# HCIA Storage 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. In SAS topology, which device fans out a single SAS link to multiple devices?**

**A. Expander**

**B. HBA**

**C. Disk drive**

**D. JBOD**

**2. Which statement about SCSI is true?**

**A. Small Computer System Interface**

**B. Serial Computer System Interface**

**C. System Computer Interface**

**D. Simple Cable System Interface**

**3. Which RAID level is pure striped with no parity or mirroring?**

**A. RAID 3**

**B. RAID 0**

**C. RAID 6**

**D. RAID 50**

**4. Which option constitutes a valid login URL to the storage device that includes the port number?**

**A. 192.168.5.12**

**B. http://192.168.5.12**

**C. https://192.168.5.12**

**D. https://192.168.5.12:8088**

**5. Which component moves the read/write heads across the disk surface?**

**A. Spindle**

**B. Read/Write Arm**

**C. Actuator**

**D. Control Circuit Board**

**6. Which of the following components make up a storage system?**

**A. Hardware**

**B. Software**

**C. Hardware, Software, and Solutions**

**D. Solutions**

**7. Which of the following is a file storage service option in distributed storage systems?**

**A. Block storage**

**B. File storage**

**C. Object storage**

**D. HDFS storage**

**8. Which statement is NOT true about distributed storage?**

**A. Supports large-scale horizontal expansion.**

**B. Supports expansion by addition of nodes to increase both computing capability and storage space.**

**C. Does not support elastic EC for data redundancy protection.**

**D. Supports storage resource pooling and virtualization.**

**9. Which statement best describes a snapshot in storage?**

**A. A snapshot is a copy of the source data at a point in time.**

**B. A snapshot duplicates the entire dataset every time.**

**C. A snapshot is used only for archiving offline.**

**D. A snapshot requires long time to create.**

**10. Statement: Long periods of service interruption due to the lack of disaster recovery system will can cause financial losses and reputation issues to the business. Is this statement True or False?**

**A. Not Applicable**

**B. Cannot Be Determined**

**C. True**

**D. False**

# Answers

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

# Explanations

## 1. In SAS topology, which device fans out a single SAS link to multiple devices?

**A. Expander**

**B. HBA**

**C. Disk drive**

**D. JBOD**

**In SAS topology, the component that fans out a single SAS link to multiple devices is the expander. An expander sits between the host interface (the HBA) and the multiple disks or enclosures, taking one upstream SAS connection and distributing it across many downstream ports. This lets you attach many drives to a single host link without needing a separate direct connection from the HBA to each drive, enabling scalable growth in storage systems. The other options don't provide that fan-out role. The host bus adapter is what the host uses to connect to the SAS network, but it doesn't multiply a single link into many; a disk drive is the endpoint device, not a routing or splitting device; and JBOD describes a chassis that holds multiple disks, often with its own internal wiring, but by itself it isn't the device that fans out a single SAS link.**

## 2. Which statement about SCSI is true?

**A. Small Computer System Interface**

**B. Serial Computer System Interface**

**C. System Computer Interface**

**D. Simple Cable System Interface**

**SCSI stands for Small Computer System Interface. This name reflects its role as a family of standards designed to connect a variety of peripherals—especially storage devices like hard drives and CD/DVD drives—to a computer using a common interface. It began as a parallel data bus that could support multiple devices on one bus behind a single host adapter, using device IDs to communicate. There are serial variants (such as Serial Attached SCSI), but the acronym SCSI itself refers to Small Computer System Interface. The other interpretations don't match the official meaning.**

## 3. Which RAID level is pure striped with no parity or mirroring?

**A. RAID 3**

**B. RAID 0**

**C. RAID 6**

**D. RAID 50**

**Data striping without redundancy is the defining feature here. In this setup, data is divided into stripes and written across multiple disks so I/O can occur in parallel, which boosts performance for reads and writes. Because there's no parity to reconstruct data and no mirrored copy, there's no protection against a drive failure—losing any disk means you lose all data in the array. This is what RAID 0 does: pure striping with no parity or mirroring, giving maximum speed but no fault tolerance. The other configurations introduce parity or redundancy (parity across disks, double parity, or a striped set that uses a parity-based RAID), which is why they don't fit the description of pure striping with no parity or mirroring.**

## 4. Which option constitutes a valid login URL to the storage device that includes the port number?

**A. 192.168.5.12**

**B. http://192.168.5.12**

**C. https://192.168.5.12**

**D. https://192.168.5.12:8088**

**A login URL to a storage device typically needs three parts: a scheme (http or https), the host address, and, if the service isn't on the default port, the port number. When the login service is expected to listen on a non-standard port, including that port is essential to reach the correct service. In this case, the login interface is accessed via https on port 8088, so the URL should specify the secure scheme, the device's IP, and the specific port: https://192.168.5.12:8088. The other forms fail because they either omit the port or omit the scheme. A bare IP address has no protocol or port, an http URL includes a scheme but omits the port, and an https URL without a port assumes the default https port (443), which may not be the storage device's login port.**

## 5. Which component moves the read/write heads across the disk surface?

**A. Spindle**

**B. Read/Write Arm**

**C. Actuator**

**D. Control Circuit Board**

**The actuator is the component that moves the read/write heads across the disk surface. It drives the precision motion of the read/write arm (often via a voice coil motor), sliding the heads to the correct radial position on each platter. The spindle only spins the platters, while the control circuit board handles electronics and commands. So the actual head-positioning movement comes from the actuator.**

## 6. Which of the following components make up a storage system?

**A. Hardware**

**B. Software**

**C. Hardware, Software, and Solutions**

**D. Solutions**

**The concept being tested is that a storage system consists of three integrated layers: physical hardware, the software that manages and accesses the stored data, and the solutions layer that covers deployment, protection, and integration with applications and services. Hardware provides the actual disks, controllers, and networking components that store data. Software offers the management, file systems, data services (like replication or snapshots), and the operating environment that makes storage usable. The solutions layer ties everything together with deployment models, backup and disaster recovery, performance optimization, and interoperability with applications and cloud services. Only when hardware, software, and solutions are combined do you get a complete, functional storage system. Choosing only hardware or only software wouldn't deliver a usable system, and solutions alone wouldn't provide the actual storage or management capabilities.**

## 7. Which of the following is a file storage service option in distributed storage systems?

**A. Block storage**

**B. File storage**

**C. Object storage**

**D. HDFS storage**

**The main idea is how data is organized and accessed in distributed storage: by blocks, files, or objects. A file storage service is built around a traditional file system model, offering a hierarchical structure of directories and files and enabling file-level operations through standard file protocols like NFS or SMB. This makes it ideal for shared folders, user home directories, and applications that expect a familiar file-system interface. Block storage provides raw blocks to a client and relies on a separate file system inside, which is different from offering a direct file-based service. Object storage stores data as objects with metadata in a flat namespace, optimized for scalability and unstructured data, but it doesn't provide a traditional file hierarchy. HDFS storage is a distributed file system used in Hadoop ecosystems, a specialized implementation rather than a general file storage service option. So the option that represents a file-based storage service is the one that gives a hierarchical file system interface.**

## 8. Which statement is NOT true about distributed storage?

**A. Supports large-scale horizontal expansion.**

**B. Supports expansion by addition of nodes to increase both computing capability and storage space.**

**C. Does not support elastic EC for data redundancy protection.**

**D. Supports storage resource pooling and virtualization.**

**In distributed storage, redundancy and scalability are designed to adapt as the system grows. Data is spread across many nodes, enabling large-scale horizontal expansion, and adding nodes increases both capacity and computing power. The architecture also pools storage resources and provides virtualization to present a unified view of the storage. A central capability is erasure coding for data protection, which uses data and parity chunks to recover from failures with less overhead than full replication. Importantly, elastic erasure coding means the system can adjust the coding scheme and re-balance data as nodes are added or removed, maintaining fault tolerance while scaling efficiently. Therefore, the statement that elastic EC is not supported isn't true; distributed storage typically supports elastic EC to adapt redundancy with the cluster. The other statements correctly describe distributed storage features: horizontal expansion, growth in compute and storage with new nodes, and resource pooling with virtualization.**

## 9. Which statement best describes a snapshot in storage?

**A. A snapshot is a copy of the source data at a point in time.**

**B. A snapshot duplicates the entire dataset every time.**

**C. A snapshot is used only for archiving offline.**

**D. A snapshot requires long time to create.**

**A snapshot captures the state of data at a specific moment. It gives you a point-in-time view of the data so you can restore or reference that exact state later. In most storage systems, this is done without copying all the data immediately. Instead, the snapshot creates metadata and references to the original data blocks, using techniques like copy-on-write or redirect-on-write. Only when data changes after the snapshot are new blocks allocated, which makes snapshots fast to create and space-efficient. This is why the option describing a snapshot as a full duplicate of the entire dataset isn't accurate—snapshots don't copy everything up front. They're not limited to offline archiving, and they're typically quick to establish rather than taking a long time.**

## 10. Statement: Long periods of service interruption due to the lack of disaster recovery system will can cause financial losses and reputation issues to the business. Is this statement True or False?

**A. Not Applicable**

**B. Cannot Be Determined**

**C. True**

**D. False**

**The statement is true: long service interruptions without a disaster recovery system lead to financial losses and reputational damage. Disaster recovery helps restore critical IT services quickly after a disruption, reducing downtime. When there is no DR plan, outages last longer, so revenue drops from lost sales, backlogged orders, and potential penalties. Recovery costs may also rise as systems are brought back online. Beyond money, reliability matters to customers and partners; repeated or prolonged outages erode trust, push customers to competitors, and harm the company's brand. While exact figures can vary, the directional impact—financial loss and damaged reputation from extended downtime without a disaster recovery setup—is a well-established consequence.**

# 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://hciastorage.examzify.com**

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