

CompTIA A+ Core 1 (220-1101) Certification Practice Exam (Sample)

Study Guide



Everything you need from our exam experts!

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Table of Contents

Copyright	1
Table of Contents	2
Introduction	3
How to Use This Guide	4
Questions	5
Answers	8
Explanations	10
Next Steps	16

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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. How many conductors are present in an RJ-11 connector?

- A. 2 Conductors**
- B. 4 Conductors**
- C. 8 Conductors**
- D. 6 Conductors**

2. What is a Cable modem's primary technology standard used for broadband?

- A. ADSL**
- B. DOCSIS**
- C. Ethernet**
- D. ISDN**

3. What is the primary function of cable crimpers?

- A. To test the integrity of network cables**
- B. To connect the modular connector to the Ethernet cable**
- C. To measure voltage in electrical wiring**
- D. To splice fiber optic cables**

4. What is required for RAID 5 to function effectively?

- A. At least 1 drive**
- B. At least 2 drives**
- C. At least 3 drives**
- D. At least 4 drives**

5. Which feature is common in Direct Burial STP cables?

- A. They are only used indoors.**
- B. They require no grounding.**
- C. They often contain gel to repel water.**
- D. They use RG-6 connectors.**

6. Which type of drive typically communicates over SATA or PCIe?

- A. Hard Disk Drive**
- B. Solid State Drive**
- C. Optical Drive**
- D. Flash Drive**

7. Which of the following connectors can connect to both USB and Thunderbolt devices?

- A. RJ-11**
- B. USB-C**
- C. miniUSB**
- D. SC**

8. What type of cooling system is characterized by circulating coolant through a computer?

- A. Passive cooling**
- B. Active cooling**
- C. Liquid cooling**
- D. Radiant cooling**

9. Which component utilizes a smaller form factor for memory?

- A. DIMM**
- B. SODIMM**
- C. SIMM**
- D. RAMBUS**

10. What do front panel connectors typically connect to?

- A. Cooling fans only**
- B. The power supply only**
- C. Storage devices only**
- D. Control buttons and LEDs**

Answers

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

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Explanations

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1. How many conductors are present in an RJ-11 connector?

- A. 2 Conductors**
- B. 4 Conductors**
- C. 8 Conductors**
- D. 6 Conductors**

An RJ-11 connector, commonly used for telephone connections, typically has 2 conductors. This configuration is designed to carry a single phone line, which requires only a minimal number of wires to transmit voice signals. While RJ-11 connectors can physically accommodate up to 6 positions (the slots for the wires), in standard use, only the center two conductors are connected for voice communication. It's important to understand that while RJ-45 connectors used for Ethernet networking have 8 conductors, the RJ-11 is specifically designed for telephony and thus utilizes only the necessary conductors for its smaller, less complex data transmission requirements. This 2-conductor setup aligns with traditional telephone line usage, ensuring efficient and effective communication without the need for additional wiring capacity.

2. What is a Cable modem's primary technology standard used for broadband?

- A. ADSL**
- B. DOCSIS**
- C. Ethernet**
- D. ISDN**

The primary technology standard used for broadband in cable modems is DOCSIS, which stands for Data Over Cable Service Interface Specification. DOCSIS is specifically designed to provide high-speed internet access via a cable television network. This standard allows for the transmission of data alongside traditional cable TV signals, effectively utilizing the existing coaxial cable infrastructure. DOCSIS enables cable operators to offer various tiers of internet service, providing capabilities for both downstream and upstream data transmission at high speeds. Standards have evolved over time, with DOCSIS 3.0 and DOCSIS 3.1 supporting much higher data rates, improving efficiency and accommodating more users on the same network. While ADSL is a technology used for broadband over telephone lines, Ethernet is a standard for local area networks, primarily concerned with data communication within a limited area, and ISDN is an older technology for transmitting voice and data over traditional phone lines. DOCSIS stands out as the industry standard specifically tailored for the infrastructure utilized by cable modems.

3. What is the primary function of cable crimpers?

- A. To test the integrity of network cables
- B. To connect the modular connector to the Ethernet cable**
- C. To measure voltage in electrical wiring
- D. To splice fiber optic cables

The primary function of cable crimpers is to connect the modular connector to the Ethernet cable. This process involves inserting the bare wires of the Ethernet cable into the appropriate slots in a modular connector, and then using the crimping tool to secure the connector in place by pushing metal pins through the insulation and into the copper wires. This ensures a solid electrical connection that allows for effective data transmission over the network. In contrast, testing the integrity of network cables involves tools like cable testers or multimeters, which are used to verify that signals can travel along the cable without interference or loss. Measuring voltage in electrical wiring typically requires a multimeter and is not a function of cable crimpers. Splicing fiber optic cables involves specialized tools and techniques that are significantly different from the crimping process used for Ethernet cables. Thus, the specific role of cable crimpers is centered around the secure connection of connectors to cables for networking purposes.

4. What is required for RAID 5 to function effectively?

- A. At least 1 drive
- B. At least 2 drives
- C. At least 3 drives**
- D. At least 4 drives

For RAID 5 to function effectively, a minimum of three drives is necessary. This configuration is designed to provide both data redundancy and improved performance through striping with parity. In RAID 5, data and parity information are distributed across all drives in the array. This means that if one drive fails, the data can still be reconstructed using the remaining drives and the parity information, thus ensuring fault tolerance. Using fewer than three drives would not allow RAID 5 to write the necessary parity information while also maintaining the redundancy that is characteristic of this RAID level. With only one or two drives, the system cannot effectively implement both data striping and parity distribution, which is critical for the RAID 5 functionality. Therefore, the requirement for at least three drives is essential to achieve the desired balance of redundancy and performance in a RAID 5 setup.

5. Which feature is common in Direct Burial STP cables?

- A. They are only used indoors.
- B. They require no grounding.
- C. They often contain gel to repel water.**
- D. They use RG-6 connectors.

Direct Burial STP (Shielded Twisted Pair) cables are specifically designed to be installed underground, where they may be exposed to moisture and environmental conditions. One of the common features that makes them suitable for this application is the presence of gel or other water-resistant materials contained within the cable. This gel helps to repel water and prevents moisture from penetrating the cable, which could otherwise damage the internal wires and lead to signal degradation or loss. Due to the cable's intended use outdoors and underground, it must withstand various environmental factors. The gel serves as a protective layer, ensuring that the cable remains functional even in damp or wet conditions, which is crucial for maintaining network integrity in outdoor installations.

6. Which type of drive typically communicates over SATA or PCIe?

- A. Hard Disk Drive
- B. Solid State Drive**
- C. Optical Drive
- D. Flash Drive

A Solid State Drive (SSD) typically communicates over SATA or PCIe interfaces. SATA (Serial Advanced Technology Attachment) is commonly used for older SSDs and is known for its wide compatibility with existing systems and decent speeds. However, for newer, high-performance SSDs, the PCIe (Peripheral Component Interconnect Express) interface is often utilized. PCIe offers significantly faster data transfer rates compared to SATA, making it the preferred choice for modern computing needs. While Hard Disk Drives (HDDs) also use SATA for connectivity, they do not utilize PCIe because their technology is different and generally slower than SSDs. Optical Drives primarily use interfaces like SATA as well but are not a type of solid-state storage. Flash Drives, typically referring to USB drives, function independently of SATA or PCIe context, relying instead on USB protocols for data transfer. Thus, the communication channels specified in the question are most directly associated with Solid State Drives.

7. Which of the following connectors can connect to both USB and Thunderbolt devices?

- A. RJ-11**
- B. USB-C**
- C. miniUSB**
- D. SC**

The choice of USB-C as the correct answer is based on its versatility and capability to support both USB and Thunderbolt devices through the same connector type. USB-C is a 24-pin connector that has become a standardized interface for many types of devices, allowing for data transfer, power delivery, and video output. With respect to Thunderbolt, USB-C is the connector utilized in Thunderbolt 3 and Thunderbolt 4 implementations, which enables high-speed data transfer rates and the ability to daisy-chain multiple devices. This dual compatibility means that devices equipped with USB-C ports can communicate with both traditional USB peripherals and devices that advance Thunderbolt technology, as both interfaces are fundamentally compatible at the hardware level. In contrast, the other options do not have this capability. RJ-11 is a connector primarily used for telephone lines and has no relevance to USB or Thunderbolt technologies. miniUSB is an older type of USB connector that does not support Thunderbolt connections, and SC refers to a type of fiber optic connector that is entirely different and irrelevant to both USB and Thunderbolt.

8. What type of cooling system is characterized by circulating coolant through a computer?

- A. Passive cooling**
- B. Active cooling**
- C. Liquid cooling**
- D. Radiant cooling**

The type of cooling system that is characterized by circulating coolant through a computer is liquid cooling. This system typically involves the use of a liquid, often water mixed with coolant additives, which is circulated through tubes and cooling blocks in order to absorb heat from key components such as the CPU and GPU. The heat absorbed by the liquid is then dissipated through a radiator, often with the assistance of fans to enhance heat removal. Liquid cooling is known for its efficiency in heat transfer compared to air cooling systems. By directly transferring heat away from components using a liquid medium, it can maintain lower temperatures, which is especially beneficial for high-performance systems or overclocked setups. This method is not only effective but also helps to reduce noise levels compared to traditional air cooling solutions, which rely on fans that can produce noise when running at high speeds. In contrast, passive cooling relies on heat sinks and natural convection, active cooling typically refers to systems that use fans or other mechanical means without necessarily involving liquid, and radiant cooling utilizes surfaces to emit heat rather than circulating a liquid coolant.

9. Which component utilizes a smaller form factor for memory?

- A. DIMM**
- B. SODIMM**
- C. SIMM**
- D. RAMBUS**

The component that utilizes a smaller form factor for memory is SODIMM. SODIMM stands for Small Outline Dual In-line Memory Module, and it is specifically designed to fit into the compact spaces of laptops and small form factor devices. SODIMMs are shorter and narrower than standard DIMMs (Dual In-line Memory Modules), which are typically used in desktop computers. This compact size allows laptops and other portable devices to utilize memory without taking up excessive space, which is crucial for maintaining a lightweight and slim profile. In contrast, while DIMMs are the standard for desktop computers, and SIMMs (Single In-line Memory Modules) are older technology used primarily in early computer systems, they do not provide the small form factor needed for modern compact devices. RAMBUS refers to a type of memory technology rather than a specific form factor and is generally associated with high-speed memory projects that require unique slots rather than the size consideration of SODIMMs.

10. What do front panel connectors typically connect to?

- A. Cooling fans only**
- B. The power supply only**
- C. Storage devices only**
- D. Control buttons and LEDs**

Front panel connectors are essential components on a computer motherboard that facilitate the connection of various user interface elements located on the front panel of a computer case. These connectors typically interface with control buttons, such as the power button and reset button, as well as status indicators like power and hard drive activity LEDs. This functionality is crucial for the user experience, providing an accessible way to control the computer and receive visual feedback on its status. For instance, the power button allows the user to turn the computer on and off, while LEDs indicate whether the system is currently powered on or if there is disk activity. The other options focus on specific components rather than the overall scope of what front panel connectors serve. Cooling fans are generally connected to different headers on the motherboard dedicated to thermal management, the power supply connects to various components within the system using different types of connectors like SATA or Molex, and storage devices are connected through data interfaces such as SATA or NVMe, rather than front panel connections. Thus, the connectivity of control buttons and LEDs is the primary role of front panel connectors.

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:

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

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