

Certified Rhythm Analysis Technician (CRAT) 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. When is it appropriate to wash your hands in a clinical setting?**
 - A. Before putting on gloves only**
 - B. After removing gloves but not between patient contacts**
 - C. Between patient contacts**
 - D. After glove removal but before gloving**
- 2. What additional information is needed on ECG tracing after discovering a bundle branch block?**
 - A. Patient symptoms**
 - B. Blood pressure reading**
 - C. Patient's underlying rhythm**
 - D. Patient's cardiac history**
- 3. If you were performing an ECG on a patient who has had his left lower leg amputated, where should you put the leg electrodes?**
 - A. Place both the left and right electrodes on the lower abdomen.**
 - B. Place the left electrode on the upper left and the right leg electrode on the lower leg.**
 - C. Place both the left and right electrodes on the upper legs close to the trunk.**
 - D. Place both electrodes on the chest below the chest electrodes.**
- 4. What are the atrial and ventricular rates on this rhythm strip which has 23 small boxes between R-R and 7 small boxes between P-P?**
 - A. 300 V/ 80 A**
 - B. 150 V/ 40 A**
 - C. 280 A/ 70 V**
 - D. None of the above**

- 5. Which educational material formats are best to recommend to patients regarding their cardiac monitoring device?**
- A. Phone app**
 - B. WebMD website**
 - C. Youtube videos**
 - D. Manufacturer's website**
- 6. What is the typical heart rate observed in atrial flutter?**
- A. 40 to 60 bpm**
 - B. 60 to 100 bpm**
 - C. 100 to 150 bpm**
 - D. 150 to 300 bpm**
- 7. What does the ECG rhythm described as regular, P-P march indicate?**
- A. Complete heart block**
 - B. Wenckebach**
 - C. First degree heart block**
 - D. Second degree AV block, Mobitz type II**
- 8. What rhythm is characterized by regularity and five complete cycles?**
- A. Sinus rhythm**
 - B. Atrial fibrillation**
 - C. Sinus bradycardia**
 - D. Multifomed atrial rhythm**
- 9. What ECG characteristic is indicative of myocardial ischemia?**
- A. Changes in the ST segment and T waves**
 - B. Widening of the QRS complex**
 - C. Changes in the QRS complex and ST segment**
 - D. Prolongation of the PR interval**

10. What should a technician prioritize when obtaining an ECG for a new patient?

- A. Follow-up with the previous physician**
- B. Verify the patient's medical history**
- C. Check calibration of the machine**
- D. Prepare the patient for physical examination**

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Answers

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

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Explanations

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1. When is it appropriate to wash your hands in a clinical setting?

- A. Before putting on gloves only**
- B. After removing gloves but not between patient contacts**
- C. Between patient contacts**
- D. After glove removal but before gloving**

Washing hands between patient contacts is crucial in a clinical setting to prevent cross-contamination and the spread of infections. This practice is grounded in infection control protocols designed to safeguard both patients and healthcare providers. When healthcare workers wash their hands before approaching a patient and again when transitioning between patients, they minimize the risk of transmitting pathogens from one patient to another, thereby maintaining a hygienic environment. This is particularly important in clinical settings where multiple patients may be treated in quick succession, as even brief interactions can lead to the transfer of harmful microorganisms. The importance of hand hygiene cannot be overstated; it is one of the simplest yet most effective ways to reduce healthcare-associated infections. Regularly washing hands as part of standard precautions reinforces the overall standard of care and protects vulnerable populations. In contrast, washing hands only before putting on gloves or after removing gloves but not between patient contacts would lead to increased risk of transferring harmful pathogens. Thus, incorporating handwashing between patient interactions is a critical component of effective infection prevention strategies in healthcare settings.

2. What additional information is needed on ECG tracing after discovering a bundle branch block?

- A. Patient symptoms**
- B. Blood pressure reading**
- C. Patient's underlying rhythm**
- D. Patient's cardiac history**

In the context of interpreting an electrocardiogram (ECG) when a bundle branch block (BBB) is identified, knowing the patient's underlying rhythm is critical. The underlying rhythm provides essential context for assessing the significance and potential implications of the bundle branch block. For instance, if the underlying rhythm is a normal sinus rhythm, it may suggest that the bundle branch block is an incidental finding. Conversely, if the underlying rhythm indicates some form of arrhythmia, it could signal more serious conditions, especially if there are related symptoms such as syncope or chest pain. This contextual understanding helps guide further diagnostic and treatment decisions. It is also valuable for evaluating how the bundle branch block interacts with the overall cardiac function and any symptoms the patient may be experiencing. Understanding patient symptoms, blood pressure, or cardiac history can be insightful, but they do not provide direct clarity about how to interpret the ECG findings related to the specific mechanics of the heart's conduction system at that moment. Therefore, having a clear picture of the underlying rhythm is key to comprehensively understanding the significance of the bundle branch block on the ECG.

3. If you were performing an ECG on a patient who has had his left lower leg amputated, where should you put the leg electrodes?
- A. Place both the left and right electrodes on the lower abdomen.
 - B. Place the left electrode on the upper left and the right leg electrode on the lower leg.
 - C. Place both the left and right electrodes on the upper legs close to the trunk.**
 - D. Place both electrodes on the chest below the chest electrodes.

The correct placement of electrodes in the case of a left lower leg amputation involves considering the anatomical changes due to the amputation and the need to establish a complete ECG circuit. By placing both the left and right leg electrodes on the upper legs close to the trunk, you maintain proximity to the heart while ensuring that the electrodes can effectively capture the electrical signals from the heart. Electrodes are typically placed on the body in a way that they can accurately reflect the electrical activity of the heart. When a limb is amputated, the standard locations for placing the leg electrodes (the lower leg) are no longer available. By placing the electrodes on the upper legs, you effectively create a new reference point that allows for proper signal acquisition. This position also maintains a bilateral symmetry, which is important for an accurate reading of the electrical currents as they travel from the heart. This approach helps to mitigate the risk of poor signal quality that could occur if the electrodes were placed further from the heart, such as on the lower abdomen or the chest. Additionally, placing them on the upper legs maintains a standard that is often recognized in clinical settings, facilitating consistent and reliable readings. Overall, placing both the left and right electrodes on the upper legs provides a practical solution that

4. What are the atrial and ventricular rates on this rhythm strip which has 23 small boxes between R-R and 7 small boxes between P-P?
- A. 300 V/ 80 A
 - B. 150 V/ 40 A
 - C. 280 A/ 70 V
 - D. None of the above**

To determine the atrial and ventricular rates from the rhythm strip, it's essential to understand how to calculate these rates based on the number of small boxes in the strip. The ventricular rate is derived from the R-R intervals, which is the distance between successive R waves. Given that there are 23 small boxes between R-R, the calculation for the ventricular rate is done using the formula: $\text{Rate} = 1500 / \text{number of small boxes between R-R}$. Thus, for 23 boxes, the rate is calculated as $1500 / 23 \approx 65.2$ beats per minute (bpm), which rounds to approximately 65 bpm. For the atrial rate, which is calculated from the P-P intervals (the distance between successive P waves), there are 7 small boxes between P-P. The calculation follows the same formula: $\text{Rate} = 1500 / \text{number of small boxes between P-P}$. In this case, it's $1500 / 7 \approx 214.3$ bpm, rounding approximately to 214 bpm. Now, looking at the correct answer choice, none of the provided options match the calculated rates of approximately 65 bpm for the ventricular rate and 214 bpm for the atrial rate

5. Which educational material formats are best to recommend to patients regarding their cardiac monitoring device?

A. Phone app

B. WebMD website

C. Youtube videos

D. Manufacturer's website

Recommending the manufacturer's website for educational materials regarding a cardiac monitoring device is particularly advantageous because it provides the most accurate and specific information directly from the source that designed and produced the device. The manufacturer is typically the best resource for detailed instructions, user manuals, troubleshooting tips, and insights on device features, ensuring that patients receive reliable and tailored information. In contrast, a phone app may not always provide comprehensive information specifically related to the monitoring device. While it can offer convenience, the depth of content may vary based on the app's design and the information included. WebMD, while a reputable source for health information, may not always have the latest or most device-specific information, as its focus is general health topics rather than specific medical devices. YouTube videos, although they can be informative and engaging, often vary in quality and accuracy. The information provided may not always reflect the latest standards or specific device details, which can lead to misunderstandings or misuse of the device. Thus, the manufacturer's website stands out as the best choice because it directly addresses the unique needs and questions a patient may have regarding their cardiac monitoring device.

6. What is the typical heart rate observed in atrial flutter?

A. 40 to 60 bpm

B. 60 to 100 bpm

C. 100 to 150 bpm

D. 150 to 300 bpm

In atrial flutter, the typical heart rate is commonly observed in the range of 100 to 150 beats per minute (bpm). This arrhythmia is characterized by a rapid reentrant circuit usually located in the right atrium, which leads to a distinctive "sawtooth" pattern in the electrocardiogram known as "F-waves." The rapid firing of the atria results in a regular ventricular response, often sustaining rates around this figure. The heart rate in atrial flutter can vary depending on the ventricular response, which might increase to the higher end of the spectrum (closer to 150 bpm) if there is a 2:1 block, meaning for every two atrial beats, the ventricles beat once. It is crucial for practitioners to recognize this range, as it helps in the diagnosis and subsequent management of patients experiencing this type of arrhythmia. The other ranges mentioned do not accurately describe the heart rates associated with atrial flutter; lower heart rates would indicate bradycardia or a different arrhythmia, while excessively high heart rates could suggest other conditions, such as atrial fibrillation or a different type of tachycardia.

7. What does the ECG rhythm described as regular, P-P march indicate?

- A. Complete heart block**
- B. Wenckebach**
- C. First degree heart block**
- D. Second degree AV block, Mobitz type II**

The description of an ECG rhythm as a "regular, P-P march" implies that there is a consistent pattern to the P waves, meaning they occur at regular intervals. This is characteristic of complete heart block (also known as third-degree AV block) where the atria and ventricles are depolarizing independently. In this condition, P waves can be seen regularly marching out as the atria contract, but they are not effectively leading to ventricular contraction, resulting in an overall disconnection between atrial and ventricular rhythms. In complete heart block, while the P waves are regular, the QRS complexes can be of varying morphology and rates depending on the escape rhythm present in the ventricles. The "march" aspect indicates the P waves have a consistent timing, reinforcing that the atrial activity is unaffected by ventricular activity. In contrast, the other options relate to varying degrees of AV block where the relationship between P waves and QRS complexes is disrupted, either through dropped beats or irregular timing, which does not align with the regularity indicated by "P-P march." For instance, Wenckebach (second-degree AV block type I) is characterized by progressive lengthening of the PR interval leading to a non-conducted P wave, and

8. What rhythm is characterized by regularity and five complete cycles?

- A. Sinus rhythm**
- B. Atrial fibrillation**
- C. Sinus bradycardia**
- D. Multifomed atrial rhythm**

The rhythm characterized by regularity and five complete cycles is indeed sinus bradycardia. Sinus bradycardia is defined as a heart rate that is slower than normal (typically fewer than 60 beats per minute) while maintaining a regular rhythm. This indicates that the heart's electrical impulses are originating from the sinoatrial (SA) node, which is the natural pacemaker of the heart. In sinus bradycardia, the rhythmic quality is present, signifying consistent intervals between heartbeats. When the rhythm is described as having five complete cycles, it refers to the clear and consistent pattern of the electrical activity as recorded on an electrocardiogram (ECG), where each cycle represents a complete heartbeat. Since the rhythm comes from the SA node, it reflects normal conduction through the atria and ventricles, thereby maintaining the regularity that is characteristic of this rhythm. Recognizing the regularity in the heart's rhythm is crucial for diagnosing and differentiating it from other arrhythmias, such as atrial fibrillation, which is characterized by an irregular and often chaotic rhythm. Multifomed atrial rhythm and other forms, while they might show regularity in certain situations, do not fit the specific criteria of sinus brady

9. What ECG characteristic is indicative of myocardial ischemia?

- A. Changes in the ST segment and T waves**
- B. Widening of the QRS complex**
- C. Changes in the QRS complex and ST segment**
- D. Prolongation of the PR interval**

The presence of changes in the ST segment and T waves is a well-recognized hallmark of myocardial ischemia on an electrocardiogram (ECG). Myocardial ischemia, which occurs when blood flow to the heart muscle is reduced, leads to specific electrical changes that can be detected during ECG monitoring. Typically, during ischemia, the ST segment may be depressed or elevated, depending on the type and severity of the ischemic event. Additionally, T wave changes, such as inversion or flattening, often accompany these shifts in the ST segment. These alterations reflect the altered repolarization process in the cardiac cells due to inadequate oxygenation and energy substrate supply. In contrast, widening of the QRS complex usually indicates issues related to conduction delays in the ventricles, which may not be related specifically to ischemia. Changes in the QRS complex and ST segment could signify various other cardiac conditions, and the prolongation of the PR interval is more indicative of issues in atrial conduction rather than ischemic events. Therefore, recognizing the specific pattern of ST segment and T wave changes is critical in identifying myocardial ischemia accurately.

10. What should a technician prioritize when obtaining an ECG for a new patient?

- A. Follow-up with the previous physician**
- B. Verify the patient's medical history**
- C. Check calibration of the machine**
- D. Prepare the patient for physical examination**

Prioritizing the verification of the patient's medical history is essential when obtaining an ECG for a new patient because it provides critical information that can influence the interpretation of the ECG results. Understanding the patient's medical history, including any previous heart conditions, relevant medications, and risk factors, allows the technician to evaluate the ECG within the proper context. This step is crucial in identifying any anomalies or concerns that may arise from the ECG readings, ensuring that appropriate action can be taken if necessary. In contrast, while checking the calibration of the machine and preparing the patient for examination are important tasks, they are secondary to understanding the patient's medical background. Similarly, following up with the previous physician can be beneficial but should not take precedence over immediate information that could directly affect the diagnostic process. By prioritizing the verification of the patient's medical history, the technician sets a solid foundation for accurate assessment and patient care.

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://crat.examzify.com>

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