Emergency Nursing Orientation 3.0: Cardiovascular Emergencies 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. **Post-ACS discharge medications should typically include which combination?**

   A. Antibiotics

   B. Diuretics only

   C. Aspirin, P2Y12 inhibitor, statin, beta-blocker, ACE inhibitor

   D. Calcium channel blocker

2. **In a patient with atrial fibrillation with rapid ventricular response who is unstable, what is the recommended intervention?**

   A. Rate control with IV diltiazem

   B. Immediate synchronized cardioversion

   C. Observation

   D. Anticoagulation only

3. **Which score is most commonly used to guide invasive strategy decisions in ACS?**

   A. GRACE score

   B. Wells score

   C. CHADS2

   D. MELD

4. **Which statement does not accurately characterize intravenous nitroglycerin administration?**

   A. Begin with a low infusion rate and titrate to effect

   B. Monitor the patient's vital signs every 2 hours while giving intravenous nitroglycerin

   C. Use a continuous IV infusion with a dedicated line

   D. Check blood pressure and heart rate every 5 minutes during initiation

5. **Which energy strategy is described as delivering energy without synchronization to the heart during emergency rhythm management?**

   A. Synchronized cardioversion

   B. Atropine administration

   C. Pacing

   D. Defibrillation

6. Which ECG leads reflect an anterior wall infarction?

A. V1 and V2

B. II, III, aVF

C. V3 and V4

D. V5 and V6

7. Imaging confirms pericardial effusion with tamponade?

A. Echocardiography shows pericardial effusion with diastolic RV collapse

B. ST elevations

C. Hyperkalemia

D. Normal imaging

8. When should a patient with ACS be referred for catheterization and potential PCI?

A. STEMI or high-risk NSTEMI with ongoing ischemia or high-risk features

B. NSTEMI with no ongoing ischemia

C. Stable angina with no ischemia

D. Chest pain with normal ECG

9. How do ST elevations differ between STEMI due to myocardial infarction and diffuse ST elevations due to pericarditis?

A. STEMI shows diffuse, convex ST elevations; pericarditis shows focal ST elevations with reciprocal changes

B. STEMI shows focal ST elevations with reciprocal changes; pericarditis shows diffuse concave ST elevations with PR depression

C. STEMI shows diffuse ST elevations with PR depression; pericarditis shows focal ST elevations with reciprocal changes

D. STEMI shows focal ST elevations with PR depression; pericarditis shows diffuse ST elevations with PR depression

10. What hemodynamic profile defines cardiogenic shock and which initial pharmacologic strategies are used?

A. Normal CO with high SVR; use phenylephrine

B. High cardiac output with low filling pressures; use nitroprusside and milrinone

C. Low cardiac output with elevated left-sided filling pressures (high PCWP) and hypotension; initial management includes norepinephrine as a vasopressor and dobutamine as an inotrope, with definitive MI treatment.

D. Low CO with low PCWP; use dopamine

Answers

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

Explanations

1. Post-ACS discharge medications should typically include which combination?

A. Antibiotics

B. Diuretics only

C. Aspirin, P2Y12 inhibitor, statin, beta-blocker, ACE inhibitor

D. Calcium channel blocker

Post-ACS discharge care aims to prevent reinfarction, reduce mortality, and support heart function by addressing thrombosis, lipid management, remodeling, and symptoms. The combination of aspirin and a P2Y12 inhibitor provides dual antiplatelet therapy to prevent thrombus formation on ruptured plaque or on a stent. A statin is essential to stabilize plaques and lower LDL, improving long-term outcomes after an ACS. A beta-blocker reduces myocardial oxygen demand and helps prevent reinfarction and arrhythmias, provided there are no contraindications. An ACE inhibitor protects against adverse remodeling and lowers mortality risk, especially in patients with reduced LV function, hypertension, or diabetes. Antibiotics are not a standard part of post-ACS discharge unless an infection is present, and diuretics alone don't address the primary pathophysiology of ACS. Calcium channel blockers aren't universally indicated for all post-ACS patients, though they may be used for angina or hypertension in specific cases. The five-drug combination above represents the typical, guideline-supported core regimen for discharge after ACS.

2. In a patient with atrial fibrillation with rapid ventricular response who is unstable, what is the recommended intervention?

A. Rate control with IV diltiazem

B. Immediate synchronized cardioversion

C. Observation

D. Anticoagulation only

When atrial fibrillation with rapid ventricular response is causing instability, the priority is to rapidly restore effective cardiac output. Immediate synchronized cardioversion is used to convert the rhythm back to normal sinus rhythm and quickly stabilize perfusion. Rate-control medications like diltiazem are useful in stable AF with RVR, but in unstable patients they won't quickly correct poor hemodynamics and can worsen hypotension. Observation offers no remedy for the hemodynamic collapse, and anticoagulation alone does not address the urgent need to restore rhythm. Synchronized cardioversion delivers a shock timed with the heart's electrical activity to restore coordinated rhythm safely, and is the fastest way to reverse the instability in this scenario.

3. Which score is most commonly used to guide invasive strategy decisions in ACS?

A. GRACE score

B. Wells score

C. CHADS2

D. MELD

Risk stratification in ACS guides who should undergo invasive evaluation and potential revascularization. The GRACE score is the most commonly used tool for this purpose because it estimates the patient's risk of in-hospital and short-term mortality using readily available admission data: age, heart rate, systolic blood pressure, creatinine, presence of cardiac arrest at presentation, ST-segment deviation, elevated cardiac enzymes, and Killip class. This combination reflects both hemodynamic status and extent of myocardial injury, which helps clinicians decide how aggressively to pursue invasive strategies like early coronary angiography and possible revascularization. Higher GRACE scores indicate greater risk and a higher likely benefit from invasive management, while lower scores may support a more conservative approach. Wells score, CHADS2, and MELD serve different purposes: Wells assesses pretest probability for pulmonary embolism or deep vein thrombosis; CHADS2 estimates stroke risk in atrial fibrillation and guides anticoagulation; MELD evaluates liver disease severity and transplant risk. None of these are specifically validated for guiding invasive decisions in ACS.

4. Which statement does not accurately characterize intravenous nitroglycerin administration?

A. Begin with a low infusion rate and titrate to effect

B. Monitor the patient's vital signs every 2 hours while giving intravenous nitroglycerin

C. Use a continuous IV infusion with a dedicated line

D. Check blood pressure and heart rate every 5 minutes during initiation

IV nitroglycerin is a potent vasodilator that must be started at a low infusion rate and titrated to achieve the desired effect while closely watching the patient's hemodynamics. It's given as a continuous infusion through a dedicated line so dosing stays consistent and there's no delay if a faster adjustment is needed. During initiation, frequent monitoring of blood pressure and heart rate is essential because the drug can cause rapid drops in BP or reflex tachycardia; many protocols call for checks every 5 minutes (and more often if unstable or if the patient is on high doses). Checking vital signs only every 2 hours would miss these rapid changes and is not appropriate during initiation. Once hemodynamics stabilize, monitoring intervals can be extended, but the initiation phase requires close, frequent assessment.

5. Which energy strategy is described as delivering energy without synchronization to the heart during emergency rhythm management?

A. Synchronized cardioversion

B. Atropine administration

C. Pacing

D. Defibrillation

The energy strategy described is defibrillation. In emergency rhythm management, defibrillation delivers an electric shock without synchronizing to the heart's electrical activity, which is essential when the rhythm is chaotic and pulseless, such as ventricular fibrillation or pulseless ventricular tachycardia. Because there's no reliable pacing pattern to follow in these scenarios, delivering the shock asynchronously aims to depolarize a critical mass of myocardium all at once, momentarily stopping the chaotic activity so the heart's natural pacemakers can reestablish a normal rhythm. This differs from synchronized cardioversion, which is used when the patient has a pulse but is in a tachyarrhythmia; the shock is timed to the R wave to avoid inducing a worse rhythm. Pacing and atropine aren't about delivering an energy shock in the same way: pacing provides timed electrical impulses to maintain rate, and atropine is a drug to speed the heart rather than an energy-delivery intervention.

6. Which ECG leads reflect an anterior wall infarction?

A. V1 and V2

B. II, III, aVF

C. V3 and V4

D. V5 and V6

Anterior wall involvement shows up on the ECG most clearly in the chest leads that look directly at the front surface of the left ventricle. The leads V3 and V4 are the most representative for this area, often with V2 also showing changes. This pattern occurs because these precordial leads are positioned over the anterior wall and detect transmural ischemia there, typically from a left anterior descending artery occlusion. The other lead patterns point to different territories: the inferior leads pick up an inferior-wall infarction, while the lateral leads reflect the lateral wall. The septal/anteroseptal region is best seen in the more anterior chest leads like V1 and V2.

7. Imaging confirms pericardial effusion with tamponade?

A. Echocardiography shows pericardial effusion with diastolic RV collapse

B. ST elevations

C. Hyperkalemia

D. Normal imaging

The key idea is that tamponade is about impaired filling due to pressure from fluid around the heart, which shows up on imaging as diastolic collapse of the right ventricle when there is a pericardial effusion. In tamponade, the intrapericardial pressure approaches or exceeds the filling pressures of the right heart, especially during diastole, causing the right ventricle to collapse. This echo finding—diastolic RV collapse in the setting of a pericardial effusion—is the hallmark that distinguishes tamponade physiology from a simple effusion. Having pericardial fluid alone doesn't confirm tamponade; you need evidence that filling is compromised. Other choices don't fit because ST elevations point to myocardial injury or pericarditis, not specifically tamponade; hyperkalemia is an electrolyte issue with conduction effects, not an imaging finding of tamponade; normal imaging would not align with a tamponade diagnosis. In practice, seeing diastolic RV collapse on echocardiography with a pericardial effusion indicates the need for urgent intervention to relieve the pressure and restore cardiac filling.

8. When should a patient with ACS be referred for catheterization and potential PCI?

A. STEMI or high-risk NSTEMI with ongoing ischemia or high-risk features

B. NSTEMI with no ongoing ischemia

C. Stable angina with no ischemia

D. Chest pain with normal ECG

In acute coronary syndromes, the goal is to restore blood flow to the affected area as quickly as possible when there is ongoing ischemia. For STEMI, the blockage is usually complete, and the artery should be opened with catheter-directed therapy as a priority (PCI) as soon as possible to minimize heart muscle damage. For NSTEMI, the artery is not completely occluded, so an invasive strategy isn't always emergent, but it's strongly indicated when there is ongoing chest pain or other high-risk features—such as persistent or recurring ischemia, hemodynamic instability, heart failure, life-threatening arrhythmias, or a high risk score—to promptly identify and treat a culprit lesion. The best choice reflects that urgent catheterization and PCI are indicated for STEMI or for high-risk NSTEMI patients with ongoing ischemia or high-risk features. NSTEMI without ongoing ischemia and stable angina without ischemia, or chest pain with a normal ECG, do not require immediate invasive intervention and are managed more conservatively or with noninvasive risk stratification unless new high-risk features develop.

9. How do ST elevations differ between STEMI due to myocardial infarction and diffuse ST elevations due to pericarditis?

A. STEMI shows diffuse, convex ST elevations; pericarditis shows focal ST elevations with reciprocal changes

B. STEMI shows focal ST elevations with reciprocal changes; pericarditis shows diffuse concave ST elevations with PR depression

C. STEMI shows diffuse ST elevations with PR depression; pericarditis shows focal ST elevations with reciprocal changes

D. STEMI shows focal ST elevations with PR depression; pericarditis shows diffuse ST elevations with PR depression

The main idea is recognizing how the ST elevations differ in location and shape between a true transmural infarction and pericarditis. In a STEMI, the injury affects a specific coronary territory, so the ST elevations are focal to that region and you often see reciprocal ST depressions in leads opposite the involved area. In pericarditis, the inflammatory process involves the whole pericardium, leading to diffuse ST elevations across many leads, and these elevations tend to be concave upward with accompanying PR-segment depression (often with PR elevation in aVR). So, the best description is that STEMI shows focal ST elevations with reciprocal changes, while pericarditis shows diffuse, concave ST elevations with PR depression.

10. What hemodynamic profile defines cardiogenic shock and which initial pharmacologic strategies are used?

A. Normal CO with high SVR; use phenylephrine

B. High cardiac output with low filling pressures; use nitroprusside and milrinone

C. Low cardiac output with elevated left-sided filling pressures (high PCWP) and hypotension; initial management includes norepinephrine as a vasopressor and dobutamine as an inotrope, with definitive MI treatment.

D. Low CO with low PCWP; use dopamine

In cardiogenic shock the heart is not pumping effectively, so cardiac output falls and tissue perfusion decreases. The failure is primarily left-sided, so pressures backing up into the left heart rise, producing an elevated left-sided filling pressure (high PCWP). The patient becomes hypotensive because forward flow is inadequate. The goal of initial therapy is to stabilize perfusion by increasing both pressure and flow. Norepinephrine is used as a vasopressor to raise mean arterial pressure and improve coronary and systemic perfusion without overly dilating the vessels, which can worsen perfusion in a failing heart. Dobutamine is added to boost contractility and stroke volume, which raises cardiac output and helps reduce LV filling pressures as perfusion improves. In the context of an acute myocardial infarction, definitive treatment is rapid reperfusion to restore blood flow to the affected myocardium. Other approaches that focus mainly on reducing afterload or that rely on beta-agonists alone can worsen symptoms if blood pressure is already low, so the combination of norepinephrine with dobutamine best fits the typical hemodynamic profile and initial management.

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://emnursingorientation3cardioem.examzify.com

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