

AAMI Certified Associate in Biomedical Technology (CABT) 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. According to CMS, medical equipment intended to be used on a patient is categorized as which of the following?**
 - A. Monitoring**
 - B. Therapeutic**
 - C. Diagnostic**
 - D. Monitoring, Therapeutic, Diagnostic**

- 2. Which device opens or closes a circuit?**
 - A. Capacitor**
 - B. Switch**
 - C. Transformer**
 - D. Transistor**

- 3. What is the pacemaker of the heart?**
 - A. Atrioventricular Node**
 - B. Sinoatrial Node**
 - C. Purkinje Fibers**
 - D. Bundle of His**

- 4. A Defibrillator analyzer is used for?**
 - A. Calibrating ECG leads**
 - B. Measuring patient heart rate during surgery**
 - C. Replacing batteries in devices**
 - D. Testing the performance of defibrillators**

- 5. What is the formula for two resistors in a parallel circuit?**
 - A. $R_t = R_1 + R_2$**
 - B. $R_t = (R_1 \times R_2) / (R_1 + R_2)$**
 - C. $1/R_t = 1/R_1 + 1/R_2$**
 - D. $R_t = R_1 - R_2$**

- 6. Step-down rooms in a hospital are used for patients who are transitioning from ICU to a general ward and require close monitoring.**
- A. To house general medical wards for stable patients**
 - B. To provide close observation during ICU transition to a ward**
 - C. To provide dialysis services**
 - D. Emergency triage area**
- 7. What is the electrical inductance unit?**
- A. The Henry (symbolized H)**
 - B. The Farad (F)**
 - C. The Volt (V)**
 - D. The Ohm**
- 8. What is the four-step respiration process?**
- A. Inhalation, External respiration, Internal respiration, Cellular respiration**
 - B. Breathing (ventilation), External respiration, Internal respiration, Metabolic respiration**
 - C. Breathing (ventilation), External respiration, Internal respiration, Cellular respiration**
 - D. Inspiration, Expiration, Gas exchange, Cellular respiration**
- 9. Which option is not a CMS category for medical equipment used on patients?**
- A. Monitoring**
 - B. Therapeutic**
 - C. Diagnostic**
 - D. Sterilization**
- 10. What is a patient simulator used for?**
- A. To deliver patient medications automatically**
 - B. To mimic patient signals for testing medical devices**
 - C. To sterilize medical equipment**
 - D. To store patient data**

Answers

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

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Explanations

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1. According to CMS, medical equipment intended to be used on a patient is categorized as which of the following?

- A. Monitoring**
- B. Therapeutic**
- C. Diagnostic**
- D. Monitoring, Therapeutic, Diagnostic**

The test is about how CMS classifies equipment used on patients by function. CMS groups devices by what they're used to do for the patient: monitoring (tracking vitals or status), therapeutic (delivering treatment or supporting bodily function), or diagnostic (assessing health or condition). Many devices can serve more than one purpose in a clinical workflow, so the broad, inclusive category that includes all three functions is the right pick. For example, a patient monitor is primarily for monitoring, but it's often used to inform therapy decisions; an infusion pump delivers therapy and may provide data that supports monitoring; diagnostic equipment is used to determine health status, and its data can influence therapeutic actions. The key idea is that CMS recognizes these three main uses, and some devices span multiple uses, so listing all three captures the full range.

2. Which device opens or closes a circuit?

- A. Capacitor**
- B. Switch**
- C. Transformer**
- D. Transistor**

Switches are used to make or break a circuit. Their main function is to provide a controllable path for current: when the switch is closed, the circuit is complete and current can flow; when it's opened, the path is broken and the current stops. This clear on/off control is exactly what defines a switch. Capacitors store electrical energy and influence current by charging and discharging, but they don't serve as a manual on/off control for a complete path. Transformers transfer energy between circuits by changing voltage and current levels through induction, not by opening or closing a circuit. Transistors can act as switches or amplifiers, but their primary role is as an active control element within a circuit rather than the simple device whose main job is to open or close the circuit.

3. What is the pacemaker of the heart?

- A. Atrioventricular Node**
- B. Sinoatrial Node**
- C. Purkinje Fibers**
- D. Bundle of His**

The sinoatrial node in the right atrium acts as the heart's natural pacemaker. It contains specialized pacemaker cells that fire spontaneously at the fastest rate, typically 60-100 beats per minute in a healthy adult, setting the pace for the entire heart. This rapid, regular impulse starts the heartbeat and travels through the conduction system to coordinate atrial and then ventricular contraction. If the SA node slows or fails, other parts of the conduction system can take over, but at a slower intrinsic rate (the atrioventricular node around 40-60 bpm). The Purkinje fibers and Bundle of His are crucial for transmitting impulses to the ventricles and coordinating their contraction, but they do not determine the heart's basic pace.

4. A Defibrillator analyzer is used for?

- A. Calibrating ECG leads
- B. Measuring patient heart rate during surgery
- C. Replacing batteries in devices
- D. Testing the performance of defibrillators**

A defibrillator analyzer is a test instrument used to verify that defibrillators perform correctly by simulating a patient load and measuring how much energy is actually delivered, the shape of the shock waveform, the impedance, and the timing of synchronized shocks. This ensures the device meets specifications and will operate safely in a real event, making it essential for maintenance, acceptance testing, and regulatory compliance. It isn't used to calibrate ECG leads, measure patient heart rate during surgery, or replace batteries in devices, which are tasks handled by other tools or routine maintenance processes.

5. What is the formula for two resistors in a parallel circuit?

- A. $R_t = R_1 + R_2$
- B. $R_t = (R_1 \times R_2) / (R_1 + R_2)$**
- C. $1/R_t = 1/R_1 + 1/R_2$
- D. $R_t = R_1 - R_2$

In a parallel circuit, the currents have separate paths, so the total resistance is reduced compared to either resistor. The relationship for two resistors is that the reciprocals add: $1/R_t = 1/R_1 + 1/R_2$. From there, you can rearrange to $R_t = (R_1 \times R_2) / (R_1 + R_2)$. This direct form gives R_t outright, which is why it's the clearest choice. It's also the same idea as the reciprocal form, just expressed as R_t directly. The other options don't describe parallel behavior: adding them would be for series, and subtracting them isn't a standard parallel rule. For a quick check, if R_1 and R_2 are known, this formula yields a value smaller than either resistor, as expected in parallel.

6. Step-down rooms in a hospital are used for patients who are transitioning from ICU to a general ward and require close monitoring.

- A. To house general medical wards for stable patients
- B. To provide close observation during ICU transition to a ward**
- C. To provide dialysis services
- D. Emergency triage area

Step-down rooms provide intermediate care between ICU and a general ward, offering closer monitoring and support for patients who are recovering but still need more observation than a standard ward can provide. This setup allows more frequent vital checks, telemetry, and graduated reductions in ICU care as patients stabilize. The description specifically matches providing close observation during the transition from ICU to a ward, making it the best fit. It wouldn't be for housing stable general medical wards, which don't require heightened monitoring; nor for dialysis services or for emergency triage, which are separate settings with different purposes.

7. What is the electrical inductance unit?

- A. The Henry (symbolized H)**
- B. The Farad (F)**
- C. The Volt (V)**
- D. The Ohm**

Inductance quantifies how much voltage is generated when current changes in a circuit. The unit for this property is the Henry, symbol H. This comes from the relation $V = L \frac{di}{dt}$: if the current changes at 1 ampere per second and the induced voltage is 1 volt, the inductance L is 1 Henry. In other terms, 1 Henry equals 1 volt-second per ampere, which can also be expressed as ohm-seconds. The other options correspond to different electrical quantities: a Farad is capacitance, a Volt is electrical potential, and an Ohm is resistance.

8. What is the four-step respiration process?

- A. Inhalation, External respiration, Internal respiration, Cellular respiration**
- B. Breathing (ventilation), External respiration, Internal respiration, Metabolic respiration**
- C. Breathing (ventilation), External respiration, Internal respiration, Cellular respiration**
- D. Inspiration, Expiration, Gas exchange, Cellular respiration**

The four-step sequence of respiration moves from bringing air into the lungs to using oxygen for energy production in cells. The first step is Breathing (ventilation), the mechanical process that inflates and deflates the lungs to move air to the exchange surfaces. Next is External respiration, the gas exchange between the alveoli and the blood, where oxygen enters the blood and carbon dioxide leaves it. Then Internal respiration occurs, the gas exchange between the blood and body tissues, delivering oxygen to cells and picking up carbon dioxide. The final step is Cellular respiration, the cellular process that uses oxygen to metabolize nutrients and produce ATP, with water and carbon dioxide as byproducts. This ordering is why Breathing (ventilation) is the correct first term, followed by External respiration, Internal respiration, and Cellular respiration. Other options replace ventilation with Inhalation or use less standard terms like Metabolic respiration or lump gas exchange into a single step, which doesn't fit the widely taught four-step sequence.

9. Which option is not a CMS category for medical equipment used on patients?

- A. Monitoring**
- B. Therapeutic**
- C. Diagnostic**
- D. Sterilization**

CMS groups devices by their function in direct patient care. Monitoring devices gather data about a patient's condition, diagnostic devices help identify or confirm a condition, and therapeutic devices deliver treatment. Sterilization, on the other hand, is a process used to clean and sterilize equipment to prevent infection. It is not a device category that operates on patients, so it isn't considered a CMS category for medical equipment used on patients.

10. What is a patient simulator used for?

- A. To deliver patient medications automatically**
- B. To mimic patient signals for testing medical devices**
- C. To sterilize medical equipment**
- D. To store patient data**

The main idea is that a patient simulator creates realistic physiological signals so medical devices can be tested and validated without a real patient. By mimicking heart rhythms, blood pressure, breathing, and other signals, it lets technicians check that monitors, ventilators, defibrillators, and other equipment respond correctly, trigger alarms appropriately, and stay calibrated under different conditions. You can program scenarios from stable readings to dangerous variations to ensure devices perform safely in real-life situations. It's not used to deliver medications, sterilize equipment, or store patient data.

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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://aamicabt.examzify.com>

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

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