

Pre-Tachyarrhythmia 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

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- 1. Which of the following is NOT a sensitivity pre-set option in the current DC ICD?**
 - A. STD**
 - B. TWS**
 - C. VFS**
 - D. GPS**

- 2. Which discriminant helps distinguish VT from AF with rapid ventricular response?**
 - A. Onset**
 - B. Stability**
 - C. QRS morphology**
 - D. Rate**

- 3. It is possible to cardiovert AFib during a DFT. True or False?**
 - A. True**
 - B. False**
 - C. Not Applicable**
 - D. Sometimes**

- 4. In implantable cardioverter-defibrillator therapy, which statement best describes the difference between primary and secondary prevention?**
 - A. Primary: therapeutic after a cardiac event; Secondary: prophylactic**
 - B. Primary: prophylactic; Secondary: positive event (SCD) or EP study**
 - C. Primary: prophylactic; Secondary: routine testing only**
 - D. Primary: palliative; Secondary: curative**

- 5. What are the two things that occur during the initial noise interval?**
 - A. Rwave is rectified**
 - B. Rwave is measured**
 - C. Rwave is rectified and Rwave is measured**
 - D. Neither occurs**

- 6. Which statement is true about stimulation during the excitable gap in a reentrant circuit?**
- A. It prolongs the rhythm**
 - B. It terminates the tachycardia**
 - C. It has no effect**
 - D. When the stimulus hits the excitable gap it breaks the rhythm**
- 7. Which action enables therapy on the device during implant/follow-up?**
- A. Circle ICD THERAPY ON**
 - B. Reinterrogate**
 - C. Final printout**
 - D. Document the patient consent**
- 8. Which term best identifies the feature on the programmer that is used to initiate atrial fibrillation in testing?**
- A. Atrial overdrive pacing**
 - B. Ventricular pacing**
 - C. Atr NIPS**
 - D. Randomized stimulation**
- 9. When should you suggest using a bi-phasic 2 shock waveform?**
- A. When patients are taking a class 3 antiarrhythmic drug**
 - B. When patients have bradycardia**
 - C. After a long QT interval**
 - D. When there is ventricular pacing**
- 10. What waveform type is used in the defibrillators?**
- A. Monophasic**
 - B. Truncated**
 - C. Biphasic**
 - D. Rectified**

Answers

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

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Explanations

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1. Which of the following is NOT a sensitivity pre-set option in the current DC ICD?

- A. STD
- B. TWS
- C. VFS
- D. GPS**

Sensing sensitivity in a DC ICD is about how readily the device interprets electrical signals as ventricular activity, with predefined presets that tailor detection to balance accurate therapy against oversensing noise. Among the listed options, STD stands for a standard sensitivity preset, and TWS and VFS are specialized sensitivity configurations used to adjust how the device senses signals under different conditions. GPS, on the other hand, is not part of the sensitivity settings; it's not used to determine how the ICD detects cardiac signals and is not a sensitivity preset. Therefore, GPS is the option that does not fit.

2. Which discriminant helps distinguish VT from AF with rapid ventricular response?

- A. Onset
- B. Stability**
- C. QRS morphology
- D. Rate

Stability of how the rhythm behaves and the patient's hemodynamic status is the key here. Ventricular tachycardia typically produces a steady, regular ventricular rhythm, even when the heart rate is high. In contrast, atrial fibrillation with rapid ventricular response yields an irregularly irregular ventricular rhythm because the atrial activity is chaotic and the ventricular response varies from beat to beat. So, looking at whether the rhythm is stable and regular versus irregular and unstable helps you tell VT apart from AF with RVR. The other features can be misleading: onset can occur abruptly in both, rate can be high in either, and QRS morphology can be variable or mimic VT if there is aberrant conduction.

3. It is possible to cardiovert AFib during a DFT. True or False?

- A. True**
- B. False
- C. Not Applicable
- D. Sometimes

Cardioversion can restore sinus rhythm from atrial fibrillation by delivering a synchronized shock to the atria. A defibrillation threshold test focuses on finding the energy needed to terminate ventricular fibrillation, but this doesn't preclude using a synchronized atrial shock if atrial fibrillation is present during the test. In other words, the device or the clinical setup can switch to a synchronized cardioversion mode to convert AFib, separate from the unsynchronized defibrillation used for VF. If AFib is ongoing or reappears during the testing, a properly timed synchronized shock can be used to reestablish sinus rhythm. As with any AFib intervention, consider thromboembolic risk and anticoagulation timing based on how long AFib has been present.

4. In implantable cardioverter-defibrillator therapy, which statement best describes the difference between primary and secondary prevention?

A. Primary: therapeutic after a cardiac event; Secondary: prophylactic

B. Primary: prophylactic; Secondary: positive event (SCD) or EP study

C. Primary: prophylactic; Secondary: routine testing only

D. Primary: palliative; Secondary: curative

The key idea is distinguishing risk-based prevention from event-based prevention in ICD therapy. Primary prevention means we implant the device to prevent the first Sudden Cardiac Death in patients who are at high risk but have not yet had a life-threatening arrhythmia. This is a prophylactic use aimed at stopping a potential future event. Secondary prevention, on the other hand, is for patients who have already experienced a life-threatening arrhythmia, such as a survived SCD or sustained VT, and the ICD is implanted to prevent recurrence. An electrophysiology study that shows inducible VT/VF also supports secondary prevention because it demonstrates susceptibility to dangerous arrhythmias, indicating the need to prevent another event. So, describing primary as prophylactic and secondary as based on a prior event (SCD) or an inducible arrhythmia on EP study captures the fundamental distinction.

5. What are the two things that occur during the initial noise interval?

A. Rwave is rectified

B. Rwave is measured

C. Rwave is rectified and Rwave is measured

D. Neither occurs

During the initial noise interval, you want to both rectify the R wave and measure its magnitude. Rectifying the R wave converts any negative deflections to positive, so the peak height can be assessed consistently regardless of lead polarity. Measuring its amplitude right away provides a numerical reference for how big a true R peak typically is, which is essential for setting detection thresholds and distinguishing signal from noise later on. If you only rectified, you'd still lack a concrete reference value to base thresholds on. If you only measured, the polarity of the R wave could skew the measurement and make thresholding unreliable across different leads or beats. By doing both, you establish a robust baseline: a known, positive peak size that informs how the subsequent detector will recognize real R waves amidst noise.

6. Which statement is true about stimulation during the excitable gap in a reentrant circuit?

A. It prolongs the rhythm

B. It terminates the tachycardia

C. It has no effect

D. When the stimulus hits the excitable gap it breaks the rhythm

The excitable gap is the window in a reentrant circuit where tissue has recovered and can be captured by a stimulus. A premature stimulus arriving during this gap can propagate into the circuit and collide with the circulating wavefront in a way that interrupts the loop, terminating the tachycardia. So stimulation hitting the excitable gap breaks the rhythm. If the stimulus lands outside this window, the reentry often persists or has little effect.

7. Which action enables therapy on the device during implant/follow-up?

A. Circle ICD THERAPY ON

B. Reinterrogate

C. Final printout

D. Document the patient consent

Enabling therapy on an ICD during implant or follow-up ensures the device is active and capable of delivering treatment when a dangerous rhythm is detected. The therapy settings control whether the device will deliver anti-tachycardia pacing or a shock in response to detected tachyarrhythmias. Verifying that therapy is ON is essential to confirm the device will actually treat arrhythmias during testing and routine follow-up. Other actions serve different purposes: reinterrogation retrieves data from the device, the final printout is just documentation of results, and documenting patient consent is administrative and does not adjust device function. Therefore, turning ICD therapy on is the correct action.

8. Which term best identifies the feature on the programmer that is used to initiate atrial fibrillation in testing?

A. Atrial overdrive pacing

B. Ventricular pacing

C. Atr NIPS

D. Randomized stimulation

The concept being tested is how testing environments provoke atrial fibrillation in a controlled way using the device's programming features. The best term is atrial NIPS, which stands for atrial non-invasive pacing stimulation. This feature allows the tester to deliver targeted atrial pacing sequences without invasive intervention, reliably initiating atrial activity to provoke AF for evaluating detection and response of the device's therapies. Atrial overdrive pacing is typically used to terminate or suppress tachyarrhythmias rather than to start them. Ventricular pacing targets the ventricle and doesn't reliably produce atrial fibrillation. Randomized stimulation isn't a standard, defined testing method. So, atrial NIPS is the correct term for initiating AF in testing.

9. When should you suggest using a bi-phasic 2 shock waveform?

- A. When patients are taking a class 3 antiarrhythmic drug**
- B. When patients have bradycardia**
- C. After a long QT interval**
- D. When there is ventricular pacing**

Biphasic two-shock defibrillation is more effective at terminating ventricular fibrillation with less energy and less myocardial injury than older single-phase or monophasic shocks. This increased efficiency is particularly helpful in patients whose heart tissue properties are altered by antiarrhythmic drugs, especially class III agents like amiodarone or sotalol, which prolong repolarization and can make defibrillation less straightforward. The two-phase waveform delivers a more reliable depolarizing effect across these altered tissues, improving the chance of successful rhythm conversion at lower energy. The other scenarios aren't about choosing the waveform for defibrillation: bradycardia isn't a shockable rhythm issue, a long QT interval is a risk factor for torsades de pointes but not a specific trigger to switch to a biphasic two-shock approach, and ventricular pacing relates to pacing rather than defibrillation strategy.

10. What waveform type is used in the defibrillators?

- A. Monophasic**
- B. Truncated**
- C. Biphasic**
- D. Rectified**

Modern external defibrillators use a biphasic waveform, delivering the shock in two opposite directions within one event. This two-phase approach is more effective at restoring rhythm while requiring lower energy, which lowers damage to the heart muscle compared with older single-direction shocks. In many devices, this biphasic form is described as a truncated exponential waveform, where the second phase is limited in duration to optimize safety and efficacy. So, the essential type is biphasic, with the truncated exponential shape being a common implementation of that biphasic idea. Monophasic defibrillation is older and generally less favorable due to higher energy needs and greater myocardial injury; terms like rectified describe different or less common waveform implementations and don't define the standard practice.

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://pretachyarrhythmia.examzify.com>

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

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