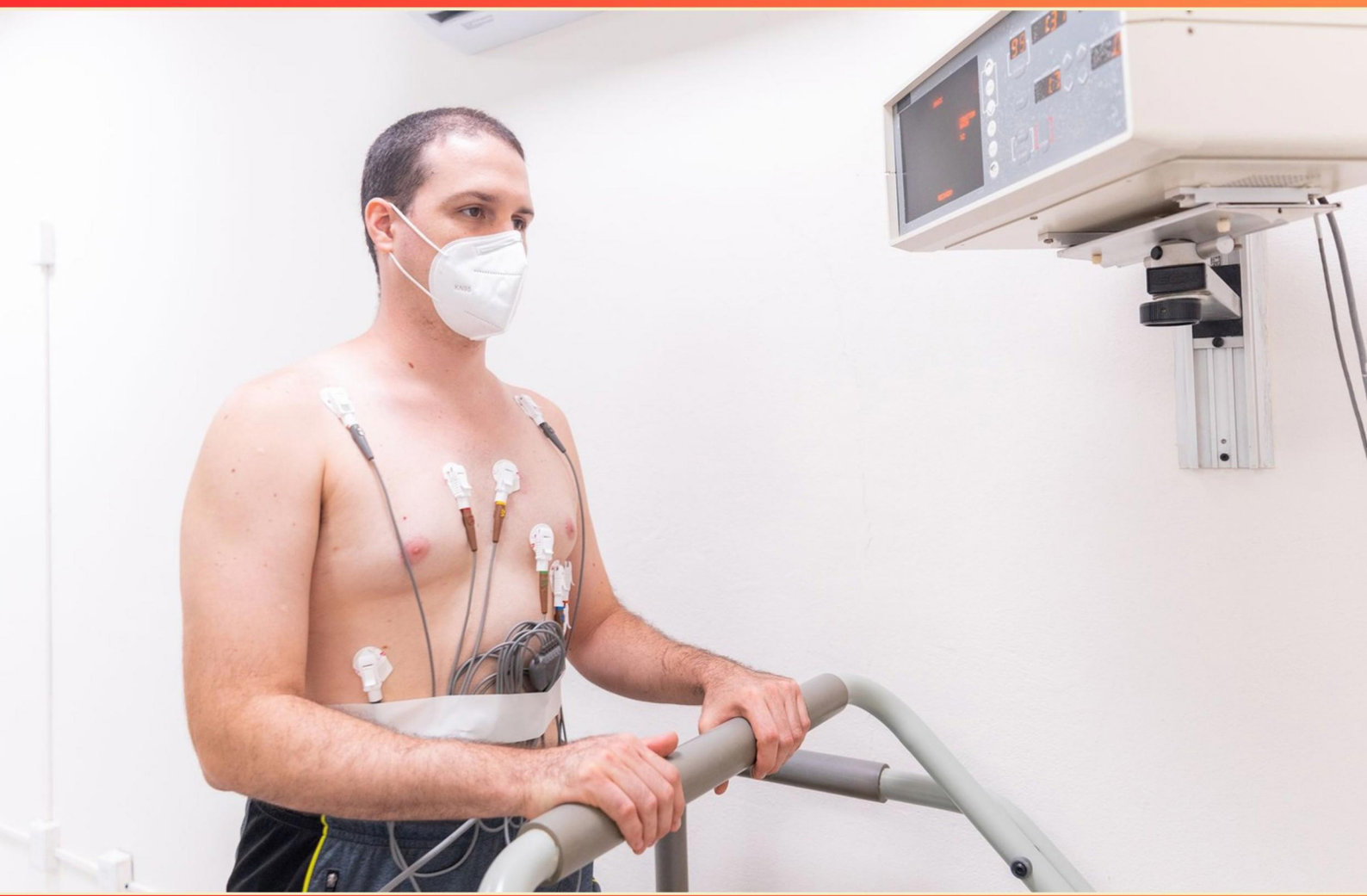
# BASIC ARRHYTHMIAS WITH 12 LEAD EKG'S PRACTICE TEST (SAMPLE)

## STUDY GUIDE



## SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

**VISIT US ONLINE FOR THE FULL VERSION STUDY GUIDE**

https://basicarrhythmias12leadekg.examzify.com

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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.

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# 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!

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# Questions

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**1. When tachycardia is caused by block at the AV node, what is the goal of treatment?**

A. Increase conduction through the AV junction

B. Decrease conduction through the AV node

C. Slow the heart rate

D. Increase heart rate by pacing

**2. In the Sokolow-Lyon criterion, which measurement sum is used?**

A. R in V1 plus S in V5/V6 ≥ 35 mm

B. S in V1 plus R in V5/V6 ≥ 35 mm

C. S in V1 plus R in V4 ≥ 30 mm

D. S in V2 plus R in V4 ≥ 40 mm

**3. Which statement describes narrow-complex tachycardia versus wide-complex tachycardia?**

A. Narrow-complex tachycardia has QRS duration < 120 ms; wide-complex tachycardia has QRS ≥ 120 ms

B. Narrow-complex tachycardia has QRS duration > 120 ms; wide-complex tachycardia has QRS < 120 ms

C. Both have QRS duration < 100 ms

D. Wide-complex tachycardia confirms atrial tachycardia

**4. Which feature identifies a paced rhythm on an ECG?**

A. Absence of QRS complexes

B. Inverted T waves in all leads

C. Evidence of pacing spikes before the QRS complexes and a paced rhythm pattern

D. Prolonged PR interval without QRS

**5. What defines a pathological Q wave on ECG?**

A. Q waves ≥0.04 seconds and at least 25% of the following R wave height

B. Q waves ≥0.08 seconds with 50% R wave height

C. Q waves <0.02 seconds and absent R waves

D. Q waves only in lateral leads

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**6. This term marks the boundary between the end of the QRS and the beginning of the ST segment.**

A. J point

B. P point

C. Q point

D. T point

**7. What rhythm is the normal cardiac pattern that typically does not produce symptoms?**

A. Normal Sinus Rhythm

B. Atrial Fibrillation

C. Ventricular Tachycardia

D. Junctional Rhythm

**8. Which of the following statements about the QT interval in hypocalcemia is correct?**

A. Shortened QT interval

B. QT interval unchanged

C. ST depression

D. Prolonged QT interval

**9. Which valve ejects blood from the left ventricle into the aorta?**

A. Aortic semilunar valve

B. Pulmonic semilunar valve

C. Tricuspid valve

D. Mitral valve

**10. Which pattern is commonly referred to as 'rabbit ears' on the ECG?**

A. Notched R waves

B. Wide QRS

C. Sinus tachycardia

D. Peaked T waves

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# Answers

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

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# Explanations

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## 1. When tachycardia is caused by block at the AV node, what is the goal of treatment?

A. Increase conduction through the AV junction

B. Decrease conduction through the AV node

C. Slow the heart rate

D. Increase heart rate by pacing

*When AV nodal block is the reason for the tachycardia, the ventricles aren't being adequately activated by atrial impulses. The primary aim is to restore the connection between atria and ventricles by increasing conduction through the AV junction. This reestablishes paced, coordinated ventricular activation in response to the atrial rate, improving hemodynamics and reducing the dissociation that can occur with AV nodal block. Decreasing AV conduction or simply slowing the heart rate would worsen the problem, and pacing to raise the rate doesn't fix the underlying conduction block.*

## 2. In the Sokolow-Lyon criterion, which measurement sum is used?

A. R in V1 plus S in V5/V6 ≥ 35 mm

B. S in V1 plus R in V5/V6 ≥ 35 mm

C. S in V1 plus R in V4 ≥ 30 mm

D. S in V2 plus R in V4 ≥ 40 mm

*Voltage criteria for left ventricular hypertrophy rely on the idea that a enlarged left ventricle produces stronger electrical forces visible in the ECG as a deep S wave in the right precordial lead and a tall R wave in the lateral leads. The Sokolow-Lyon criterion specifically uses the S wave amplitude in V1 plus the R wave amplitude in V5 or V6, and if that sum is 35 mm or greater, LVH is suggested. That matches the option described here: S in V1 plus R in V5/V6 ≥ 35 mm. The other patterns don't reflect this exact pair or the same threshold, so they aren't the Sokolow-Lyon measurement criterion.*

## 3. Which statement describes narrow-complex tachycardia versus wide-complex tachycardia?

A. Narrow-complex tachycardia has QRS duration < 120 ms; wide-complex tachycardia has QRS ≥ 120 ms

B. Narrow-complex tachycardia has QRS duration > 120 ms; wide-complex tachycardia has QRS < 120 ms

C. Both have QRS duration < 100 ms

D. Wide-complex tachycardia confirms atrial tachycardia

*The key idea is how the QRS duration reflects where the electrical impulse is coming from and how it's conducted to the ventricles. Narrow-complex tachycardia means the QRS complexes are run through the normal His-Purkinje system, so the ventricular activation is rapid and the QRS duration is short, typically less than 120 milliseconds. Wide-complex tachycardia means the ventricular activation is abnormal or delayed—due to a ventricular origin or aberrant conduction through the ventricles—so the QRS duration is 120 milliseconds or longer. That makes the statement correct: narrow-complex tachycardia has QRS duration less than 120 ms, while wide-complex tachycardia has QRS duration of 120 ms or more. The other options either flip the cutoff, claim an incorrect universal QRS range, or imply that wide QRS always points to atrial tachycardia, which isn't true since wide complexes can arise from ventricular tachycardia or SVT with aberrancy.*

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## 4. Which feature identifies a paced rhythm on an ECG?

A. Absence of QRS complexes

B. Inverted T waves in all leads

C. Evidence of pacing spikes before the QRS complexes and a paced rhythm pattern

D. Prolonged PR interval without QRS

*Recognizing a paced rhythm comes from noticing pacing spikes—tiny vertical deflections—before the QRS complexes. Those spikes are the pacemaker's impulses delivering capture. When the ventricle is paced, the subsequent QRS is the paced complex, and the rhythm repeats with the same pattern, creating a recognizable paced rhythm. This pacing spike-before-QRS pattern is what identifies a paced rhythm. Other features don't fit: absence of all QRS complexes would mean no ventricular activation, not pacing; inverted T waves in all leads are nonspecific and don't indicate pacing; a prolonged PR interval without QRS suggests first-degree AV block, not pacing.*

## 5. What defines a pathological Q wave on ECG?

A. Q waves ≥0.04 seconds and at least 25% of the following R wave height

B. Q waves ≥0.08 seconds with 50% R wave height

C. Q waves <0.02 seconds and absent R waves

D. Q waves only in lateral leads

*Pathological Q waves reflect prior myocardial infarction with scar, and they are defined by a specific combination of width and depth in a single lead. The standard criterion is a Q wave that lasts at least 0.04 seconds (40 ms) and is at least one-quarter the height of the following R wave in that lead. This ensures the Q wave is truly representing scar tissue rather than a normal variant. That matches the correct choice: a Q wave of ≥0.04 seconds with at least 25% of the following R wave height. The other descriptions don't fit the defining pattern. A Q wave that's longer, such as 0.08 seconds, still isn't paired with the correct depth criterion (25% of the R wave, not 50%), and the combination isn't the accepted standard. Q waves shorter than 0.02 seconds and absent R waves don't describe a pathologic Q; they point to different abnormalities. Lastly, limiting Q waves to lateral leads isn't how a pathologic Q wave is defined—it can appear in various leads depending on infarct location.*

## 6. This term marks the boundary between the end of the QRS and the beginning of the ST segment.

A. J point

B. P point

C. Q point

D. T point

*The boundary between the end of the QRS and the beginning of the ST segment is defined by the J point. The J point marks where the QRS complex finishes and the ST segment begins, with the ST segment extending from there up to the onset of the T wave. Clinically, ST changes are assessed starting at the J point relative to the baseline, which is why this point is key for detecting ST elevation or depression. The P wave occurs before the QRS and is not involved in marking this boundary, the Q point relates to the start of the QRS deflection rather than the end of it, and the T point is associated with the terminal part of the T wave rather than the transition from QRS to ST.*

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## 7. What rhythm is the normal cardiac pattern that typically does not produce symptoms?

A. Normal Sinus Rhythm

B. Atrial Fibrillation

C. Ventricular Tachycardia

D. Junctional Rhythm

*Normal Sinus Rhythm is the heart's natural pace that comes from the SA node, producing a coordinated and regular heartbeat. It features a regular rhythm with a P wave before every QRS complex, a normal PR interval, a narrow QRS, and a rate about 60–100 beats per minute in adults. This combination means the atria and ventricles are activating in sync, delivering steady cardiac output, so most people feel no symptoms. Other rhythms describe abnormal patterns. Atrial fibrillation lacks distinct P waves and has an irregularly irregular rhythm, which can cause palpitations, dizziness, or stroke risk. Ventricular tachycardia is a fast, wide-complex rhythm that frequently impairs hemodynamics and can be dangerous. Junctional rhythm originates near the AV node and often shows altered P waves with a slower rate, which can produce symptoms if the heart isn't pumping effectively. Thus, the rhythm that is normal and typically asymptomatic is normal sinus rhythm.*

## 8. Which of the following statements about the QT interval in hypocalcemia is correct?

A. Shortened QT interval

B. QT interval unchanged

C. ST depression

D. Prolonged QT interval

*Hypocalcemia prolongs ventricular repolarization, which shows up as a longer QT interval on the ECG. Calcium helps the plateau phase of the cardiac action potential; when calcium is low, repolarization takes longer, extending the QT from the start of the QRS to the end of the T wave. That's why the statement describing a prolonged QT interval is correct. Smaller clues help solidify the concept: hypercalcemia shortens the QT interval, so a shortened QT would not fit hypocalcemia. QT interval being unchanged isn't consistent with the slowed repolarization caused by low calcium, and ST depression isn't the characteristic feature of hypocalcemia. Prolonged QT can raise the risk of dangerous arrhythmias like torsades de pointes, especially with other predisposing factors.*

## 9. Which valve ejects blood from the left ventricle into the aorta?

A. Aortic semilunar valve

B. Pulmonic semilunar valve

C. Tricuspid valve

D. Mitral valve

*Blood ejected from the left ventricle into the aorta flows through the aortic semilunar valve. This valve sits at the outflow tract of the left ventricle and opens during systole to allow ejection, then closes during diastole to prevent backflow into the ventricle. It's a semilunar valve with three cusps that coapt to seal the opening when closed. The pulmonic semilunar valve serves the right heart, regulating flow from the right ventricle to the pulmonary artery. The mitral valve is the left atrioventricular valve between the left atrium and ventricle, and the tricuspid valve is the right atrioventricular valve between the right atrium and ventricle.*

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## 10. Which pattern is commonly referred to as 'rabbit ears' on the ECG?

A. Notched R waves

B. Wide QRS

C. Sinus tachycardia

D. Peaked T waves

*"Rabbit ears" on an ECG describe notching of the R wave—the R wave appears as two small upward deflections with a notch between them, giving a pair of peaks that look like ears. This notching is most noticeable in lateral leads (like I, aVL, V5–V6) and is classically seen with conditions that delay ventricular activation, such as left bundle branch block, where the QRS is wide and the R wave has that distinctive double-peak shape. So the pattern best described as notched R waves is the one that fits the "rabbit ears" idea. The other patterns don't capture that double-peak R wave look: a wide QRS speaks to duration in general, sinus tachycardia is a fast rate, and peaked T waves are tall, pointed T waves seen in different problems.*

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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:

https://basicarrhythmias12leadekg.examzify.com

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

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