

Khan Academy The Internet Practice Test (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. An intranet is a private network set up for an organization. Which statement is true?**
 - A. A public network connected to the internet.**
 - B. A private network set up for an organization.**
 - C. A wireless network used in homes.**
 - D. A network used for gaming only.**

- 2. Imagine the Internet without the Domain Name System (DNS). What would be true?**
 - A. You would still access websites using friendly domain names.**
 - B. You would not be able to use friendly domain names; you'd need numeric IP addresses.**
 - C. DNS would be replaced by a faster system.**
 - D. The Internet would stop working entirely.**

- 3. What is the purpose of the destination address in an IP packet?**
 - A. The sender's address**
 - B. Routers use it to decide where to send the packet.**
 - C. It defines the packet's encryption key**
 - D. It indicates the data's priority**

- 4. Why does using multiple random words with mixed casing improve password strength?**
 - A. It reduces the complexity requirements.**
 - B. It increases length and entropy, making brute-force harder.**
 - C. It makes it easier to remember the password.**
 - D. It makes the password easier to guess.**

- 5. Which statement best describes how TCP/IP sends data around the Internet?**
 - A. Data is sent as a single block and all packets are delivered automatically.**
 - B. Packets are sent without routing and arrive in order automatically.**
 - C. Computers split messages into packets and the destination acknowledges each packet to ensure delivery.**
 - D. The destination computer never acknowledges receipt.**

- 6. Which best describes the fault tolerance of routing on the Internet?**
- A. There are multiple routes for each IP packet to follow. A packet can be re-routed if a path becomes unavailable.**
 - B. Packets always follow the same precomputed path and cannot be rerouted.**
 - C. If a path fails, all packets are lost and never resequenced.**
 - D. Fault tolerance is unrelated to routing; it's a feature of end-host software.**
- 7. Which of the following statements best describes the Domain Name System (DNS)?**
- A. DNS maps domain names to IP addresses.**
 - B. DNS routes packets between networks.**
 - C. DNS stores website content.**
 - D. DNS encrypts network traffic.**
- 8. In 1986, NSFNET connected 6 university departments across the US. How many routes exist between NCAR and JVNC if any connection can fail?**
- A. 4 departments across the US.**
 - B. 8 departments across the US.**
 - C. 10 departments across the US.**
 - D. 6 departments across the US.**
- 9. What is the Transmission Control Protocol (TCP) responsible for?**
- A. Encrypting data.**
 - B. Reliable transmission of packets.**
 - C. Routing of packets.**
 - D. DNS resolution.**
- 10. What is the primary purpose of the sequence number in IP packets?**
- A. It ensures the IP addresses are unique.**
 - B. It helps the receiving computer reassemble the packets.**
 - C. It encrypts the payload.**
 - D. It determines the path the packet should take.**

Answers

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

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Explanations

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1. An intranet is a private network set up for an organization. Which statement is true?

- A. A public network connected to the internet.**
- B. A private network set up for an organization.**
- C. A wireless network used in homes.**
- D. A network used for gaming only.**

An intranet is a private network designed for an organization's internal use, with access restricted to employees and authorized partners. The statement is true because it captures that privacy and organizational scope—the network is built to share internal resources, tools, and information securely within the organization, often protected by firewalls and authentication and sometimes accessible remotely via VPN. This contrasts with the public Internet, which is open to anyone, and it isn't simply a wireless home network or a gaming-only network, which would have different purposes and access. Intranets can host internal websites, file shares, calendars, email, and collaboration tools, all meant for internal use rather than public access.

2. Imagine the Internet without the Domain Name System (DNS). What would be true?

- A. You would still access websites using friendly domain names.**
- B. You would not be able to use friendly domain names; you'd need numeric IP addresses.**
- C. DNS would be replaced by a faster system.**
- D. The Internet would stop working entirely.**

The test is about how domain names are turned into the numeric addresses the Internet uses to route data. DNS provides that mapping from friendly names (like example.com) to IP addresses. Without DNS, there's no universal way to resolve those names, so you couldn't rely on typing a domain name to reach a site. You'd have to know and use the numeric IP address directly, or rely on local mappings you've set up on a device, which isn't scalable across the whole Internet. That's why the correct idea is that you wouldn't be able to use friendly domain names; you'd need numeric IP addresses. The Internet wouldn't suddenly stop working just because DNS is gone—the underlying routing by IP addresses would still function. What would be lost is convenient name resolution; the other options imply a guaranteed replacement or a complete failure, which aren't implied by removing DNS.

3. What is the purpose of the destination address in an IP packet?

- A. The sender's address
- B. Routers use it to decide where to send the packet.**
- C. It defines the packet's encryption key
- D. It indicates the data's priority

The destination address tells the network where the packet is meant to arrive. Routers read this address and use their routing tables to decide the next hop that will lead toward that destination. With each hop, the packet moves closer to the final device, until it reaches the correct recipient. This addressing is what enables end-to-end delivery across the Internet. The sender's address identifies who sent the packet, not where it should go. The encryption key isn't defined by the destination address in the IP header, and data priority is handled by separate QoS mechanisms rather than the destination address.

4. Why does using multiple random words with mixed casing improve password strength?

- A. It reduces the complexity requirements.
- B. It increases length and entropy, making brute-force harder.**
- C. It makes it easier to remember the password.
- D. It makes the password easier to guess.

The strength comes from making the password both long and highly unpredictable. When you use several random words, you dramatically increase the number of possible combinations an attacker would have to try. Each extra word multiplies the total options, so the search space grows exponentially. Adding mixed casing adds even more variation for each word, further inflating the total possibilities. This combination—more length plus a larger, more random set of possibilities—piles up entropy, which is the measure of unpredictability, and makes brute-force attempts far less likely to succeed. In contrast, a short or predictable pattern doesn't provide that same explosion in possible candidates, so it's easier to guess or crack. Even though remembering a longer phrase with random casing can be trickier, the security payoff is a much stronger defense against guessing.

5. Which statement best describes how TCP/IP sends data around the Internet?
- A. Data is sent as a single block and all packets are delivered automatically.
 - B. Packets are sent without routing and arrive in order automatically.
 - C. Computers split messages into packets and the destination acknowledges each packet to ensure delivery.**
 - D. The destination computer never acknowledges receipt.

The main idea tested is how data travels over TCP/IP by being broken into pieces and verified on receipt. In practice, messages are split into packets that travel through the network and may take different paths. The transport layer (TCP) adds reliability by having the destination acknowledge the received data, using sequence numbers to keep track of what's arrived and to trigger retransmission if something is missing. This combination lets data be sent efficiently and still arrive correctly and in order. So describing it as computers splitting messages into packets and the destination acknowledging each packet to ensure delivery captures the essential mechanism of reliable TCP/IP communication. The other statements are off because data isn't guaranteed to arrive as a single block, routing is involved and packets can be delayed or different paths, and a destination does not never acknowledge receipt.

6. Which best describes the fault tolerance of routing on the Internet?
- A. There are multiple routes for each IP packet to follow. A packet can be re-routed if a path becomes unavailable.
 - B. Packets always follow the same precomputed path and cannot be rerouted.**
 - C. If a path fails, all packets are lost and never resequenced.
 - D. Fault tolerance is unrelated to routing; it's a feature of end-host software.

Fault tolerance in routing comes from having many possible paths between endpoints and from routing protocols that keep updating which path to use. If a link or router along a route fails, routers can switch to alternate paths so packets still reach their destination. Because different packets can take different routes, a flow may arrive with packets out of order, which the transport layer or reassembly can handle. This is why the idea that every packet sticks to a single precomputed path forever or that a failed path causes all packets to be lost isn't accurate. Routing is designed to adapt and keep delivery going even when parts of the network have issues.

7. Which of the following statements best describes the Domain Name System (DNS)?

- A. DNS maps domain names to IP addresses.**
- B. DNS routes packets between networks.**
- C. DNS stores website content.**
- D. DNS encrypts network traffic.**

DNS acts as the internet's phonebook, translating human-friendly domain names into machine-readable IP addresses so computers can find each other on the network. When you type a URL, a DNS resolver asks a series of servers—starting with the root, then the top-level domain, and finally the authoritative name server for the domain—to return the exact address to connect to. That mapping is what lets your browser reach the correct server without you needing to remember a string of numbers. DNS also uses caching to speed up repeated lookups and supports different record types, like A for IPv4 addresses and AAAA for IPv6. Other statements don't fit because DNS doesn't route packets between networks, that's the job of routers. It doesn't store website content—that lives on web servers or content delivery networks. And it doesn't encrypt traffic—encryption happens with protocols like TLS over HTTP.

8. In 1986, NSFNET connected 6 university departments across the US. How many routes exist between NCAR and JVNC if any connection can fail?

- A. 4 departments across the US.**
- B. 8 departments across the US.**
- C. 10 departments across the US.**
- D. 6 departments across the US.**

Redundancy is the idea here: when any single connection could fail, you want multiple independent routes between two sites. In 1986, NSFNET connected six university departments across the United States, so there are six potential routes between NCAR and JVNC—one route that can go through each department in the network. This means even if one link drops, there are other routes available, up to six distinct ways to get from NCAR to JVNC in this setup. The other numbers only reflect different ways of counting possible intermediate paths, but the question's framing points to the total participating departments as the count of routes.

9. What is the Transmission Control Protocol (TCP) responsible for?

- A. Encrypting data.
- B. Reliable transmission of packets.**
- C. Routing of packets.
- D. DNS resolution.

TCP's main job is to ensure reliable delivery of data between two endpoints. It establishes a connection, slices data into segments, and numbers them so the receiving end can put them back in order. It uses acknowledgments and, if a segment is lost or corrupted, retransmits it, so data arrives intact and in the right sequence. It also manages flow control so the sender doesn't overwhelm the receiver. Because of these features, TCP is the protocol that guarantees reliable transmission of packets. Encryption (for security), DNS resolution (mapping names to addresses), and routing (deciding paths through the network) are handled by other parts of the network stack.

10. What is the primary purpose of the sequence number in IP packets?

- A. It ensures the IP addresses are unique.
- B. It helps the receiving computer reassemble the packets.**
- C. It encrypts the payload.
- D. It determines the path the packet should take.

When IP fragments a large packet, the system needs a way for the destination to put all the pieces back together in the right order. The relevant header information marks which fragments belong to the same original datagram and where each fragment fits in that original message. The Identification field groups fragments, and the Fragment Offset indicates each piece's position within the original packet. With those together, the receiving host can collect all the fragments with the same identifier and reassemble them into the complete datagram. That's why this option is the best choice: it directly supports reconstructing the original data after fragmentation. It's not about making IP addresses unique, encrypting the payload, or choosing the route—the addressing, security, and routing processes handle those things, not the fragment reassembly mechanism.

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://khanacademytheinternet.examzify.com>

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

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