

# Certified EKG technician (CET) Practice Exam (Sample)

## Study Guide



**Everything you need from our exam experts!**

**This is a sample study guide. To access the full version with hundreds of questions,**

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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. Don't worry about getting everything right, 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, and take breaks to retain information better.**

## 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.**

## 7. Use Other Tools

**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. What components make up a complete cardiac cycle?**
  - A. P wave, QRS complex, and T wave**
  - B. Atrial contraction and ventricular relaxation**
  - C. Heart rate and blood pressure**
  - D. Diastole and systole**
  
- 2. How does hyperkalemia specifically affect an EKG?**
  - A. It causes sinus bradycardia**
  - B. It results in peaked T waves and wide QRS complexes**
  - C. It presents with elevated ST segments**
  - D. It leads to inverted QRS complexes**
  
- 3. A thin spike before the P wave suggests that a pacemaker has been implanted to pace which part of the heart?**
  - A. Ventricles**
  - B. Atria**
  - C. Purkinje fibers**
  - D. AV node**
  
- 4. Why is patient history important before performing an EKG?**
  - A. To ensure patient comfort during the procedure**
  - B. To interpret the EKG accurately and identify underlying conditions**
  - C. To determine which leads to use for the EKG**
  - D. To prepare the patient for possible complications**
  
- 5. For a patient with a below-the-knee amputation of the left leg, where should the right leg electrode be placed?**
  - A. On the lower right abdomen**
  - B. On the right thigh**
  - C. On the back of the right knee**
  - D. On the lateral aspect of the right foot**

**6. When instructing a patient about using a transtelephonic event monitor, where should the card be applied during an event?**

- A. On the upper chest**
- B. Over the left shoulder**
- C. On the wrist**
- D. Over the middle to lower part of the sternum**

**7. How can a technician check for lead placement accuracy?**

- A. Listen for heart sounds**
- B. Utilize a calibration stimulus**
- C. Check visual alignment on the monitor**
- D. Assess skin sensitivity**

**8. What is the standard lead placement for V6 during an EKG?**

- A. Left anterior axillary line**
- B. Left midaxillary line**
- C. Right midclavicular line**
- D. Right anterior axillary line**

**9. What does a consistent R-R wave interval indicate?**

- A. Irregularity in heart rhythm**
- B. Consistent heart rate**
- C. Pacing from an external device**
- D. Presence of arrhythmia**

**10. Why is P wave morphology significant in an EKG?**

- A. It indicates blood pressure levels**
- B. It provides insights into atrial health**
- C. It reflects ventricular function**
- D. It shows breathing patterns**

## **Answers**

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

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## **Explanations**

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## 1. What components make up a complete cardiac cycle?

- A. P wave, QRS complex, and T wave**
- B. Atrial contraction and ventricular relaxation**
- C. Heart rate and blood pressure**
- D. Diastole and systole**

The components that make up a complete cardiac cycle primarily involve the electrical activity of the heart, which is represented by the P wave, QRS complex, and T wave. This is essential because the cardiac cycle encapsulates the sequence of events that occur during one heartbeat, including the contraction and relaxation phases of the heart chambers, which are driven by electrical impulses. The P wave reflects atrial depolarization, leading to atrial contraction. The QRS complex indicates ventricular depolarization, which corresponds with ventricular contraction. The T wave represents ventricular repolarization, occurring as the ventricles relax. Collectively, these components form the foundation for understanding how the heart beats and maintains circulation. Other options, while relevant to cardiac function, do not define the complete cardiac cycle in terms of its primary electrical and mechanical activities. Atrial contraction and ventricular relaxation describe phases but do not capture the entirety of the cardiac cycle. Heart rate and blood pressure are important physiological parameters but are not components of the cardiac cycle itself. Diastole and systole refer to the phases of movement and pressure within the heart but do not provide the detailed electrical events that characterize the cardiac cycle. Thus, the choice highlighting the P wave, QRS complex, and T wave accurately encompasses

## 2. How does hyperkalemia specifically affect an EKG?

- A. It causes sinus bradycardia**
- B. It results in peaked T waves and wide QRS complexes**
- C. It presents with elevated ST segments**
- D. It leads to inverted QRS complexes**

Hyperkalemia, which refers to an elevated level of potassium in the blood, has specific effects on the electrocardiogram (EKG) that are important for recognizing and managing the condition. The correct answer highlights that hyperkalemia leads to peaked T waves and wide QRS complexes on the EKG. As potassium levels rise, the myocardial cell membrane becomes more depolarized, which primarily affects the repolarization phase of the cardiac action potential. This results in changes in the shape and duration of the T wave, leading to its characteristic peaking. Furthermore, as severity increases, the QRS complex begins to widen. This widening occurs because increased potassium disrupts the normal conduction pathway through the ventricles, delaying ventricular depolarization. These distinct EKG changes are critical indicators for clinicians, as they can lead to life-threatening arrhythmias if not promptly recognized and treated. The identification of peaked T waves and wide QRS complexes is essential for diagnosing hyperkalemia in a clinical setting, emphasizing the importance of monitoring potassium levels in patients at risk for electrolyte imbalances.

**3. A thin spike before the P wave suggests that a pacemaker has been implanted to pace which part of the heart?**

- A. Ventricles**
- B. Atria**
- C. Purkinje fibers**
- D. AV node**

A thin spike before the P wave on an electrocardiogram (ECG) indicates that a pacemaker is stimulating the atria. This is due to the fact that the spike represents the electrical impulse generated by the pacemaker, which is specifically designed to initiate depolarization in the atrial tissue. If the pacemaker is pacing the atria, it will trigger a contraction of the atria just before the P wave is seen on the ECG. In cases where a pacemaker paces the ventricles, the spike would appear before the QRS complex, while pacing of the Purkinje fibers typically wouldn't present a visible spike preceding the P wave since it's inherent to the ventricular depolarization. Additionally, pacing at the level of the AV node would also affect the timing of atrial and ventricular contractions, but this is distinguishable by the placement and timing of the pacing spike relative to other heart activity. Thus, this characteristic spike before the P wave clearly indicates atrial pacing.

**4. Why is patient history important before performing an EKG?**

- A. To ensure patient comfort during the procedure**
- B. To interpret the EKG accurately and identify underlying conditions**
- C. To determine which leads to use for the EKG**
- D. To prepare the patient for possible complications**

Understanding patient history is crucial before performing an EKG because it provides context needed for accurate interpretation of the results. An EKG can reveal a variety of heart conditions, but its accuracy and relevance depend significantly on knowing the patient's medical background. Factors such as previous heart conditions, existing symptoms, medications, and any family history of cardiovascular disease can all influence what an EKG shows and how it should be interpreted. For instance, if a patient has a history of arrhythmias, knowledge of that history can help the technician or physician look specifically for signs of such conditions on the EKG. Additionally, previous medical conditions and current symptoms can guide clinical decisions, particularly in emergency situations where immediate and accurate diagnoses are vital. In contrast, while patient comfort is important, the primary aim of gathering history is not solely about comfort during the procedure. The choice of leads used in an EKG is generally standardized based on established protocols, rather than individualized patient history, although certain adjustments might be made in specific scenarios. Lastly, preparing patients for possible complications, while a valid consideration in many medical procedures, is not the main focus of historical data collection in this context.

**5. For a patient with a below-the-knee amputation of the left leg, where should the right leg electrode be placed?**

- A. On the lower right abdomen**
- B. On the right thigh**
- C. On the back of the right knee**
- D. On the lateral aspect of the right foot**

For a patient with a below-the-knee amputation of the left leg, placing the right leg electrode on the lower right abdomen is appropriate due to the need for accurate electrical conduction and representation of the heart's activity. When an amputation occurs, especially in the lower extremities, the remaining limb can be used to create a proper electrical circuit. In this case, positioning the electrode on the abdomen helps ensure that the electrical signals are not distorted by the absence of the left leg and provides a consistent point of reference for the EKG recording. The abdominal placement is on the same horizontal plane as where the foot would normally be, thereby providing a more accurate electrical reading while avoiding any potential interference or complications related to the amputation site. Other locations such as the thigh, back of the knee, or lateral aspect of the foot may not provide the necessary clarity or stability for signal acquisition due to the specifics of the patient's condition, such as the absence of the left leg and possible anatomical variations. Placing the electrode on the abdomen circumvents these issues and allows for an effective EKG tracing.

**6. When instructing a patient about using a transtelephonic event monitor, where should the card be applied during an event?**

- A. On the upper chest**
- B. Over the left shoulder**
- C. On the wrist**
- D. Over the middle to lower part of the sternum**

Applying the card over the middle to lower part of the sternum is the correct method when using a transtelephonic event monitor. This placement is optimal for capturing the heart's electrical activity, as it is centrally located where the heart is positioned within the thoracic cavity. This area offers a direct line to monitor the electrical signals effectively, ensuring accurate readings during an event. The other locations, while potentially effective for different types of monitoring (e.g., upper chest or wrist), may not provide as reliable or comprehensive data for the purpose of the transtelephonic event monitor, which is specifically designed to detect cardiac events that typically originate near the heart. Hence, the standard practice is to place the monitoring device over the sternum, ensuring better contact and signal transmission for proper assessment.

## 7. How can a technician check for lead placement accuracy?

- A. Listen for heart sounds**
- B. Utilize a calibration stimulus**
- C. Check visual alignment on the monitor**
- D. Assess skin sensitivity**

Checking for lead placement accuracy is crucial in obtaining an accurate electrocardiogram (EKG) reading. The correct method in this scenario involves checking visual alignment on the monitor. When the leads are placed correctly, the EKG trace on the monitor should display distinct waveforms that correspond accurately to the electrical activity of the heart. Proper alignment helps ensure that the technician can assess the heart's rhythm and any potential abnormalities effectively. Utilizing a calibration stimulus is a method that assesses the functionality of the equipment rather than confirming lead placement. While listening for heart sounds might provide some information about heart function, it does not help in verifying whether the EKG leads are placed correctly. Assessing skin sensitivity, on the other hand, relates to evaluating the patient's reaction to the electrodes but does not provide direct feedback about the accuracy of lead placement. Thus, checking visual alignment on the monitor becomes the most effective approach for ensuring that the leads are placed accurately.

## 8. What is the standard lead placement for V6 during an EKG?

- A. Left anterior axillary line**
- B. Left midaxillary line**
- C. Right midclavicular line**
- D. Right anterior axillary line**

The standard lead placement for V6 during an EKG is along the left midaxillary line. V6 is one of the precordial leads and is positioned to provide an accurate assessment of the heart's electrical activity, particularly from the left side of the heart. The midaxillary line represents a location that is lateral to the left side of the chest and is generally aligned with the anatomical position of the heart. Placing V6 at the left midaxillary line allows for effective monitoring of electrical activity and assists in tracing any potential abnormalities in the heart's function. This precise positioning is crucial for obtaining a clear and accurate EKG reading, as each lead placement has specific anatomical references that help reflect the heart's overall electrical performance from multiple angles.

## 9. What does a consistent R-R wave interval indicate?

- A. Irregularity in heart rhythm
- B. Consistent heart rate**
- C. Pacing from an external device
- D. Presence of arrhythmia

A consistent R-R wave interval indicates a stable and regular heart rate. The R-R interval measures the time between successive R waves of the QRS complex on an electrocardiogram (ECG), which represents ventricular depolarization. When these intervals are consistent, it demonstrates that the heart is contracting at regular intervals, suggesting that the electrical activity of the heart is normal and predictable. This consistency is crucial in identifying normal sinus rhythm and in differentiating between potential cardiac issues. A variable R-R interval could suggest irregular rhythms, such as arrhythmias, which fluctuate in timing and may lead to further implications for cardiac health. Therefore, recognizing a consistent R-R wave interval is essential for assessing heart rhythm stability and evaluating overall cardiac function.

## 10. Why is P wave morphology significant in an EKG?

- A. It indicates blood pressure levels
- B. It provides insights into atrial health**
- C. It reflects ventricular function
- D. It shows breathing patterns

The significance of P wave morphology in an EKG primarily lies in its ability to provide insights into atrial health. The P wave represents atrial depolarization, which is the electrical activity that triggers the contraction of the atria. Analyzing the shape, size, and duration of the P wave can reveal important information about the atria's structure and function. For instance, variations in P wave morphology may indicate atrial enlargement, which can occur in conditions like hypertension or heart valve disease. Abnormalities in the P wave can also suggest atrial arrhythmias such as atrial fibrillation or atrial flutter, where the normal rhythm of atrial contractions is disrupted. Therefore, careful examination of the P wave contributes significantly to understanding the overall health of the atria and can guide further diagnostic and therapeutic decisions.

# 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](mailto:hello@examzify.com).**

**Or visit your dedicated course page for more study tools and resources:**

**<https://cet.examzify.com>**

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

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