skin caused by increased bilirubin in the blood and tissue.

4. A butterfly pattern or batwing pattern on a chest radiograph indicates?

A. Pneumonia

B. Atelectasis

C. ARDS

D. Pulmonary edema

5. As blood leaves the capillary bed and enters the venous system, the capillary pressure is about how many mmHg?

A. 20 mmHg

B. 10 mmHg

C. 5 mmHg

D. 15 mmHg

6. Which of the following best defines signs?

- **A. Subjective information provided by the patient.**
- **B. Objective evidence observed or measured by clinician.**
- **C. Family history only.**
- **D. Pain scale.**

7. Pulsus paradoxus is defined as which phenomenon?

- **A. A pulse or blood pressure that varies during respiration.**
- **B. A pulse that increases with inspiration.**
- **C. A heartbeat that stops during inspiration.**
- **D. A pulse that is higher on expiration.**

8. Depressed or inverted T waves indicate?

- **A. Pulmonary embolism**
- **B. Myocardial ischemia**
- **C. Pericarditis**
- **D. Atrial fibrillation**

9. Normal cardiac output is?

- **A. 2-3 L/min**
- **B. 4-8 L/min**
- **C. 8-12 L/min**
- **D. 1-1.5 L/min**

10. If diastolic pressure is 80 mmHg and systolic pressure is 120 mmHg, what is the mean arterial pressure using the standard formula?

- **A. 100 mmHg**
- **B. 106.7 mmHg**
- **C. 93.3 mmHg**
- **D. 86.7 mmHg**

Answers

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

Explanations

1. What is the normal range for white blood cell count per cubic millimeter?

A. 1-2 thousand

B. 3-4 thousand

C. 4-6 thousand

D. 5-10 thousand

White blood cell count reflects immune system status. In adults, the normal range is broadly around 4,000 to 11,000 cells per microliter (per cubic millimeter). Many standard teaching resources summarize this as about 5,000 to 10,000, which fits the typical exam reference. Choosing 5,000 to 10,000 is the best match because it sits squarely in the commonly cited normal span used in clinical practice and exams. Counts lower than this (such as 1-2k or 3-4k) suggest leukopenia, while extremely high values point toward leukocytosis. The 4-6k range is plausible but narrower and misses the upper normal end that exams often use. Context: higher counts can indicate infection, inflammation, stress, or marrow stimulation; lower counts raise concern for impaired immunity or marrow suppression.

2. Normal prothrombin time is within which range?

A. 8-12 seconds

B. 6-9 seconds

C. 12-15 seconds

D. 20-25 seconds

Prothrombin time assesses how long the extrinsic pathway takes to form a clot. The normal reference range is roughly twelve to fifteen seconds (lab values may vary slightly). This range is used to monitor anticoagulation with warfarin and to evaluate vitamin K-dependent factor function. Times longer than this suggest a coagulopathy or anticoagulation effect, while shorter times are not typical. So the normal range is twelve to fifteen seconds.

3. Jaundice is defined as?

A. Profuse sweating.

B. Redness due to capillary congestion.

C. Cyanosis caused by reduced oxyhemoglobin.

D. A yellowish appearance of the skin caused by increased bilirubin in the blood and tissue.

Jaundice is the yellowish appearance of the skin and the whites of the eyes caused by elevated bilirubin in the blood and tissues. Bilirubin comes from the breakdown of heme in red blood cells and is normally processed by the liver and excreted in bile. When bilirubin builds up—whether from increased production, impaired liver processing, or blockage of bile flow—the yellow color becomes visible on the skin and sclera. This can stem from prehepatic (hemolysis), hepatic (liver dysfunction), or posthepatic (biliary obstruction) issues. Other signs like profuse sweating, redness from capillary congestion, or blue-tinged skin from low oxygen are not jaundice and reflect different processes.

4. A butterfly pattern or batwing pattern on a chest radiograph indicates?

A. Pneumonia

B. Atelectasis

C. ARDS

D. Pulmonary edema

A butterfly or bat-wing pattern on a chest radiograph signals central interstitial edema from elevated pulmonary venous pressure, typically due to left-sided heart failure. The fluid accumulates around the hila and spreads outward into the perihilar and lower lung zones, creating symmetric opacities that resemble wings. This central distribution is the hallmark of pulmonary edema, reflecting fluid leaking into the interstitium and, as it worsens, into the alveoli. Pneumonia usually presents as focal or lobar consolidation rather than a symmetric perihilar pattern. Atelectasis tends to produce linear or plate-like opacities at the bases or in dependent regions rather than a central bat-wing distribution. ARDS can cause diffuse bilateral infiltrates, but the classic bat-wing pattern is most characteristic of cardiogenic pulmonary edema due to congestive heart failure.

5. As blood leaves the capillary bed and enters the venous system, the capillary pressure is about how many mmHg?

A. 20 mmHg

B. 10 mmHg

C. 5 mmHg

D. 15 mmHg

Capillary hydrostatic pressure drops as blood moves through the capillary bed. By the time blood leaves into the venous side, this pressure is about 10 mmHg. This relatively low capillary pressure compared with the arterial end helps balance filtration with reabsorption under Starling forces, with plasma oncotic pressure (~25 mmHg) pulling fluid back in and lymphatics handling excess fluid. The other numbers you might see are associated with the arterial or mid-capillary pressures, not the venous exit, so 10 mmHg best represents the pressure at the point of entering the venous system.

6. Which of the following best defines signs?

A. Subjective information provided by the patient.

B. Objective evidence observed or measured by clinician.

C. Family history only.

D. Pain scale.

Signs are objective evidence that can be observed or measured by the clinician—things you can see, hear, or quantify, like abnormal lung sounds, cyanosis, high or low vital signs, or lab and imaging results. This contrasts with symptoms, which are subjective experiences reported by the patient, such as pain or shortness of breath. A pain scale measures how the patient feels (a symptom), not an observable finding. Family history provides background information rather than current objective evidence. So signs are the observable, measurable data you gather during assessment.

7. Pulsus paradoxus is defined as which phenomenon?

A. A pulse or blood pressure that varies during respiration.

B. A pulse that increases with inspiration.

C. A heartbeat that stops during inspiration.

D. A pulse that is higher on expiration.

Pulsus paradoxus is about how the pulse and blood pressure change with breathing. Specifically, there is an inspiratory drop in systolic blood pressure (and often a weaker pulse) that is larger than normal. This variation reflects exaggerated cardiopulmonary interactions: increased venous return to the right heart during inspiration shifts the interventricular septum and reduces left ventricular filling, and in conditions like tamponade, the heart can't compensate well, exaggerating the fall. While it's most associated with cardiac tamponade, it can also appear in severe asthma or COPD and constrictive pericarditis. The correct description emphasizes a pulse or blood pressure that varies with respiration, especially a drop during inspiration. The other options describe increases with inspiration, a heartbeat stopping, or a higher pulse on expiration, none of which capture this respiratory variation.

8. Depressed or inverted T waves indicate?

A. Pulmonary embolism

B. Myocardial ischemia

C. Pericarditis

D. Atrial fibrillation

Depressed or inverted T waves reflect altered ventricular repolarization due to reduced oxygen supply to the heart muscle. When ischemia affects the myocardium, especially subendocardial tissue, repolarization changes cause the T wave to flatten or invert. This pattern is a classic sign of myocardial ischemia, seen with angina or NSTEMI. Other conditions don't fit this pattern as neatly: pulmonary embolism isn't defined by T wave inversion, pericarditis typically shows diffuse ST elevation with PR depression, and atrial fibrillation is a rhythm issue with absent P waves rather than characteristic T wave changes.

9. Normal cardiac output is?

A. 2-3 L/min

B. 4-8 L/min

C. 8-12 L/min

D. 1-1.5 L/min

Cardiac output is the amount of blood the heart pumps each minute, and it equals heart rate times stroke volume. At rest, a typical heart rate is about 60–100 beats per minute and stroke volume is around 60–80 mL, which gives roughly 4–8 liters per minute of blood pumped. This range reflects normal tissue perfusion while at rest across adults of different sizes. Values well below this, like 2–3 or 1–1.5 L/min, indicate reduced output and can be seen in serious heart dysfunction or shock. Values higher than about 8 L/min can occur during intense exercise or hyperdynamic states, but aren't considered normal at rest. So the normal resting cardiac output is about 4–8 L/min.

10. If diastolic pressure is 80 mmHg and systolic pressure is 120 mmHg, what is the mean arterial pressure using the standard formula?

A. 100 mmHg

B. 106.7 mmHg

C. 93.3 mmHg

D. 86.7 mmHg

Mean arterial pressure reflects the average pressure driving blood through the vessels during a cardiac cycle, and it's weighted toward diastole because the heart spends more time relaxing than contracting. The standard approach is MAP ≈ diastolic pressure + one-third of the pulse pressure, where pulse pressure = systolic minus diastolic. With diastolic 80 and systolic 120, pulse pressure is 40; one-third of that is about 13.3. So MAP ≈ 80 + 13.3 = 93.3 mmHg. The same result comes from the equivalent formula (2 × diastolic + systolic)/3 = (2 × 80 + 120)/3 = 280/3 ≈ 93.3. This value is physiologically reasonable and sits below the simple average of 100 because more time is spent in diastole.

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://nbrcrrtexit.examzify.com

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