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

1. Why are IPv4 addresses more expensive to lease recently?

A. They offer better performance than IPv6.

B. There are very few IPv4 addresses left, increasing demand.

C. They are more secure than IPv6.

D. They are required for private networks.

2. Which operation is an example of computationally intensive cryptographic work?

A. Generating randomness

B. Printing a document

C. Rendering a video

D. Copying files

3. What is a common use of cookies in web interactions?

A. Encrypting the data on a page.

B. Maintaining login state across pages.

C. Resolving DNS queries.

D. Sending emails.

4. Which password choice demonstrates the strongest protection?

A. password123

B. Marjorie combines 5 random words and alternates the casing: "scarves-TOKYO-theme-TEAMWORK-trulia".

C. qwerty!

D. Letmein2010

5. Which country had an IPv6 adoption rate of 0.2% as of October 2018?

A. China 2.9%

B. India 34%

C. United States 34%

D. Indonesia 0.2%

6. What is the main goal of establishing an encrypted communication channel between two computers?

- **A. To securely exchange information**
- **B. To speed up data transfer**
- **C. To reduce latency**
- **D. To compress data**

7. In an IP network, which field helps computers reorder packets that arrive out of order?

- **A. Destination port**
- **B. Sequence number**
- **C. Time to Live**
- **D. Source IP address**

8. What is the primary purpose of WAN technologies?

- **A. To connect devices within a single local building**
- **B. To connect multiple LANs across large geographic areas**
- **C. To replace the Internet**
- **D. To increase hardware costs**

9. Which statement best describes an intranet's security and fault tolerance?

- **A. Intranets are typically more secure but often less fault-tolerant.**
- **B. Intranets are less secure but more fault-tolerant.**
- **C. Intranets are equally secure and fault-tolerant as public networks.**
- **D. Intranets are more secure and more fault-tolerant.**

10. In the path of delivering a packet, what is the role of the nearest router?

- **A. Forward the packet toward its destination.**
- **B. Change the packet's source IP address.**
- **C. Resolve the domain name in the URL.**
- **D. Encrypt the packet payload.**

Answers

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

Explanations

1. Why are IPv4 addresses more expensive to lease recently?

A. They offer better performance than IPv6.

B. There are very few IPv4 addresses left, increasing demand.

C. They are more secure than IPv6.

D. They are required for private networks.

Supply and demand in a fixed-resource market: IPv4 addresses are scarce because the total number of possible addresses is finite, and most of them are already allocated. There aren't many new, clean blocks left to assign, so organizations that need publicly routable addresses must compete for what remains. Although IPv6 exists to vastly expand the address pool, it's not yet universal in all networks and services, so many buyers still rely on IPv4 for compatibility and reachability. That limited supply combined with growing demand from ISPs, data centers, cloud providers, and enterprises drives up the price of leasing IPv4 space. The other statements aren't about why the price increases—their claims about performance, security, or private networks don't explain the market scarcity that pushes prices higher.

2. Which operation is an example of computationally intensive cryptographic work?

A. Generating randomness

B. Printing a document

C. Rendering a video

D. Copying files

Generating randomness is essential in cryptography because keys, nonces, and salts must be unpredictable to keep data secure. Producing high-entropy randomness often requires substantial computation—gathering entropy from multiple sources, using randomness extractors, or running a cryptographically strong PRNG with a secure seed. That extra effort is what makes it an example of computationally intensive cryptographic work. The other activities—printing a document, rendering a video, and copying files—are routine computer tasks focused on I/O or media processing and don't involve the heavy cryptographic computations used to protect information.

3. What is a common use of cookies in web interactions?

A. Encrypting the data on a page.

B. Maintaining login state across pages.

C. Resolving DNS queries.

D. Sending emails.

Cookies store small bits of data in your browser to help a site recognize you as you move from page to page. The common use is maintaining login state across pages: after you sign in, a session token is saved in a cookie. As you navigate, the browser sends that token with each request to the same site, so the server knows who you are and keeps you logged in without asking for your credentials again. This makes it possible to move through a site—viewing your account, your cart, or your dashboard—without re-entering your password each time. Other options aren't the same role: encrypting data on a page is handled by the secure connection (HTTPS), DNS resolution is a network function, and sending emails is done by mail servers, not cookies.

4. Which password choice demonstrates the strongest protection?

A. password123

B. Marjorie combines 5 random words and alternates the casing: "scarves-TOKYO-theme-TEAMWORK-trulia".

C. qwerty!

D. Letmein2010

Long, randomized passwords that are long in length are much harder to crack than short, common ones. The option with five random words, plus mixed casing and separators, creates a huge number of possible combinations. Because the words are random and not a familiar phrase, attackers can't easily guess it by trying common terms or patterns. The extra capitalization and the separators add complexity without sacrificing the overall unpredictability, making brute-force and dictionary attacks far less likely to succeed. In contrast, simple, predictable passwords—whether a common word with numbers, a keyboard pattern, or a well-known phrase with a year—are routinely tried by attackers and can be cracked quickly. So the five-random-words approach offers the strongest protection.

5. Which country had an IPv6 adoption rate of 0.2% as of October 2018?

A. China 2.9%

B. India 34%

C. United States 34%

D. Indonesia 0.2%

IPv6 adoption rate shows what share of a country's internet traffic is using IPv6 instead of the older IPv4. In October 2018, countries varied a lot in how quickly they rolled out IPv6 because the upgrade depends on how ready ISPs, data centers, and mobile networks are to support IPv6. Among the options, the country with only 0.2% IPv6 adoption is Indonesia. The other nations listed had much higher figures at that time, reflecting more extensive deployment of IPv6 across networks and devices. The small percentage for Indonesia highlights slower IPv6 rollout and continued reliance on IPv4 in many networks during that period.

6. What is the main goal of establishing an encrypted communication channel between two computers?

A. To securely exchange information

B. To speed up data transfer

C. To reduce latency

D. To compress data

Protecting data as it travels is the main purpose of an encrypted channel. When two computers communicate this way, the information is transformed into unreadable cipher text that only the intended recipient can turn back into readable data with a key. This keeps sensitive details like passwords and personal information safe from anyone who might intercept the message, ensuring a secure exchange between the two ends. Encryption isn't primarily about speed, reducing latency, or compressing data. It can add some overhead for the security checks and decryption work, and compression, if used, is a separate optimization. The primary aim is confidentiality and trust in the communication, which is why securely exchange information is the best answer.

7. In an IP network, which field helps computers reorder packets that arrive out of order?

A. Destination port

B. Sequence number

C. Time to Live

D. Source IP address

Packets can take different paths and arrive in a different order than they were sent. To rebuild the original data stream, each piece carries a position marker—the sequence number. The receiving system uses these numbers to place segments in the correct order and to detect any missing pieces, buffering as needed until the data can be opened in the right sequence. That sequencing is what makes the data flow seamless for the application. Other fields serve different roles: the destination port directs the data to the right application, Time to Live helps prevent looping in the network, and the source IP identifies who sent the packet. These don't provide the ordering information needed to reorder arriving packets.

8. What is the primary purpose of WAN technologies?

A. To connect devices within a single local building

B. To connect multiple LANs across large geographic areas

C. To replace the Internet

D. To increase hardware costs

WAN technologies are meant to connect networks over long distances, letting separate local networks work together as part of a larger, wide-area network. That explains why the right choice focuses on linking several LANs across large geographic areas. Connecting devices within a single building describes a LAN, not a WAN. Replacing the Internet isn't what WANs do—the Internet itself relies on wide-area networking to connect networks globally. And increasing hardware costs isn't the goal of WANs; the purpose is to enable long-distance connectivity so resources can be shared across locations. For example, a company with offices in different cities uses a WAN to connect its branch LANs so everyone can access the same services and data.

9. Which statement best describes an intranet's security and fault tolerance?

A. Intranets are typically more secure but often less fault-tolerant.

B. Intranets are less secure but more fault-tolerant.

C. Intranets are equally secure and fault-tolerant as public networks.

D. Intranets are more secure and more fault-tolerant.

An intranet is a private network that sits behind a company's security measures, like firewalls, strict access controls, and centralized authentication. Because only authorized employees and devices can reach its resources, it tends to be more secure than a public network where anyone on the internet can attempt access. However, that same private setup can be less fault-tolerant if the internal infrastructure isn't designed with broad redundancy. If a core switch, server, or link inside the organization fails, there may not be as many alternate routes or providers to keep services running unless extra redundancy is built in. So the idea that intranets offer stronger security while sometimes sacrificing fault tolerance relative to wide-open public networks is the best way to describe their typical trade-offs.

10. In the path of delivering a packet, what is the role of the nearest router?

A. Forward the packet toward its destination.

B. Change the packet's source IP address.

C. Resolve the domain name in the URL.

D. Encrypt the packet payload.

At the heart of this idea is how routing works: a router's job is to take a received packet and decide where to send it next. The nearest router is the first device between you and the rest of the network, so it looks at the packet's destination IP address and uses its routing table to choose the next hop that will bring the packet closer to that destination. By forwarding the packet along to the next router, it helps the packet travel step by step toward its final host. It doesn't typically change the source IP or try to resolve domain names, and encryption isn't something the router handles as part of basic forwarding. Those other functions are handled by different processes or layers (NAT in some routers, DNS, and encryption at higher layers or with secure tunnels).

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!