ACLS Basics and STEMIs Practice Test (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 should be used to monitor the effectiveness of airway placement?

A. Pulse oximetry

B. Quantitative waveform capnography

C. ECG

D. Blood pressure

2. What is the recommended chest recoil after each compression?

A. Partial recoil after each compression

B. No recoil

C. Complete chest recoil after each compression

D. Recoil only after every other compression

3. Which action is aligned with administration principles for a high-performance team?

A. Reducing Leadership Involvement

B. Implementing Continuous Improvement

C. Limiting Measurement

D. Increasing Code Team Size

4. In STEMI, a complete occlusion of an epicardial artery results in what for blood flow beyond the blockage?

A. Normal flow past the occlusion

B. No blood flow beyond the occlusion

C. Increased flow beyond the occlusion

D. Flow only during systole

5. Which of the following is correctly listed as a H in resuscitation guidelines?

A. Hyperglycemia

B. Hypothermia

C. Hyperkalemia

D. Hypotension

6. Which statement is true about high-risk NSTE-ACS in terms of ECG findings compared with STEMI?

- **A. ST-segment elevation**
- **B. ST-segment depression of 0.5 mm or greater or dynamic T-wave inversion with pain**
- **C. No ECG changes**
- **D. Peaked T waves**

7. Indications for initiating IV nitroglycerin in STEMI include which of the following?

- **A. Recurrent or continuing chest discomfort unresponsive to sublingual nitro**
- **B. Pulmonary edema complicating STEMI**
- **C. Hypertension complicating STEMI**
- **D. All of the above**

8. Element 'Structure' includes what 3 things?

- **A. protocols, policies, procedures**
- **B. Programs, organization, culture**
- **C. satisfaction, safety, quality**
- **D. people, education, equipment**

9. In the management of ventricular fibrillation, which statement is consistent with the provided guidance?

- **A. Defibrillation should occur before any CPR**
- **B. Defibrillation is never used in conjunction with CPR**
- **C. CPR then defibrillation**
- **D. Defibrillation is avoided in the presence of CPR**

10. During cardiac arrest, what percentage of oxygen should be administered?

- **A. 100% oxygen**
- **B. 50% oxygen**
- **C. 21% oxygen**
- **D. 90% oxygen**

Answers

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

Explanations

1. What should be used to monitor the effectiveness of airway placement?

A. Pulse oximetry

B. Quantitative waveform capnography

C. ECG

D. Blood pressure

Verifying airway placement relies on direct feedback about ventilation in real time. Quantitative waveform capnography provides that by measuring end-tidal CO2 and showing a continuous capnogram. After intubation, a detectable and consistent end-tidal CO2 confirms the tube is in the trachea and ventilation is reaching the lungs. The waveform also helps track ventilation over time and quickly flags esophageal intubation if CO2 is absent or markedly reduced. Pulse oximetry, while important for assessing oxygenation, does not tell you where the tube is or whether ventilation is effective right away; oxygen saturation can remain normal for a period even with incorrect placement or suboptimal ventilation. ECG monitors heart rhythm, not airway position, and blood pressure reflects circulation rather than confirming airway placement.

2. What is the recommended chest recoil after each compression?

A. Partial recoil after each compression

B. No recoil

C. Complete chest recoil after each compression

D. Recoil only after every other compression

Complete chest recoil after each compression is essential because CPR works in cycles of pushing blood out of the heart and then letting the heart fill again. When you press down, intrathoracic pressure rises and drives blood forward. For the heart to fill effectively, the chest must rebound fully to its normal position, creating the negative pressure that pulls blood back in and restores the pressures needed to perfuse the heart and brain. If you don't allow full recoil, the heart stays partially compressed, venous return is reduced, stroke volume drops, and overall CPR effectiveness decreases. Recoil should occur with every compression, not only after some of them, and you should lift your hands completely off the chest between compressions to allow full recoil.

3. Which action is aligned with administration principles for a high-performance team?

A. Reducing Leadership Involvement

B. Implementing Continuous Improvement

C. Limiting Measurement

D. Increasing Code Team Size

Continuous improvement drives ongoing learning and adaptation, which is essential for a high-performance team. By building regular feedback loops—such as retrospectives, specific metrics, and small, testable changes—the team can identify bottlenecks, validate what works, and raise quality and speed over time. This aligns with administration principles that emphasize accountability, alignment with goals, and the capacity to respond to change. Reducing leadership involvement undermines the support, guidance, and blocking of obstacles that teams need to stay productive and aligned. Limiting measurement removes visibility into performance and the data needed to judge whether changes actually help. Increasing the size of the team without proper process improvements and coordination tends to introduce more communication overhead and onboarding time, which can slow progress rather than accelerate it.

4. In STEMI, a complete occlusion of an epicardial artery results in what for blood flow beyond the blockage?

A. Normal flow past the occlusion

B. No blood flow beyond the occlusion

C. Increased flow beyond the occlusion

D. Flow only during systole

When a coronary artery is completely blocked, the blood cannot move past the blockage to the downstream tissue. The myocardium fed by that artery loses its perfusion, so there is essentially no forward flow beyond the occlusion. Some collateral vessels from other arteries may provide limited alternate blood supply, but this flow does not come from the blocked artery itself. The other ideas—normal flow past the blockage, increased flow beyond the blockage, or flow only during systole—don't fit because a complete occlusion stops forward perfusion to the downstream myocardium, leading to ischemia and potential infarction if not reperfused.

5. Which of the following is correctly listed as a H in resuscitation guidelines?

A. Hyperglycemia

B. Hypothermia

C. Hyperkalemia

D. Hypotension

In resuscitation guidelines, the Hs represent reversible causes that should be addressed to improve outcomes. The Hs typically include Hypoxia, Hypovolemia, Hydrogen ion (acidosis), Hyperkalemia or Hypokalemia, and Hypothermia. Of the options given, hypothermia fits this group most clearly. Low body temperature can slow metabolism and disturb cardiac conduction, contributing to cardiac arrest; recognizing it signals the need for active warming and rewarming as part of resuscitation. Hyperglycemia isn't listed among the Hs, hypotension isn't a standard H, and while electrolyte disturbances like potassium issues can be considered under electrolyte problems, the choice that aligns with the defined H set is hypothermia.

6. Which statement is true about high-risk NSTE-ACS in terms of ECG findings compared with STEMI?

A. ST-segment elevation

B. ST-segment depression of 0.5 mm or greater or dynamic T-wave inversion with pain

C. No ECG changes

D. Peaked T waves

The key idea is that high-risk non–ST-elevation ACS signals ischemia without the transmural injury that causes ST-segment elevation. On the ECG, this shows up as ST-segment depression of at least 0.5 mm or dynamic T-wave inversion, often accompanied by chest pain. These patterns indicate subendocardial ischemia and a higher risk of progression to myocardial infarction, which is why this finding is the best description for high-risk NSTE-ACS. ST-segment elevation is the hallmark of STEMI, not high-risk NSTE-ACS, so that option doesn't fit. An ECG with no changes is possible in some ACS cases but doesn't capture the high-risk ischemic pattern described. Peaked T waves point to electrolyte issues like hyperkalemia, not ACS patterns.

7. Indications for initiating IV nitroglycerin in STEMI include which of the following?

A. Recurrent or continuing chest discomfort unresponsive to sublingual nitro

B. Pulmonary edema complicating STEMI

C. Hypertension complicating STEMI

D. All of the above

IV nitroglycerin in STEMI is used when you need to reduce the heart's oxygen demand and improve perfusion by dilating veins (lower preload) and, at higher doses, dilating arteries (lower afterload). Recurrent chest discomfort that persists despite sublingual nitro shows ongoing ischemia that often responds to a continuous IV infusion. In pulmonary edema complicating STEMI, IV nitro lowers LV filling pressures and reduces preload, helping to unload the failing ventricle and improve pulmonary congestion. When hypertension is present with STEMI, IV nitro lowers systemic vascular resistance and afterload, which can improve coronary perfusion and reduce myocardial wall stress. Because of these effects, all these situations are appropriate indications for initiating IV nitroglycerin in STEMI, with careful hemodynamic monitoring to avoid hypotension and other contraindications.

8. Element 'Structure' includes what 3 things?

A. protocols, policies, procedures

B. Programs, organization, culture

C. satisfaction, safety, quality

D. people, education, equipment

Structure in quality care refers to the resources and organizational setup that support care delivery. It includes the people who provide care, the education and training they have, and the equipment and tools available to use. These elements create the foundation that allows protocols and workflows to be carried out safely and effectively, and they influence patient outcomes. That's why the combination of people, education, and equipment fits best. Protocols, policies, and procedures are guidelines for action (a process), not the actual resources. Programs, organization, and culture describe broad organizational aspects, with culture focusing on behavior and norms rather than tangible resources. Satisfaction, safety, and quality are outcomes used to measure performance, not the structural resources themselves.

9. In the management of ventricular fibrillation, which statement is consistent with the provided guidance?

A. Defibrillation should occur before any CPR

B. Defibrillation is never used in conjunction with CPR

C. CPR then defibrillation

D. Defibrillation is avoided in the presence of CPR

During ventricular fibrillation, keeping blood flowing to the brain and heart is crucial, so starting high-quality chest compressions right away to maintain perfusion is essential while the team prepares to deliver a shock. The guidance emphasizes initiating CPR immediately and then delivering the defibrillation as soon as it can be performed without causing long pauses in compressions. This approach helps preserve organ perfusion and improves the likelihood that defibrillation will successfully restore a normal rhythm. So, CPR first, then defibrillation, aligns with the goal of minimizing interruptions to chest compression while still treating the shockable rhythm with a timely shock. Defibrillation is not avoided or prohibited during CPR, and defibrillating before any CPR would risk delaying perfusion, which is not optimal for outcomes.

10. During cardiac arrest, what percentage of oxygen should be administered?

A. 100% oxygen

B. 50% oxygen

C. 21% oxygen

D. 90% oxygen

Maximizing oxygen delivery during CPR is the key idea. When the heart isn't circulating, tissues quickly become hypoxic, so giving the highest possible arterial oxygen content helps support brain and heart viability while chest compressions are in progress. That's why 100% oxygen is recommended during cardiac arrest. Using a bag-valve mask or an advanced airway with 100% O2 ensures the patient receives the maximum oxygen available, improving the chance of oxygen reaching vital organs. Lower percentages—like ambient air (about 21%), or even 50% or 90%—don't guarantee the same level of oxygen delivery and can leave tissues more hypoxic during resuscitation. After circulation is restored, clinicians often titrate oxygen to avoid hyperoxia, but during the arrest itself the priority is to deliver the most oxygen possible.

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://aclsbasicsandstemis.examzify.com

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