

CERTIFIED BIOMEDICAL EQUIPMENT TECHNICIAN (CBET) PRACTICE EXAM (SAMPLE)

STUDY GUIDE



Prepare with structure. Pass with confidence



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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. What is the largest component of the brain responsible for processing sensory information?**
 - A. Cerebellum
 - B. Cerebrum
 - C. Thalamus
 - D. Frontal lobe

- 2. What could be the issue if a PCA pump shows an error message about not requesting input?**
 - A. Power source issue
 - B. Defective pump mechanism
 - C. Possible faulty patient controller
 - D. Connection problems to the IV

- 3. What is the minimum encryption level required by US-CERT regulations for medical data?**
 - A. 32 bit
 - B. 64 bit
 - C. 128 bit
 - D. 256 bit

- 4. Which of the following is an example of therapeutic medical equipment?**
 - A. Diagnostic imaging machines
 - B. Infusion pumps or ventilators
 - C. Laboratory analyzers
 - D. Surgical instruments

- 5. The graph of the cardiac output measurement resembles**
 - A. a square wave
 - B. a bell-shaped curve
 - C. an inverted QRS wave
 - D. blood pressure oscillation

- 6. What protection method is primarily used to prevent electrical shock in medical devices?**
- A. Fuses
 - B. Grounding
 - C. Circuit breakers
 - D. Insulation
- 7. Why is disconnecting a device from power sources essential before servicing?**
- A. To save energy during repairs
 - B. To ensure the technician's safety and prevent electric shock
 - C. To allow for software updates
 - D. To minimize time during maintenance
- 8. During a laparoscopic carbon dioxide laser case, a technician should:**
- A. Wear an approved lead apron
 - B. Wear appropriate safety glasses
 - C. Stand a minimum of two meters away from the laser
 - D. Ensure smoke evacuator
- 9. What is the most likely reason a centrifuge will not start without manual intervention on the rotor?**
- A. Faulty power supply
 - B. Bad brushes
 - C. Improper balancing
 - D. Overheating
- 10. Which of the following wireless network security protocols provides the most security?**
- A. WEP
 - B. WPA
 - C. WAAS
 - D. WPA2-Enterprise

Answers

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

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Explanations

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1. What is the largest component of the brain responsible for processing sensory information?

- A. Cerebellum
- B. Cerebrum**
- C. Thalamus
- D. Frontal lobe

The cerebrum is the largest component of the brain and plays a crucial role in processing sensory information. It is divided into two hemispheres and contains various areas that are specialized for different functions related to sensory perception. Areas within the cerebrum are responsible for interpreting signals received from the senses, such as sight, sound, touch, taste, and smell. The overall architecture of the cerebrum facilitates higher cognitive functions, including reasoning, problem-solving, and decision-making, making it central to both processing and responding to sensory input. The cerebellum, while important for coordination and balance, primarily manages motor control and does not serve as the main processing center for sensory information. The thalamus acts as a relay station that transmits sensory signals to the appropriate areas of the cerebrum but is not the largest structure nor does it process information to the same extent as the cerebrum. The frontal lobe, part of the cerebrum, is involved in higher cognitive functions and decision-making but does not encompass the total processing of sensory information for all senses. Thus, the cerebrum's size and comprehensive role in sensory processing solidify its designation as the largest component responsible for this function.

2. What could be the issue if a PCA pump shows an error message about not requesting input?

- A. Power source issue
- B. Defective pump mechanism
- C. Possible faulty patient controller**
- D. Connection problems to the IV

In the context of a PCA (Patient-Controlled Analgesia) pump displaying an error message regarding not requesting input, the most relevant issue is likely a faulty patient controller. The patient controller is a critical component that allows the patient to communicate their need for medication. If the controller is malfunctioning or not working properly, it could result in the pump failing to recognize or process input from the patient, triggering an error message. This issue emphasizes the importance of the patient controller's functionality in facilitating the patient's ability to manage their pain effectively. When the controller is not functioning optimally, it can prevent the patient from receiving timely medication doses, directly impacting their pain management protocol. In contrast, while power source issues may lead to a general malfunction of the pump, they usually present different error messages. A defective pump mechanism would likely impact the pump's ability to dispense medication rather than leading to a specific error about request input. Lastly, connection problems to the IV might result in a lack of medication delivery but would generally not cause the pump to indicate an input request issue directly related to the patient's commands. Therefore, a malfunction in the patient controller is the most fitting reason for the error message displayed.

3. What is the minimum encryption level required by US-CERT regulations for medical data?

- A. 32 bit
- B. 64 bit
- C. 128 bit**
- D. 256 bit

The minimum encryption level required by US-CERT regulations for medical data is 128-bit encryption. This level of encryption is considered robust enough to protect sensitive data from unauthorized access and potential breaches. It employs an algorithm that uses a key that is 128 bits long, which offers a substantial number of possible combinations, making it secure against brute-force attacks. Regulations emphasize the importance of protecting electronic health information due to the sensitive nature of the data. A higher encryption standard, such as 256-bit, is often used for added security, but 128-bit is the established minimum level to ensure compliance with federal regulations. This requirement reflects the balance between data security concerns and technological capabilities, ensuring that medical data remains confidential and secure against emerging threats in cybersecurity.

4. Which of the following is an example of therapeutic medical equipment?

- A. Diagnostic imaging machines
- B. Infusion pumps or ventilators**
- C. Laboratory analyzers
- D. Surgical instruments

Therapeutic medical equipment refers to devices that are used to treat patients or manage their conditions. Infusion pumps and ventilators are prime examples of such equipment. Infusion pumps deliver medications, nutrients, or fluids directly into a patient's bloodstream in controlled amounts, which is essential for therapeutic treatment in various medical settings. Ventilators, on the other hand, are used to assist or control patient breathing, providing life-supporting therapy for individuals who have difficulty breathing adequately on their own. In contrast, the other options primarily fall into diagnostic or procedural categories. Diagnostic imaging machines are used primarily for identifying medical conditions, not for treating them. Laboratory analyzers are utilized to perform tests and analyze biological samples, supporting diagnosis rather than providing treatment. Surgical instruments, while critical for carrying out surgical procedures, are not classified as therapeutic equipment in the same sense; they are tools used during surgery rather than devices that deliver ongoing treatment to patients.

5. The graph of the cardiac output measurement resembles

- A. a square wave
- B. a bell-shaped curve**
- C. an inverted QRS wave
- D. blood pressure oscillation

The graph of cardiac output measurement resembles a bell-shaped curve because it reflects the relationship between heart rate, stroke volume, and overall cardiac efficiency. In a normal physiological state, cardiac output increases to meet the metabolic demands of the body during activities like exercise, reaching a peak before gradually declining as the body returns to a resting state. This shape represents the dynamics of the cardiovascular response to various stressors or levels of activity, showing an initial rise followed by a smooth tapering off, which is characteristic of many biological phenomena that operate around a set point or average. The bell-shaped curve effectively demonstrates how cardiac output can vary in response to changes in physiological demand, making it a fitting representation for this measurement. Other options, however, typically reflect different physiological phenomena. A square wave might represent a constant output rather than the dynamic changes seen in cardiac output. An inverted QRS wave pertains specifically to electrocardiogram readings, while blood pressure oscillation would depict fluctuations in blood pressure rather than the summative output of the heart's pumping action.

6. What protection method is primarily used to prevent electrical shock in medical devices?

- A. Fuses
- B. Grounding**
- C. Circuit breakers
- D. Insulation

Grounding is primarily used to prevent electrical shock in medical devices by providing a safe path for electric current to flow in the event of a fault or failure. When a device has a grounding system, any leakage current that may occur due to a fault is directed away from the user and diverted to the ground. This significantly reduces the risk of electric shock, ensuring that the patient's safety and the operator's safety are prioritized during operation. In the context of medical equipment, where patients may be in vulnerable positions or unprotected, grounding becomes critical. It creates a barrier that minimizes the chances of harmful electrical currents that could come from internal failures or external interferences. This method is complementary to other protection strategies like insulation, which helps prevent contact with live parts, and circuit breakers and fuses, which are designed to interrupt circuits under overload conditions but do not directly address shock protection in the same way grounding does. Thus, grounding stands out as a fundamental safety mechanism specific to the context of protecting both patients and healthcare providers from electrical hazards in medical devices.

7. Why is disconnecting a device from power sources essential before servicing?

- A. To save energy during repairs
- B. To ensure the technician's safety and prevent electric shock**
- C. To allow for software updates
- D. To minimize time during maintenance

Disconnecting a device from power sources before servicing is crucial primarily for safety reasons. It protects technicians from the risk of electric shock, which can occur if they come into contact with live electrical components while working on or around the device. By ensuring that the device is completely powered down, technicians can safely perform repairs or maintenance without the concern of electrical hazards. The other potential reasons, such as saving energy, allowing for software updates, or minimizing maintenance time, do not address the immediate safety risks involved in working with electrical equipment. While these factors may be beneficial in other contexts, they do not justify the primary need for disconnection from power during servicing, making safety the most compelling reason in this scenario.

8. During a laparoscopic carbon dioxide laser case, a technician should:

- A. Wear an approved lead apron
- B. Wear appropriate safety glasses**
- C. Stand a minimum of two meters away from the laser
- D. Ensure smoke evacuator

In a laparoscopic carbon dioxide laser procedure, the technician should wear appropriate safety glasses to protect their eyes from the intense light and potential harmful reflections generated by the laser. Safety glasses designed specifically for laser use typically have protective coatings that filter out the specific wavelengths emitted by laser devices, thereby reducing the risk of ocular injury. This protective measure is crucial in surgical settings where lasers are deployed, as they can pose serious risks not only to the patient but also to the surgical team if proper precautions are not taken. While a smoke evacuator is indeed important for removing hazardous smoke generated by laser treatments, the immediate protection of the technician's eyes during the procedure takes precedence. In contrast, wearing a lead apron or maintaining a two-meter distance isn't necessary in the context of a carbon dioxide laser, which operates differently than X-ray or radioactive equipment.

9. What is the most likely reason a centrifuge will not start without manual intervention on the rotor?

- A. Faulty power supply
- B. Bad brushes**
- C. Improper balancing
- D. Overheating

The scenario where a centrifuge does not start without manual intervention on the rotor is often indicative of issues related to the rotor and its operation. Bad brushes in an electric motor can lead to insufficient contact with the rotor, preventing it from receiving the necessary power to initiate rotation. In many centrifuges, the motor's brushes play a critical role in conducting electricity to the rotor, and if they are worn out or malfunctioning, the motor may not receive the appropriate current to start cycling on its own. Ensuring that the brushes are in good condition is vital for the proper functioning of the motor. If they are faulty, the centrifuge may stop or require manual assistance to engage, disrupting the operational workflow. While other issues such as a faulty power supply or improper balancing can prevent the centrifuge from functioning as intended, they do not typically describe the need for manual intervention on the rotor itself. Overheating can also lead to shutdowns or failures but is more about the cessation of function rather than requiring manual intervention to initiate the process. Therefore, the relationship between motor activation and the condition of the brushes directly points to why the correct choice surrounds the concept of bad brushes.

10. Which of the following wireless network security protocols provides the most security?

- A. WEP
- B. WPA
- C. WAAS
- D. WPA2-Enterprise**

The most secure wireless network security protocol listed is WPA2-Enterprise. This protocol employs advanced security features that enhance data protection in wireless networks. WPA2-Enterprise utilizes the IEEE 802.1X authentication framework, which allows for the use of sophisticated authentication mechanisms, such as RADIUS servers. This provides individual credentials for each user rather than relying on a shared password, significantly improving security by ensuring that access can be controlled and monitored. Additionally, WPA2-Enterprise employs Advanced Encryption Standard (AES) for data encryption, which is recognized as a strong encryption protocol that protects against unauthorized access and ensures data integrity during transmission. This level of security is essential for environments where sensitive information is handled, such as in healthcare or corporate settings. Understanding these features helps clarify why WPA2-Enterprise is considered the most secure choice compared to the others, which either lack this level of individual user authentication or use weaker encryption standards.

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://cbet.examzify.com>

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

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