Cardiac HealthStream Telemetry 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. Which ECG change on telemetry is most characteristic of severe hyperkalemia?

A. Flattened T waves with prominent U waves

B. Tall, peaked T waves progressing to wide QRS and possibly a sine-wave pattern

C. ST-segment elevation in leads V2-V4

D. Prolonged PR interval with widened QRS but no T changes

2. Torsades de Pointes is commonly associated with

A. Short QT interval.

B. Prolonged QT interval.

C. No QT interval relation.

D. No effect on QT interval.

3. What is the normal Q-T interval range?

A. 0.35-0.43 sec

B. 0.25-0.30 sec

C. 0.30-0.35 sec

D. 0.45-0.50 sec

4. A sine-wave pattern on telemetry is most consistent with which electrolyte abnormality in severe cases?

A. Hypokalemia

B. Hypercalcemia

C. Hyperkalemia

D. Hypomagnesemia

5. Torsades de Pointe is best described as which rhythm?

A. Sinus Tachycardia

B. Ventricular Tachycardia

C. Torsades de Pointe

D. Atrial Fibrillation with Rapid Ventricular Response

6. How does a junctional rhythm appear on telemetry, and what is the typical rate?

- **A. P waves may be absent or inverted; QRS usually narrow; rate approximately 40-60 bpm.**
- **B. P waves preceding QRS normally; rate 60-100.**
- **C. Wide QRS with tachycardia; rate 100-120.**
- **D. No P waves or QRS; flatline.**

7. Why is continuous telemetry important after PCI or acute MI?

- **A. To monitor blood pressure continuously**
- **B. To detect early arrhythmias, monitor ischemia resolution, and guide therapy**
- **C. To assess sleep patterns**
- **D. To reduce alarm fatigue**

8. Sinus Bradycardia is defined by rate.

- **A. <60**
- **B. 60-100**
- **C. >100**
- **D. Rate varies**

9. Which of the following is a type of heart block?

- **A. First Degree AV Block**
- **B. Atrial Fibrillation**
- **C. Atrial Flutter**
- **D. Multifocal Atrial Tachycardia**

10. Sinus Tachycardia is best described as which rhythm?

- **A. Atrial Fibrillation with Rapid Ventricular Response**
- **B. Ventricular Tachycardia**
- **C. Sinus Tachycardia**
- **D. Torsades de Pointe**

Answers

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

Explanations

1. Which ECG change on telemetry is most characteristic of severe hyperkalemia?

A. Flattened T waves with prominent U waves

B. Tall, peaked T waves progressing to wide QRS and possibly a sine-wave pattern

C. ST-segment elevation in leads V2-V4

D. Prolonged PR interval with widened QRS but no T changes

Severe hyperkalemia is best recognized on ECG by tall, peaked T waves that progressively widen the QRS complex and can merge into a sine-wave pattern. This sequence occurs because high extracellular potassium speeds up repolarization (producing the tall, peaked T waves) while also slowing conduction through the heart as potassium blocks further depolarization, leading to PR prolongation and QRS widening. As potassium rises even more, the QRS widens further and the ECG can take on a sine-wave appearance, indicating a life-threatening risk of ventricular arrhythmias or arrest. The other patterns fit different scenarios: flattened T waves with prominent U waves point to hypokalemia; ST-segment elevation in precordial leads suggests an acute myocardial infarction; and prolonged PR with widened QRS but no T changes can occur earlier but does not capture the severe, sine-wave stage seen with extreme hyperkalemia.

2. Torsades de Pointes is commonly associated with

A. Short QT interval.

B. Prolonged QT interval.

C. No QT interval relation.

D. No effect on QT interval.

Torsades de pointes occurs most often when the heart's repolarization is prolonged, shown as a prolonged QT interval on the ECG. When the QT is long, tiny afterdepolarizations can appear during the late repolarization phase. These afterdepolarizations can trigger a rapid, twisting, polymorphic ventricular tachycardia that characterizes torsades de pointes and can deteriorate into more dangerous rhythms if not corrected. That's why any situation or medication that lengthens the QT interval—electrolyte disturbances like low potassium or magnesium, bradycardia, and many drugs that prolong repolarization—raises the risk for torsades. Short QT, or no QT-related changes, does not carry the same TdP risk, so prolonged QT is the key association here.

3. What is the normal Q-T interval range?

A. 0.35-0.43 sec

B. 0.25-0.30 sec

C. 0.30-0.35 sec

D. 0.45-0.50 sec

The QT interval measures the time from the start of the Q wave to the end of the T wave, reflecting how long the ventricles take to depolarize and then repolarize. In adults, a normal QT interval is typically about 0.36 to 0.44 seconds, with many teaching references citing roughly 0.35 to 0.43 seconds as a practical normal window. The range given fits well within that normal span, so it best represents a normal QT interval. Ranges shorter than this (roughly 0.25–0.30 or 0.30–0.35 seconds) are longer than normal only in certain circumstances or may reflect faster heart rates or measurement nuances. A range like 0.45–0.50 seconds is longer than normal and can indicate prolonged repolarization, which carries a risk for certain ventricular arrhythmias and warrants clinical attention.

4. A sine-wave pattern on telemetry is most consistent with which electrolyte abnormality in severe cases?

A. Hypokalemia

B. Hypercalcemia

C. Hyperkalemia

D. Hypomagnesemia

Severe hyperkalemia disrupts cardiac conduction enough to produce a sine-wave pattern on telemetry. High extracellular potassium reduces the resting membrane potential, partial depolarization inactivates sodium channels, and slows impulse propagation. This causes the QRS to widen and the T waves to merge with the QRS, yielding the characteristic sine-wave appearance. This pattern signals life-threatening potassium excess and imminent risk of dangerous arrhythmias if not treated promptly. Other electrolyte patterns don't produce this sine-wave. Hypokalemia tends to cause flat or inverted T waves with U waves; hypercalcemia shortens the QT interval; hypomagnesemia is a setup for QT prolongation and torsades de pointes rather than a sine wave.

5. Torsades de Pointe is best described as which rhythm?

A. Sinus Tachycardia

B. Ventricular Tachycardia

C. Torsades de Pointe

D. Atrial Fibrillation with Rapid Ventricular Response

Torsades de pointes is a polymorphic ventricular tachycardia. On the ECG it shows a twisting, pendulum-like pattern of the QRS complexes that appear to rotate around the baseline. This distinctive morphology occurs because the QRS axis and amplitude continuously change from beat to beat. It most often arises when the QT interval is prolonged, which can be caused by electrolyte disturbances or certain medications, and it can deteriorate into life-threatening ventricular fibrillation if not treated promptly. This is different from sinus tachycardia, which has normal P waves and a regular rhythm with a fast rate; from monomorphic ventricular tachycardia, which shows a wide, uniform QRS morphology; and from atrial fibrillation with rapid ventricular response, which is irregular and lacks discrete P waves. So the best description is that torsades de pointes is a form of ventricular tachycardia characterized by a twisting, polymorphic QRS pattern.

6. How does a junctional rhythm appear on telemetry, and what is the typical rate?

A. P waves may be absent or inverted; QRS usually narrow; rate approximately 40-60 bpm.

B. P waves preceding QRS normally; rate 60-100.

C. Wide QRS with tachycardia; rate 100-120.

D. No P waves or QRS; flatline.

A junctional rhythm arises from the AV junction, so the atria may be activated after the ventricles or not at all in the usual forward direction. On telemetry this typically shows P waves that are absent or inverted (retrograde atrial depolarization), and the QRS complex remains narrow because conduction through the His-Purkinje system is intact. The rate is usually slow, about 40-60 beats per minute, reflecting the intrinsic pacing of the AV junction rather than the SA node. This combination—absent or inverted P waves, narrow QRS, and a rate around 40-60 bpm—fits a junctional rhythm best. The other patterns describe normal sinus rhythm (P waves before QRS at 60-100 bpm), wide-QRS tachycardia, or asystole, which don't match junctional rhythm.

7. Why is continuous telemetry important after PCI or acute MI?

A. To monitor blood pressure continuously

B. To detect early arrhythmias, monitor ischemia resolution, and guide therapy

C. To assess sleep patterns

D. To reduce alarm fatigue

Continuous telemetry after PCI or an acute MI centers on real-time ECG monitoring to catch dangerous rhythm disturbances and track ischemia. The heart is especially vulnerable in the immediate post-event period to malignant arrhythmias, so detecting atrial or ventricular arrhythmias early allows rapid interventions such as pacing, defibrillation, or adjustments to therapy. Telemetry also helps assess whether ischemia is resolving or persisting by watching for changes in ST segments and heart-rate response, which guides adjustments in medications and the overall treatment plan. This ongoing electrical and perfusion-status information enables timely decisions to prevent deterioration and improve outcomes. Sleep patterns aren't the focus of telemetry, and while blood pressure monitoring is important, its continuous assessment is handled separately; alarm fatigue is addressed through broader systems and workflow improvements rather than the telemetry function itself.

8. Sinus Bradycardia is defined by rate.

A. <60

B. 60-100

C. >100

D. Rate varies

Sinus bradycardia is a slow heart rate that originates from the normal sinus node with a regular rhythm. In adults, it is defined as a heart rate below 60 beats per minute, so the description with a rate less than 60 is the correct definition. A rate of 60-100 beats per minute is considered normal resting heart rate, while a rate above 100 is tachycardia. Saying the rate simply varies does not define bradycardia, because the key feature is a distinctly low rate, not variability. Keep in mind that in some healthy individuals like well-trained athletes or during sleep, a rate under 60 can be normal, but the defining threshold remains <60 bpm.

9. Which of the following is a type of heart block?

A. First Degree AV Block

B. Atrial Fibrillation

C. Atrial Flutter

D. Multifocal Atrial Tachycardia

Conduction block means the impulse from the atria to the ventricles is slowed or interrupted. First Degree AV Block is the mild form of this, where the AV node conducts every atrial impulse to the ventricles but with a longer delay. On an ECG you'll see a PR interval longer than 0.20 seconds, with P waves followed by QRS complexes in a 1:1 relationship and a normal QRS width. Because the impulse still gets through to the ventricles, just more slowly, it's classified as a block, although usually benign. The other conditions are not blocks. Atrial fibrillation shows chaotic atrial activity with no distinct P waves and an irregularly irregular ventricular response, not a conduction delay. Atrial flutter produces sawtooth atrial patterns often with a rapid atrial rate but still represents atrial rhythm disorder rather than AV conduction block. Multifocal atrial tachycardia involves several atrial foci causing irregular P waves and rate, not a block in the AV pathway. So the correct option is First Degree AV Block.

10. Sinus Tachycardia is best described as which rhythm?

A. Atrial Fibrillation with Rapid Ventricular Response

B. Ventricular Tachycardia

C. Sinus Tachycardia

D. Torsades de Pointe

Sinus tachycardia is a fast but regular rhythm that keeps the normal electrical pathway starting from the sinus node. On the ECG you'll see a P wave before every QRS complex, a normal PR interval, and a narrow QRS, but the rate is above 100 beats per minute. This means it's the same sinus rhythm as normal heartbeats, just faster, rather than a rhythm arising from another part of the heart or with abnormal conduction. This distinguishes it from atrial fibrillation with rapid ventricular response, which would show no discrete P waves and an irregular rhythm; from ventricular tachycardia, which usually has wide, abnormal QRS complexes; and from torsades de pointes, which is a polymorphic VT with twisting QRS morphology.

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://cardiachealthstreamtelemetry.examzify.com

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