

AP NETWORKING PRACTICE TEST (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

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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. Which command is used to change the current working directory?**
 - A. Mv
 - B. Mkdir
 - C. Cd
 - D. Cp

- 2. Which standards support redundancy and high availability by providing alternative paths or load sharing?**
 - A. DNS and DHCP.
 - B. Spanning Tree Protocol (STP) and Link Aggregation Control Protocol (LACP).
 - C. FTP and HTTP.
 - D. SSH and Telnet.

- 3. Layer 2 forwarding within a local network**
 - A. Hub
 - B. Switch
 - C. Router
 - D. Repeater

- 4. Which term describes a technique intruders use to make network or internet transmissions appear legitimate to a victim computer or network?**
 - A. Flooding
 - B. Spoofing
 - C. CAM
 - D. DRM

- 5. Inter-VLAN routing refers to routing traffic between different VLANs. Which device commonly performs this routing?**
 - A. It is done by the end-user device.
 - B. It is done by a firewall.
 - C. It's routing between VLANs by a switch at layer 3.
 - D. Inter-VLAN routing refers to routing traffic between different VLANs; commonly performed by a router or a layer-3 switch.

- 6. How many bits are in a byte?**
- A. 4 bits
 - B. 8 bits
 - C. 16 bits
 - D. 32 bits
- 7. A Personal Area Network is typically used to connect which devices using short-range wireless?**
- A. Mice, keyboards, and tablets
 - B. Routers and switches
 - C. Servers and storage devices
 - D. Printers and scanners
- 8. In VLAN tagging, what is the function of the 4-byte VLAN tag (802.1Q)?**
- A. It identifies the VLAN membership of the frame, allowing switches to forward frames to the correct VLAN.
 - B. It encrypts the frame for VLAN security.
 - C. It indicates the VLAN's priority level only.
 - D. It carries an error-check value.
- 9. From the network 192.168.0.0/24 subdivided into four equal /26 subnets, which option correctly identifies the first subnet's network address and its usable host range?**
- A. 192.168.0.64/26 with usable 192.168.0.65–192.168.0.126
 - B. 192.168.0.128/26 with usable 192.168.0.129–192.168.0.190
 - C. 192.168.0.0/26 with usable 192.168.0.1–192.168.0.62
 - D. 192.168.0.192/26 with usable 192.168.0.193–192.168.0.254
- 10. In a router, where are the routes to network destinations stored?**
- A. DNS cache of domain name mappings
 - B. MAC address table
 - C. routing table
 - D. ARP cache

Answers

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

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Explanations

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1. Which command is used to change the current working directory?

- A. Mv
- B. Mkdir
- C. Cd**
- D. Cp

Changing the current working directory means moving your shell's focus to a different folder in the filesystem. The command used for this is the one that updates where you are in the directory hierarchy: you type `cd` followed by a path to switch to that location. `cd` stands for change directory, and it is what you use to navigate around rather than manipulating files themselves. For example, `cd /home/user/projects` takes you to that directory, and `cd ..` moves you up one level. In contrast, other common commands perform different tasks: `mv` moves or renames files, `mkdir` creates a new directory, and `cp` copies files. You can confirm your location with `pwd` and list contents with `ls`.

2. Which standards support redundancy and high availability by providing alternative paths or load sharing?

- A. DNS and DHCP.
- B. Spanning Tree Protocol (STP) and Link Aggregation Control Protocol (LACP).**
- C. FTP and HTTP.
- D. SSH and Telnet.

Redundancy and high availability in networks come from having multiple paths and the ability to share load across links. Spanning Tree Protocol prevents switching loops by electing a root and blocking some redundant links, then re-enabling them if an active path fails. This creates an alternate path so connectivity isn't lost. Link Aggregation Control Protocol groups several physical links into one logical path, which increases total bandwidth and lets traffic continue on the remaining links if one member fails. In short, STP provides safe, alternate routing to stay connected, while LACP enables bandwidth sharing and resilience across multiple links. The other options involve services and application protocols rather than the mechanisms that ensure network path redundancy and link-level load balancing.

3. Layer 2 forwarding within a local network

- A. Hub
- B. Switch**
- C. Router
- D. Repeater

Layer 2 forwarding uses MAC addresses to move frames within a local network. A switch is designed for this role: it builds a MAC address table by listening to each frame's source address and the port it arrives on. With that knowledge, it forwards a frame destined for a known MAC only to the specific port where that device can be reached. If the destination MAC isn't yet in the table, the switch sends the frame to all ports (except the source) so the destination can respond and the address can be learned. This targeted forwarding reduces unnecessary traffic and creates separate collision domains per port, improving efficiency compared to devices that don't inspect MAC addresses. In contrast, a hub or a repeater operates at Layer 1 and simply repeats signals to all ports, keeping a single shared collision domain. A router works at Layer 3 and routes traffic between different networks using IP addresses, not for forwarding within a single LAN.

4. Which term describes a technique intruders use to make network or internet transmissions appear legitimate to a victim computer or network?

- A. Flooding
- B. Spoofing**
- C. CAM
- D. DRM

Spoofing is the technique where an attacker pretends to be a trusted source, crafting transmissions that look legitimate to the victim's device or network. By forging identifiers such as the source IP address, MAC address, or email header, the attacker aims to bypass trust checks and get the victim to accept or act on the communication. This can enable things like intercepting traffic (man-in-the-middle), phishing, or data exfiltration because the system believes the data is coming from a legitimate, trustworthy source. Flooding would overwhelm a network with traffic and doesn't involve making transmissions appear legitimate. CAM (Content-Addressable Memory) relates to fast lookups in networking hardware rather than deception. DRM (Digital Rights Management) governs how content is used and isn't about impersonating sources.

5. Inter-VLAN routing refers to routing traffic between different VLANs. Which device commonly performs this routing?

- A. It is done by the end-user device.
- B. It is done by a firewall.
- C. It's routing between VLANs by a switch at layer 3.
- D. Inter-VLAN routing refers to routing traffic between different VLANs; commonly performed by a router or a layer-3 switch.**

Inter-VLAN routing is needed because VLANs create separate broadcast domains, so devices in different VLANs can't communicate just by switching frames. To move traffic between these networks, a device that can perform IP routing is required. A router handles this by connecting to each VLAN (often via subinterfaces on a trunk with 802.1Q tagging) and giving each VLAN its own subnet and gateway IP. In many modern networks, a Layer 3 switch provides the same capability directly on the switch, using SVIs or routed ports for each VLAN so traffic between VLANs is routed in hardware. End-user devices don't perform inter-VLAN routing; they rely on a gateway. A firewall can route, but the standard, widely applicable device for this function is a router or a Layer 3 switch.

6. How many bits are in a byte?

- A. 4 bits
- B. 8 bits**
- C. 16 bits
- D. 32 bits

A byte is eight bits. A bit is a 0 or 1, and grouping eight of those bits gives a byte, which can represent 256 distinct values (2^8). That size is the standard for encoding characters in most systems (ASCII uses 7 bits but is stored in a full byte). The other groupings correspond to different chunk sizes: four bits is a nibble, sixteen bits is two bytes, and thirty-two bits is four bytes. So eight bits per byte is the correct size.

7. A Personal Area Network is typically used to connect which devices using short-range wireless?

- A. Mice, keyboards, and tablets**
- B. Routers and switches
- C. Servers and storage devices
- D. Printers and scanners

Personal Area Networks connect the devices a person uses directly in close proximity, typically with short-range wireless like Bluetooth. The most fitting example is mice, keyboards, and tablets, because these are common personal peripherals that are paired with a single nearby device and don't require broader network infrastructure. Routers and switches are used for larger networks, servers and storage devices are enterprise resources, and printers and scanners are more often shared over a LAN or wired connection, even though some can use Bluetooth. The key idea is connecting everyday, nearby devices for individual use.

8. In VLAN tagging, what is the function of the 4-byte VLAN tag (802.1Q)?

- A. It identifies the VLAN membership of the frame, allowing switches to forward frames to the correct VLAN.
- B. It encrypts the frame for VLAN security.
- C. It indicates the VLAN's priority level only.
- D. It carries an error-check value.**

802.1Q tagging adds a 4-byte tag inside Ethernet frames to mark which VLAN the frame belongs to. This tag carries the VLAN ID (12 bits) and a small set of control bits (like priority), and switches use that information to forward the frame only within the correct VLAN, keeping traffic separated between VLANs. It does not encrypt the frame, and the error-check value is the Frame Check Sequence at the end of the frame, not part of the VLAN tag. So the tag's primary role is to identify VLAN membership and support proper forwarding across VLANs.

9. From the network 192.168.0.0/24 subdivided into four equal /26 subnets, which option correctly identifies the first subnet's network address and its usable host range?

- A. 192.168.0.64/26 with usable 192.168.0.65–192.168.0.126
- B. 192.168.0.128/26 with usable 192.168.0.129–192.168.0.190
- C. 192.168.0.0/26 with usable 192.168.0.1–192.168.0.62**
- D. 192.168.0.192/26 with usable 192.168.0.193–192.168.0.254

When you divide a /24 into four equal /26 subnets, each block spans 64 addresses in the last octet. The first block starts at 192.168.0.0 and uses the mask 255.255.255.192. Its network address is 192.168.0.0, and the broadcast for that subnet is 192.168.0.63. The usable hosts live between the network and broadcast, so they run from 192.168.0.1 to 192.168.0.62. Therefore, the correct identification is 192.168.0.0/26 with usable 192.168.0.1–192.168.0.62. The other options point to the other subnets or have incorrect usable ranges for the first subnet.

10. In a router, where are the routes to network destinations stored?

- A. DNS cache of domain name mappings
- B. MAC address table
- C. routing table**
- D. ARP cache

Routing decisions in a router are made using the routing table. The routing table contains destination network prefixes, the next-hop or exit interface to reach those networks, and metrics that help choose among multiple paths. When a packet arrives, the router finds the most specific match for the destination IP (the longest-prefix match) and forwards the packet toward the indicated next hop or out the specified interface. This table is built from static routes you configure or from dynamic routing protocols that learn routes from neighbors. The other caches and tables serve different purposes: the ARP cache maps IP addresses to MAC addresses on the local network to deliver frames locally; the MAC address table on a switch associates MAC addresses with switch ports for layer-2 forwarding; the DNS cache stores domain name to IP mappings for name resolution, not for routing decisions.

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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://apnetworking.examzify.com>

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

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