

# Introduction to Networking Concepts 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. Which network type would best be described as connecting devices across the widest geographic area among the listed types?**
  - A. LAN**
  - B. WLAN**
  - C. SAN**
  - D. WAN**
  
- 2. Which tool is primarily used in Linux to look up who owns a domain or IP block?**
  - A. Whois**
  - B. Dig**
  - C. Nslookup**
  - D. Route**
  
- 3. Which TCP/IP layer defines how data should be physically sent through the network?**
  - A. Network Interface Layer**
  - B. Application Layer**
  - C. Transport Layer**
  - D. Data Link Layer**
  
- 4. Which network topology is described as a hybrid of hub-and-spoke topology and full-mesh topology?**
  - A. Partial-mesh topology**
  - B. Star topology**
  - C. Full-mesh topology**
  - D. Ring topology**
  
- 5. A campus area network connects multiple LANs across a limited area, such as a university campus. Which acronym represents this type?**
  - A. LAN**
  - B. CAN**
  - C. MAN**
  - D. WAN**

- 6. Which layer is described as translating data from the application into a transmittable format and performing encryption if used?**
- A. Layer 6 Presentation**
  - B. Layer 3 Network**
  - C. Layer 4 Transport**
  - D. Layer 7 Application**
- 7. WLAN stands for which of the following?**
- A. Local Area Network**
  - B. Wireless Local Area Network**
  - C. Storage Area Network**
  - D. Campus Area Network**
- 8. In the TCP/IP model, which layer is responsible for routing data between networks?**
- A. Network Interface Layer**
  - B. Network Layer**
  - C. Transport Layer**
  - D. Application Layer**
- 9. Which topology is described as a hub-and-spoke arrangement where some sites connect directly to each other?**
- A. Hub-and-spoke topology**
  - B. Full-mesh topology**
  - C. Partial-mesh topology**
  - D. Star topology**
- 10. Which acronym stands for a campus area network?**
- A. LAN**
  - B. WLAN**
  - C. SAN**
  - D. CAN**

## Answers

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

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## **Explanations**

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**1. Which network type would best be described as connecting devices across the widest geographic area among the listed types?**

- A. LAN
- B. WLAN
- C. SAN
- D. WAN**

The key idea here is the geographic scope of the network type. A LAN stays within a small, local area—think a single building or campus—using wired or wireless connections to link computers, printers, and other devices at high speeds. A WLAN is similar in scope but uses wireless technology, so it can roam a bit within that same small region, still not spanning large distances. A SAN, on the other hand, is a specialized network concentrated in a data center to connect servers with storage devices, prioritizing extremely fast data transfer over short distances, not wide-area reach. A WAN is designed to connect many local networks over large geographic distances, potentially across cities, countries, or continents. It relies on routers and wide-area links provided by telecom and service providers, and Internet-based connections to link geographically dispersed sites. This broad reach is what sets WAN apart from the others. So the network type that connects devices across the widest geographic area is the WAN.

**2. Which tool is primarily used in Linux to look up who owns a domain or IP block?**

- A. Whois**
- B. Dig
- C. Nslookup
- D. Route

Ownership lookup is done with the whois service. Whois queries public registration databases to reveal who owns a domain or who has been allocated a block of IP addresses, along with contact and registration dates. On Linux, the whois command fetches this information from registries and RIRs, giving you the registrant or organization responsible for the asset. This differs from DNS query tools like dig or nslookup, which are used to discover DNS records (such as the IP address a domain resolves to) rather than who owns the domain or IP block. Route (or traceroute) is for mapping the path packets take to a destination, not for ownership data. So the tool best suited to look up ownership is whois.

**3. Which TCP/IP layer defines how data should be physically sent through the network?**

**A. Network Interface Layer**

**B. Application Layer**

**C. Transport Layer**

**D. Data Link Layer**

The Network Interface Layer governs how data is actually placed onto the network medium. This bottom layer handles framing for the local link, hardware addressing (MAC), and the electrical or wireless signaling that moves bits across a cable or air interface. Everything above it—Application and Transport layers—deals with data meaning, formatting for apps, and end-to-end delivery, not the physical transmission. In TCP/IP, the equivalent of the OSI Data Link/Physical on the local link is the Network Interface Layer, making it the layer that defines how data should be physically sent through the network.

**4. Which network topology is described as a hybrid of hub-and-spoke topology and full-mesh topology?**

**A. Partial-mesh topology**

**B. Star topology**

**C. Full-mesh topology**

**D. Ring topology**

Partial-mesh topology blends the centralized simplicity of hub-and-spoke with the redundancy of a full mesh. In a hub-and-spoke (star) setup, all devices connect through a central hub, so there aren't direct links between peripheral devices. In a full mesh, every device connects directly to every other device, which offers maximum redundancy but is very costly as the network grows. A partial-mesh adds multiple direct connections only among a subset of devices, giving several possible paths between important pairs while avoiding the expense of linking every device to every other device. This hybrid approach provides resilience where needed without the high link count of a full mesh. That's why partial-mesh is the best description for a hybrid of hub-and-spoke and full-mesh.

**5. A campus area network connects multiple LANs across a limited area, such as a university campus. Which acronym represents this type?**

**A. LAN**

**B. CAN**

**C. MAN**

**D. WAN**

Think in terms of the size and reach of a network. A campus area network connects multiple LANs across a university campus, spanning several buildings or facilities within a limited area. It's bigger than a single LAN (which typically serves one building or a small area) but smaller than a metropolitan area network (which covers an entire city) or a wide area network (which can span countries and continents). That intermediate scope is what the acronym CAMPUS area network, or CAN, represents. So the acronym that fits this description is CAN. The other options refer to smaller or much larger geographic footprints: a single building or campus LAN, a city-wide MAN, or a broad WAN.

**6. Which layer is described as translating data from the application into a transmittable format and performing encryption if used?**

**A. Layer 6 Presentation**

**B. Layer 3 Network**

**C. Layer 4 Transport**

**D. Layer 7 Application**

The main concept here is data representation and protection at the sender's side. The Presentation layer is responsible for translating data from the application into a format suitable for transmission and handling encryption (and decryption) if used. It converts application data into a standardized form so the receiving end can interpret it, and it can apply encryption to protect the payload during transit. This layer sits between the Application layer (where the data originates) and the Session layer (which manages ongoing connections). In practice, other layers focus on different tasks: the Network layer handles routing and addressing, the Transport layer manages end-to-end delivery and reliability, and the Application layer provides services and protocols for applications. The described role—data formatting and optional encryption—is what the Presentation layer is meant to do.

**7. WLAN stands for which of the following?**

**A. Local Area Network**

**B. Wireless Local Area Network**

**C. Storage Area Network**

**D. Campus Area Network**

The main idea being tested is that WLAN stands for a Local Area Network that uses wireless connections. A WLAN links devices within a small geographic area, like a home, office, or campus, using radio waves instead of cables. This makes devices portable and able to connect without being physically wired to a switch or router. In contrast, a generic Local Area Network often implies wired Ethernet, a Storage Area Network is specialized for storage traffic, and a Campus Area Network describes a larger LAN spread over multiple buildings without specifying wireless. In practice, a WLAN relies on wireless access points and wireless adapters, and it follows standards like 802.11 to manage communication and security.

**8. In the TCP/IP model, which layer is responsible for routing data between networks?**

- A. Network Interface Layer**
- B. Network Layer**
- C. Transport Layer**
- D. Application Layer**

Routing data between networks is handled by the Internet Layer in the TCP/IP model. This layer provides logical addressing with IP addresses and makes forwarding decisions to move packets from the source toward the destination across multiple routers. Routers operate at this layer, looking at the destination IP and using routing tables to pick the next hop. In contrast, the Network Interface (Link) Layer deals with delivering frames on a single local network using MAC addresses and doesn't route between networks. The Transport Layer takes care of end-to-end data delivery (reliability with TCP or datagrams with UDP) but isn't responsible for routing. The Application Layer hosts end-user processes and protocols, not routing. So, the Internet Layer is the part of TCP/IP that routes data between networks.

**9. Which topology is described as a hub-and-spoke arrangement where some sites connect directly to each other?**

- A. Hub-and-spoke topology**
- B. Full-mesh topology**
- C. Partial-mesh topology**
- D. Star topology**

Think of a central hub that all other sites connect to. In a hub-and-spoke topology, that hub is the traffic center for the whole network, and communications between the peripheral sites usually pass through the hub rather than going directly between those sites themselves. This centralizing of traffic is what defines the arrangement. If every site connected to every other site directly, that would be a full-mesh. If only some sites have direct links while others connect through the hub, that would be a partial-mesh. A star topology is similar in having a central device, but the term hub-and-spoke is the standard description for the WAN-style layout with a distinct central hub handling traffic, which best matches the description given.

**10. Which acronym stands for a campus area network?**

- A. LAN
- B. WLAN
- C. SAN
- D. CAN**

A campus area network is designed to interconnect multiple buildings on a university or corporate campus, creating a single, cohesive network infrastructure across the whole campus. It sits between a local area network and a wide area network in scope: a LAN usually serves a single building or a small site, while a WAN connects locations across cities or countries. CANs typically use a fiber backbone and high-speed links to provide fast, reliable connectivity between departmental LANs in different buildings, enabling centralized management and shared resources. The other terms: a local area network refers to networks in a small area like a building; a wireless local area network uses wireless links within the same general area; and a storage area network is specialized for linking storage devices rather than general computing devices.

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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](mailto:hello@examzify.com).**

**Or visit your dedicated course page for more study tools and resources:**

**<https://introtonetworkingconcepts.examzify.com>**

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

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