

7/4 E CARDIOVASCULAR & RESPIRATORY PRACTICE TEST (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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	15

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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 purpose of the OPQRST mnemonic?**
 - A. To guide airway management sequence.
 - B. To obtain a structured chest pain history: Onset, Provocation/Palliation, Quality, Region/Radiation, Severity, Timing.
 - C. To assess vital signs and Glasgow Coma Score.
 - D. To determine antibiotic need.

- 2. Which description best matches a normal, swishing breath sound heard on auscultation?**
 - A. Adventitious sounds
 - B. Fine crackling sounds
 - C. Diminished breath sounds
 - D. Vesicular breath sounds

- 3. Which statement is not indicated for stoma management after a laryngectomy?**
 - A. Steroid cream at the site
 - B. Mild soap and water to cleanse site
 - C. Humidifier for air entering the stoma
 - D. Non-oil-based lubricants for site lubrication

- 4. Why should suction be applied only during withdrawal of the suction catheter?**
 - A. To prevent trauma to the trachea
 - B. To ensure quicker suction
 - C. To avoid oxygenation
 - D. To increase mucous production

- 5. What is the purpose of suctioning during airway management?**
 - A. To clear secretions, blood, or vomitus that obstruct the airway.
 - B. To remove air from the lungs.
 - C. To clean the external surface of the mouth.
 - D. To deliver medications.

- 6. If a patient on ventilation does not respond to interventions, what is the appropriate next step?**
- A. Continue current plan only
 - B. Reassess and modify plan to support respiration
 - C. Stop ventilation
 - D. Discontinue all monitoring
- 7. What signs suggest a tension pneumothorax?**
- A. Hypotension, distended neck veins, tracheal deviation, and unilateral absent breath sounds.
 - B. Hypertension and bright red skin.
 - C. Clear breath sounds with normal vital signs.
 - D. Bilateral equal breath sounds with tachycardia but stable pressure.
- 8. During airway suctioning, how long should a single suction pass last?**
- A. No more than 10 seconds per pass.
 - B. 30 seconds per pass.
 - C. 60 seconds per pass.
 - D. 120 seconds per pass.
- 9. According to the Frank-Starling mechanism, how does increasing preload affect stroke volume?**
- A. Increased preload leads to greater sarcomere stretch and increased stroke volume, up to a limit.
 - B. Increasing preload reduces sarcomere overlap and decreases stroke volume.
 - C. Increased preload has no effect on stroke volume.
 - D. Increased preload always increases stroke volume without limit.
- 10. For COPD patients, what is the generally recommended target SpO2 range to balance oxygenation and CO2 retention?**
- A. 86-90%
 - B. 88-92%
 - C. 90-94%
 - D. 92-96%

Answers

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

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Explanations

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1. What is the purpose of the OPQRST mnemonic?

- A. To guide airway management sequence.
- B. To obtain a structured chest pain history: Onset, Provocation/Palliation, Quality, Region/Radiation, Severity, Timing.**
- C. To assess vital signs and Glasgow Coma Score.
- D. To determine antibiotic need.

The main idea is to structure the assessment of chest pain by using a simple framework that prompts you to ask about six key aspects of the pain. OPQRST stands for Onset, Provocation/Palliation, Quality, Region/Radiation, Severity, and Timing. This approach helps you capture enough detail to understand how the pain began, what makes it better or worse, what it feels like, where it is and whether it spreads, how intense it is, and how long it has lasted. With this information, you can better differentiate potential cardiac causes from other sources of chest pain and determine how urgently the patient needs further evaluation or treatment. It's not used for guiding airway management, measuring vital signs or Glasgow Coma Score, or deciding on antibiotics.

2. Which description best matches a normal, swishing breath sound heard on auscultation?

- A. Adventitious sounds
- B. Fine crackling sounds
- C. Diminished breath sounds
- D. Vesicular breath sounds**

Normal vesicular breath sounds are the soft, low-pitched rustling sounds heard over the lung periphery as air moves through small airways and alveoli. They have a swishing quality, are louder and longer during inspiration, and fade away with expiration. This is what you'd expect in healthy lungs, making it the description that best matches a normal breath sound. Adventitious sounds would indicate pathology (such as crackles or wheezes); fine crackles are a specific abnormal sound; diminished breath sounds imply reduced airflow.

3. Which statement is not indicated for stoma management after a laryngectomy?

- A. Steroid cream at the site**
- B. Mild soap and water to cleanse site
- C. Humidifier for air entering the stoma
- D. Non-oil-based lubricants for site lubrication

The statement being tested is about what is appropriate for routine stoma care after a laryngectomy. After a laryngectomy, keeping the airway moist and the skin around the stoma healthy are the priorities. Humidified air helps prevent drying and crusting of the stoma, which can impede airflow and cause discomfort. Cleaning the stoma and the surrounding skin with mild soap and water is standard to remove mucus and debris without irritating the tissue. Using non-oil-based lubricants on the skin around the stoma helps protect and soften the area without leaving oily residues that could interfere with the stoma appliance or trapping moisture in unwanted ways. Steroid cream at the stoma site, however, is not part of routine management. Corticosteroids can thin and weaken skin, slow healing, and increase susceptibility to infection when used on vulnerable skin around a stoma. They're not indicated unless specifically prescribed for a separate dermatologic issue by a clinician, with careful consideration of risks and benefits. If dermatitis or irritation occurs, it's best to consult with the care team before applying any topical steroids.

4. Why should suction be applied only during withdrawal of the suction catheter?

- A. To prevent trauma to the trachea**
- B. To ensure quicker suction
- C. To avoid oxygenation
- D. To increase mucous production

Suction is kept off during insertion to protect the tracheal lining; the negative pressure can easily injure the mucosa as the catheter advances. By applying suction only while withdrawing, you limit contact time with the airway walls, reducing trauma and the risk of hypoxemia from prolonged suction exposure. This technique also helps avoid provoking excessive coughing or bronchospasm during insertion. The other ideas don't fit the goal: suctioning quickly isn't the primary aim, suctioning worsens oxygenation risk rather than preventing it, and suction does not increase mucus production.

5. What is the purpose of suctioning during airway management?

- A. To clear secretions, blood, or vomitus that obstruct the airway.**
- B. To remove air from the lungs.
- C. To clean the external surface of the mouth.
- D. To deliver medications.

Suctioning during airway management is used to keep the airway clear by removing material that can block airflow, such as secretions, blood, or vomitus. This clears the passage so air can move in and out effectively, supports ventilation, and reduces the risk of aspiration. It's a procedure done with sterile technique and used when secretions or debris threaten the airway, during and after procedures like intubation or extubation, or when a patient is unable to clear secretions themselves. It's not about removing air from the lungs, cleaning the outside of the mouth, or delivering medications.

6. If a patient on ventilation does not respond to interventions, what is the appropriate next step?

- A. Continue current plan only
- B. Reassess and modify plan to support respiration**
- C. Stop ventilation
- D. Discontinue all monitoring

When a patient on ventilation isn't responding to interventions, the immediate step is to reassess and modify the plan to support respiration. This means carefully reviewing what might be limiting ventilation: is the airway patent and the endotracheal/or artificial airway properly positioned, is the ventilator settings (such as tidal volume, respiratory rate, FiO₂, and PEEP) appropriate, and is there any obstruction, secretions, bronchospasm, or a mechanical issue with the circuit? By reassessing, you identify the cause of the poor response and then tailor the management—adjust ventilator parameters, clear the airway, treat reversible conditions, or escalate support if needed. Continuing the same plan ignores potential problems, stopping ventilation or monitoring would jeopardize the patient, and those options do not address the underlying issue.

7. What signs suggest a tension pneumothorax?

- A. Hypotension, distended neck veins, tracheal deviation, and unilateral absent breath sounds.**
- B. Hypertension and bright red skin.
- C. Clear breath sounds with normal vital signs.
- D. Bilateral equal breath sounds with tachycardia but stable pressure.

Tension pneumothorax is a life-threatening emergency where air trapped under pressure in the pleural space compresses the lung and shifts the mediastinum, cutting down on returning blood to the heart. The key signs reflect that pressure effect: low blood pressure from reduced venous return, distended neck veins from the same backup of blood, tracheal deviation away from the affected side due to mediastinal shift, and unilateral absence or markedly reduced breath sounds on the side with the collapsed lung. This combination—hypotension with JVD, tracheal deviation, and unilateral absent breath sounds—best captures the urgent hemodynamic and respiratory impact of a tension pneumothorax and signals the need for immediate intervention. Other choices don't fit because hypertension and flushed skin aren't typical, normal breath sounds with stable vitals don't indicate the pressure effect on the mediastinum, and bilateral equal breath sounds with a stable presentation would not reflect the unilateral lung collapse and rapid decompensation seen in a tension pneumothorax.

8. During airway suctioning, how long should a single suction pass last?

- A. No more than 10 seconds per pass.**
- B. 30 seconds per pass.
- C. 60 seconds per pass.
- D. 120 seconds per pass.

Keeping suction passes brief is essential because suctioning can rapidly deplete oxygen and irritate the airway, increasing the risk of desaturation and bradycardia. A single suction pass should last no more than 10 seconds. If more secretions remain, pause to re-oxygenate the patient between passes and reassess before continuing. Pre-oxygenate if possible, monitor SpO2 and heart rate, and use sterile technique to minimize harm while effectively clearing secretions.

9. According to the Frank-Starling mechanism, how does increasing preload affect stroke volume?

- A. Increased preload leads to greater sarcomere stretch and increased stroke volume, up to a limit.**
- B. Increasing preload reduces sarcomere overlap and decreases stroke volume.
- C. Increased preload has no effect on stroke volume.
- D. Increased preload always increases stroke volume without limit.

Increasing preload raises the end-diastolic volume, which stretches heart muscle fibers toward their optimal length. This length-tension relationship means more cross-bridge interactions during systole, producing a stronger contraction and a larger stroke volume. This effect holds true within physiological limits; after that point, further stretch becomes less efficient and stroke volume stops increasing or can even decline. So, the correct idea is that increasing preload leads to greater sarcomere stretch and a higher stroke volume, up to a limit.

10. For COPD patients, what is the generally recommended target SpO2 range to balance oxygenation and CO2 retention?

- A. 86-90%
- B. 88-92%**
- C. 90-94%
- D. 92-96%

Balancing oxygenation with the risk of CO2 retention in COPD is what this item is testing. In COPD patients who chronically retain CO2, the drive to breathe is more fueled by low oxygen levels than by high CO2 levels. Giving too much oxygen can blunt that hypoxic drive and worsen hypercapnia, while too little oxygen risks tissue hypoxia. The generally recommended target range of 88-92% SpO2 provides enough oxygen to tissues without overshooting and increasing CO2 retention. Staying within this range helps prevent CO2 narcosis and ventilation-perfusion problems that can arise with higher oxygen levels, while still avoiding dangerous hypoxemia.

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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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