

# CompTIA A+ Core 1 (220-1001) Certification 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 troubleshooting memory issues, what should be the first step if a new computer does not boot?**
  - A. Check the display connections.**
  - B. Ensure it is plugged into a power source.**
  - C. Verify memory seating and compatibility.**
  - D. Reinstall the operating system.**
- 2. What is the first action a technician should take before replacing a hard drive in a laptop?**
  - A. Ground themselves to prevent static electricity**
  - B. Review the laptop manufacturer's documentation**
  - C. Remove the back cover**
  - D. Back up user data**
- 3. What device can be used to convert a signal between analog and digital formats?**
  - A. Router**
  - B. Switch**
  - C. Modem**
  - D. Access Point**
- 4. If a new system fails to boot and emits a beep code, what is the most likely cause of this issue?**
  - A. The hard drive is missing or damaged.**
  - B. No memory is installed or it was not detected.**
  - C. The power supply is faulty.**
  - D. The motherboard has failed.**
- 5. Which method is commonly used to prevent ESD damage when handling computer components?**
  - A. Wearing rubber gloves**
  - B. Using an ESD wrist strap**
  - C. Working on a plastic surface**
  - D. Using a wooden workbench**

- 6. What method would you choose to connect a wireless keyboard and mouse to a laptop?**
- A. Infrared**
  - B. Wi-Fi**
  - C. Bluetooth**
  - D. USB**
- 7. What type of installation would you use to replace an existing operating system without retaining any user data?**
- A. Upgrade installation**
  - B. Dual-boot installation**
  - C. Clean installation**
  - D. Custom installation**
- 8. Which protocol is used to send email messages from a mail client to a mail server?**
- A. HTTP**
  - B. FTP**
  - C. SMTP**
  - D. IMAP**
- 9. What is one reason a memory upgrade might fail to function correctly?**
- A. The memory is installed correctly.**
  - B. The memory type is too old.**
  - C. The memory is not compatible and was not installed and configured properly.**
  - D. The computer has sufficient power supply.**
- 10. What does the acronym WPA stand for in wireless security?**
- A. Wireless Protected Access**
  - B. Wi-Fi Protected Access**
  - C. Wired Protected Access**
  - D. Wireless Privacy Access**



## **Answers**

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

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## **Explanations**

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**1. When troubleshooting memory issues, what should be the first step if a new computer does not boot?**

- A. Check the display connections.**
- B. Ensure it is plugged into a power source.**
- C. Verify memory seating and compatibility.**
- D. Reinstall the operating system.**

When troubleshooting memory issues, the most logical first step is to verify memory seating and compatibility. This action is crucial because if the system fails to boot, improperly seated memory modules are a common cause of the issue. Memory must be securely fitted into the motherboard slots, and compatibility with the motherboard, in terms of type and speed, is also necessary for proper functioning. If the memory isn't installed correctly, the computer may not complete the POST (Power-On Self-Test) process, resulting in a failure to boot. Checking the display connections or ensuring the computer is plugged into a power source, while important, do not directly address potential memory hardware problems, which are often the root cause of boot failures. Likewise, reinstalling the operating system is more of a software-related solution that comes into play after hardware issues have been ruled out. Thus, confirming that the memory is properly seated and compatible is the most effective initial troubleshooting step when addressing boot failure in a new computer.

**2. What is the first action a technician should take before replacing a hard drive in a laptop?**

- A. Ground themselves to prevent static electricity**
- B. Review the laptop manufacturer's documentation**
- C. Remove the back cover**
- D. Back up user data**

The first action a technician should take before replacing a hard drive in a laptop is to review the laptop manufacturer's documentation. This documentation provides crucial information regarding specific procedures and safety precautions tailored to that particular model. It includes details about how to safely disassemble the laptop, any specific tools needed, and warnings about components that must not be touched or removed during the process. Understanding the manufacturer's guidelines can also help identify whether the hard drive is accessible through a panel on the bottom of the laptop or if it requires the entire back cover to be removed. This knowledge helps prevent damage to the laptop and ensures a smoother replacement process. While grounding oneself to prevent static electricity and backing up user data are certainly important steps in hardware upgrades or repairs, they follow the initial step of gaining sufficient knowledge from the manufacturer's documentation. Removing the back cover is a task that comes further down the line after the technician has become familiar with the laptop's design and service requirements.

**3. What device can be used to convert a signal between analog and digital formats?**

- A. Router
- B. Switch
- C. Modem**
- D. Access Point

A device that can convert signals between analog and digital formats is known as a modem. Modems serve as a bridge between analog signal systems, like telephone lines, and digital data used in computers and networks. For example, when data is sent from a computer, it is in digital format, and the modem converts that digital data into an analog signal for transmission over traditional telephone lines. On the receiving end, the modem converts the incoming analog signals back into digital format for the computer to process. In contrast, a router primarily directs data packets between networks and does not inherently convert between analog and digital signals. A switch operates within the same digital domain, handling data packets between devices on a network without engaging in any signal conversion. An access point facilitates wireless connections and does not perform any signal conversion tasks related to analog and digital formats. Understanding these functionalities clarifies why the modem is the correct choice for converting signals between analog and digital.

**4. If a new system fails to boot and emits a beep code, what is the most likely cause of this issue?**

- A. The hard drive is missing or damaged.
- B. No memory is installed or it was not detected.**
- C. The power supply is faulty.
- D. The motherboard has failed.

When a new system emits a beep code during the boot process, the most likely cause is that no memory is installed or it was not detected. Beep codes are diagnostic signals produced by the motherboard's BIOS or UEFI firmware, indicating hardware issues. Each pattern of beeps corresponds to different error conditions, and a common reason for these codes is related to memory modules. If the system lacks the necessary memory, the BIOS cannot complete the POST (Power-On Self-Test) process, which is crucial for starting up the computer. Without memory, the CPU has no way to load the system's operating system or run any processes, so the system will not boot, resulting in a specific beep code indicating a memory issue. Commonly, if memory is improperly seated, incompatible, or completely absent, the motherboard will signal this through beep codes to alert the technician or user to troubleshoot the memory components first. This understanding is fundamental in diagnosing boot failures effectively.

**5. Which method is commonly used to prevent ESD damage when handling computer components?**

- A. Wearing rubber gloves**
- B. Using an ESD wrist strap**
- C. Working on a plastic surface**
- D. Using a wooden workbench**

Using an ESD wrist strap is a widely accepted practice for preventing electrostatic discharge (ESD) damage when handling sensitive electronic components. The wrist strap is designed to safely ground the person wearing it, effectively equalizing the electrical potential between the individual and any computer components being handled. This helps to prevent the buildup of static electricity that could discharge and cause damage to the components, which are often vulnerable to such discharges. When using an ESD wrist strap, one end is typically attached to the wrist while the other end is connected to a grounded surface or object. This ensures that both the user and the components maintain a zero potential difference, significantly reducing the risk of ESD damage during the handling and installation of delicate parts such as RAM, motherboards, and CPUs. In contrast, other methods like wearing rubber gloves or working on plastic surfaces do not provide a direct grounding mechanism, which is essential for ESD protection. Rubber is an insulator, which may actually increase the risk of ESD if the individual does not take further grounding measures. While working on a wooden workbench can reduce static build-up compared to synthetic surfaces, it still does not ensure proper grounding. Thus, an ESD wrist strap remains the most effective and reliable method for minimizing

**6. What method would you choose to connect a wireless keyboard and mouse to a laptop?**

- A. Infrared**
- B. Wi-Fi**
- C. Bluetooth**
- D. USB**

Choosing Bluetooth as the method to connect a wireless keyboard and mouse to a laptop is a great decision because Bluetooth is specifically designed for short-range wireless communication. It allows multiple devices, like keyboards and mice, to connect to the laptop without occupying USB ports or requiring physical cables, making it ideal for portable and mobile environments. Bluetooth technology typically consumes low power, prolonging the battery life of the devices, and provides a reliable connection with minimal lag, which is essential for both typing and navigation. Additionally, many modern laptops come with built-in Bluetooth support, making it easier to connect peripheral devices without the need for additional components. Although other methods such as infrared could be used, they are less common and often limited in distance and line-of-sight requirements. Wi-Fi is generally used for networking purposes and not ideal for peripherals due to higher energy consumption and potential connectivity issues in a crowded network environment. Lastly, USB connections would require a direct physical connection, which may not be as convenient as a wireless solution.

**7. What type of installation would you use to replace an existing operating system without retaining any user data?**

- A. Upgrade installation**
- B. Dual-boot installation**
- C. Clean installation**
- D. Custom installation**

A clean installation is the process of installing a new operating system while completely removing any existing operating system and all user data from the device. This approach is used when a user wants to start fresh, clearing out any potential software issues, files, or configurations from the previous installation. It is particularly useful for troubleshooting, improving system performance, or transitioning to a different operating system entirely without the necessity of retaining old data. In contrast, an upgrade installation would keep the existing user data and applications while updating the operating system to a newer version. A dual-boot installation allows for multiple operating systems to be installed on the same machine, preserving each system's data and settings. A custom installation typically provides options for keeping certain features or data from the previous installation, which also does not align with the requirement of not retaining any user data. Therefore, the clean installation option is the most appropriate choice for this scenario.

**8. Which protocol is used to send email messages from a mail client to a mail server?**

- A. HTTP**
- B. FTP**
- C. SMTP**
- D. IMAP**

The protocol used to send email messages from a mail client to a mail server is Simple Mail Transfer Protocol (SMTP). This protocol is specifically designed for the transmission of email. When a user composes an email and clicks "send," the mail client communicates with the mail server using SMTP to relay the message to its destination. SMTP is essential for ensuring that the email is properly formatted and routed to the intended recipient's email server. In contrast, the other options serve different purposes. Hypertext Transfer Protocol (HTTP) is primarily used for transferring web pages and other web content over the internet. File Transfer Protocol (FTP) is used for transferring files between computers on a network. Internet Message Access Protocol (IMAP) is utilized for accessing and managing emails stored on a mail server but is not responsible for sending emails. Hence, SMTP is uniquely suited for the task of delivering email messages from clients to servers.

**9. What is one reason a memory upgrade might fail to function correctly?**

- A. The memory is installed correctly.**
- B. The memory type is too old.**
- C. The memory is not compatible and was not installed and configured properly.**
- D. The computer has sufficient power supply.**

A memory upgrade might fail to function correctly for several reasons, and compatibility is a critical factor. When the memory is not compatible with the motherboard or other hardware components, the system cannot recognize or utilize the new memory effectively. This incompatibility could arise from differences in memory type, speed, or form factor (such as DIMM versus SO-DIMM). If the memory module does not match the specifications required by the motherboard, it may either not work at all or may lead to system instability, crashes, or failure to boot. This is why ensuring that the memory upgrade is compatible with the system's specifications is essential for a successful installation. The other options highlight aspects of installation and hardware capability but do not directly relate to the core issue of compatibility. Proper installation and sufficient power supplies are critical, but they do not address the most common root cause of failed memory upgrades, which is a lack of compatibility between the components.

**10. What does the acronym WPA stand for in wireless security?**

- A. Wireless Protected Access**
- B. Wi-Fi Protected Access**
- C. Wired Protected Access**
- D. Wireless Privacy Access**

The acronym WPA stands for Wi-Fi Protected Access. This term refers to a security protocol designed to secure wireless networks by providing stronger data protection and improved network access control. WPA was introduced as a replacement for WEP (Wired Equivalent Privacy), which was found to be insecure due to various vulnerabilities. Wi-Fi Protected Access includes features like TKIP (Temporal Key Integrity Protocol), which dynamically generates a new key for each data packet sent, thereby enhancing security over the static keys used by WEP. Additionally, WPA has seen enhancements with the introduction of WPA2, which employs the much stronger AES (Advanced Encryption Standard) for data encryption. The other options refer to terms that are either incorrect or do not align with the established terminology in wireless security. For instance, "Wireless Protected Access" and "Wireless Privacy Access" do not correspond to any recognized encryption standards. "Wired Protected Access" is also inaccurate as it suggests a focus on wired networks, which is not pertinent to WPA's application in wireless security.



## 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://comptiaapluscore12201001.examzify.com>**

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