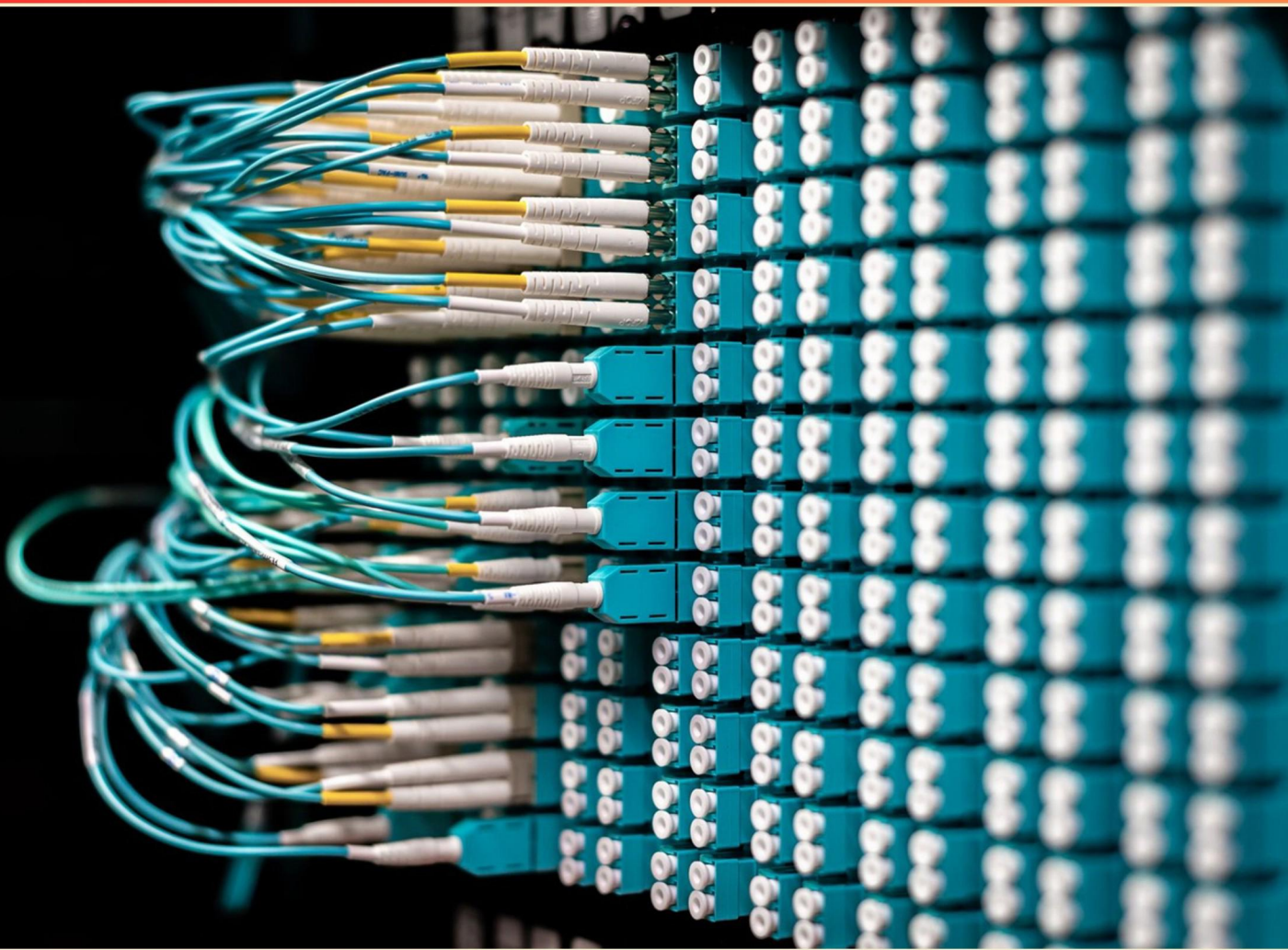


NOKIA CERTIFIED NETWORK ROUTING SPECIALIST I (NRS I) PRACTICE TEST (SAMPLE) STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

**VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE**

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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. What is 'Administrative Distance' used for in routing?**
 - A. To measure the speed of the network
 - B. To rank the trustworthiness of learned routes
 - C. To determine the bandwidth of routes
 - D. To categorize traffic types
- 2. What is the main function of a DHCP server?**
 - A. Assign IP addresses to devices on a network
 - B. Filter network traffic
 - C. Provide wireless access
 - D. Monitor network performance
- 3. Which command is used for configuring OSPF on a router?**
 - A. enable ospf [process-id]
 - B. router ospf [process-id]
 - C. set ospf [process-id]
 - D. config ospf [process-id]
- 4. Which layer of the OSI model typically interacts with routing protocols?**
 - A. Application layer
 - B. Transport layer
 - C. Network layer
 - D. Data link layer
- 5. What is the role of the OSPF Hello protocol?**
 - A. To establish neighbor relationships
 - B. To update routing tables
 - C. To compress routing updates
 - D. To manage network security breaches
- 6. What does the acronym OSPF stand for?**
 - A. Open Structured Path Function
 - B. Optimized Shortest Path First
 - C. Open Shortest Path First
 - D. Open Standard Protocol Framework

7. What is a disadvantage of using RIP compared to EIGRP?

- A. RIP is unable to support variable length subnet masking
- B. RIP provides faster convergence
- C. RIP consumes more bandwidth
- D. RIP uses IPv6 exclusively

8. What is the function of the OSPF 'Hello' packet?

- A. To send routing updates to all neighbors
- B. To maintain the adjacency between OSPF routers
- C. To establish a new routing table
- D. To terminate old routes

9. What does VLAN stand for in networking?

- A. Virtual Local Area Network
- B. Virtual Layered Access Network
- C. Variable Local Area Network
- D. Visual Local Area Network

10. What is the purpose of a VLAN (Virtual Local Area Network)?

- A. To connect several physical networks as one logical network
- B. To allow devices to communicate over long distances
- C. To separate network traffic for security and performance benefits
- D. To manage physical network topologies

Answers

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

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Explanations

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1. What is 'Administrative Distance' used for in routing?

- A. To measure the speed of the network
- B. To rank the trustworthiness of learned routes**
- C. To determine the bandwidth of routes
- D. To categorize traffic types

Administrative Distance is a vital concept in routing protocols, serving as a metric that ranks the trustworthiness of different routes that a router learns. It reflects the reliability of the source of the routing information. Each routing protocol is assigned a default numerical value for its administrative distance, with lower values indicating more trustworthy routes. For instance, directly connected interfaces typically have an administrative distance of 0, while static routes have a distance of 1, and various dynamic routing protocols have higher distances. When a router receives routing information from multiple sources, it uses administrative distance to select the best path to a destination. If two routes are available to the same destination but learned from different protocols, the router will prefer the one with the lower administrative distance. This mechanism ensures that the most reliable routes are favored in the routing table, allowing for efficient and effective routing of network traffic. The other options do not accurately capture the essence of administrative distance. It does not measure network speed, determine bandwidth, or categorize traffic types, which are all different networking concepts. Understanding administrative distance empowers network professionals to make informed decisions about route selection and optimize network performance.

2. What is the main function of a DHCP server?

- A. Assign IP addresses to devices on a network**
- B. Filter network traffic
- C. Provide wireless access
- D. Monitor network performance

The main function of a DHCP (Dynamic Host Configuration Protocol) server is to assign IP addresses to devices on a network. This process is crucial for efficient network management, as it automates the assignment of IP addresses, subnet masks, default gateways, and other crucial network parameters to devices that join the network. When a device connects to the network, it broadcasts a request for an IP address, and the DHCP server responds by allocating an available IP address from its pool. This functionality eliminates the need for manual configuration of each device, reducing the likelihood of errors and IP address conflicts. By ensuring that devices receive a unique IP address, the DHCP server plays a fundamental role in maintaining network integrity and connectivity. Other choices reflect different network functionalities. While filtering network traffic pertains to security measures, providing wireless access relates to Wi-Fi infrastructure, and monitoring network performance deals with assessing the reliability and capacity of the network. These functions are important in their own contexts but do not encapsulate the core purpose of a DHCP server.

3. Which command is used for configuring OSPF on a router?

- A. enable ospf [process-id]
- B. router ospf [process-id]**
- C. set ospf [process-id]
- D. config ospf [process-id]

The configuration of OSPF (Open Shortest Path First) on a router is accomplished using the command "router ospf [process-id]." This command is essential because it enters OSPF configuration mode, allowing the network administrator to specify parameters related to OSPF, such as router ID, network statements, and other OSPF settings. When issuing this command, the [process-id] is a numerical identifier that helps distinguish between multiple OSPF processes running on the same router. Each OSPF instance operates independently, so it is crucial to specify the correct process ID when configuring the protocol to ensure that the desired OSPF instance is modified. In contrast, the other options do not accurately represent the command structure used in OSPF configuration. For instance, "enable ospf" and "set ospf" are not valid commands in the context of OSPF configuration, and "config ospf" does not follow the correct syntax and structure that a network administrator needs to utilize when setting up OSPF effectively on a router. Therefore, the command "router ospf [process-id]" is the only correct option for entering the OSPF configuration mode on a router.

4. Which layer of the OSI model typically interacts with routing protocols?

- A. Application layer
- B. Transport layer
- C. Network layer**
- D. Data link layer

The Network layer is the third layer of the OSI model and is primarily responsible for the routing of data packets between devices across different networks. This layer manages the addressing and routing of packets by using logical addresses, such as IP addresses, which are essential for enabling communication over the internet and between different networks. Routing protocols operate at this layer, allowing devices to determine the best path for data packets to travel from the source to the destination. Common examples of routing protocols include OSPF (Open Shortest Path First), RIP (Routing Information Protocol), and BGP (Border Gateway Protocol). The other layers, while critical to overall network functionality, do not directly handle the operations related to routing protocols. The Application layer focuses on software applications and user interfaces; the Transport layer ensures end-to-end communication and reliability of data transmission; and the Data link layer is concerned with the physical transmission of data over physical mediums, including framing and physical addressing. Thus, it is accurate to state that the network layer is the primary layer that interacts with routing protocols.

5. What is the role of the OSPF Hello protocol?

- A. To establish neighbor relationships
- B. To update routing tables
- C. To compress routing updates
- D. To manage network security breaches

The OSPF Hello protocol plays a crucial role in establishing and maintaining adjacencies between OSPF routers. When OSPF routers start up or need to discover other routers in the network, they send out Hello packets to identify neighboring routers. These Hello packets contain the necessary information about the routers' configurations, such as network interface MTU size, OSPF router priority, and router ID. By receiving these packets, routers can confirm that they are still active and can determine whether to form or maintain a neighbor relationship. This process is essential because it enables OSPF to create a topology map of the network, which is necessary for effective routing. Additionally, the Hello protocol ensures that links are operational and helps in the dynamic adjustments when routers go online or offline. While the other choices refer to functions that OSPF performs, they are not directly related to the primary purpose of the Hello protocol, which focuses specifically on neighbor discovery and maintenance.

6. What does the acronym OSPF stand for?

- A. Open Structured Path Function
- B. Optimized Shortest Path First
- C. Open Shortest Path First
- D. Open Standard Protocol Framework

The acronym OSPF stands for Open Shortest Path First. This is a widely used link-state routing protocol designed for Internet Protocol (IP) networks. OSPF operates by maintaining a complete topology of the network that allows routers to calculate the shortest path to each node through a process known as Dijkstra's algorithm. The term "Open" indicates that the protocol is publicly available and not proprietary, which is significant in fostering interoperability among different network devices and vendors. By being "Shortest Path First," it emphasizes OSPF's focus on finding the most efficient route for data packets based on the shortest distance rather than the simple hop count. This characteristic allows networks to be more efficient and optimized for performance. The other options suggest various incorrect interpretations or phrases that do not accurately represent the functionality or definition of OSPF. For instance, "Optimized Shortest Path First" misrepresents the established name of the protocol, while "Open Structured Path Function" and "Open Standard Protocol Framework" do not relate to any recognized routing protocol terminology. Thus, the accurate representation of OSPF as "Open Shortest Path First" is key to understanding its role in IP networking.

7. What is a disadvantage of using RIP compared to EIGRP?

- A. RIP is unable to support variable length subnet masking**
- B. RIP provides faster convergence
- C. RIP consumes more bandwidth
- D. RIP uses IPv6 exclusively

RIP, or Routing Information Protocol, has limitations regarding its support for variable length subnet masking (VLSM). This means that when utilizing RIP, the protocol cannot take advantage of network designs that utilize different subnet masks within the same network segment. This is a significant constraint because VLSM allows for more efficient use of IP addresses by enabling networks to be segmented into subnets of varying sizes based on the number of addresses required. In contrast, EIGRP (Enhanced Interior Gateway Routing Protocol) does support VLSM, allowing for greater flexibility and more efficient routing in complex network topologies. Hence, RIP's lack of support for VLSM is a clear disadvantage when compared to EIGRP. Other options present different aspects of routing protocols. However, they do not correctly highlight the inherent limitations of RIP compared to EIGRP. For instance, RIP does not provide faster convergence; in fact, EIGRP generally offers faster convergence due to its more advanced algorithms. Additionally, RIP tends to consume less bandwidth than some protocols, not more, which further emphasizes the efficiency of EIGRP in certain scenarios. Lastly, RIP is not exclusively an IPv6 protocol; it is primarily used for IPv4, while EIGRP has separate implementations for

8. What is the function of the OSPF 'Hello' packet?

- A. To send routing updates to all neighbors
- B. To maintain the adjacency between OSPF routers**
- C. To establish a new routing table
- D. To terminate old routes

The function of the OSPF 'Hello' packet is primarily to maintain the adjacency between OSPF routers. OSPF, which stands for Open Shortest Path First, relies on these Hello packets to discover and identify other OSPF-enabled devices on the same network segment. When OSPF routers exchange Hello packets, they negotiate the parameters of their communication, including hello and dead intervals, which are essential for establishing and maintaining their neighboring relationships. These packets play a crucial role in maintaining the state of the adjacency between routers, ensuring that they stay aware of each other's presence and health. If a router does not receive Hello packets from a neighbor for a defined period (determined by the dead interval), it will assume that the neighbor is down and can remove it from the routing table, thus enhancing network reliability and maintaining accurate routing information. While some of the other options focus on routing updates or table management, they do not directly address the primary role of Hello packets in building and maintaining OSPF adjacencies.

9. What does VLAN stand for in networking?

- A. Virtual Local Area Network**
- B. Virtual Layered Access Network
- C. Variable Local Area Network
- D. Visual Local Area Network

VLAN stands for Virtual Local Area Network. This term is fundamental in networking as it refers to a logical subgroup within a local area network that can combine devices from various physical LANs. VLANs enhance network efficiency and security by isolating broadcast domains without requiring multiple physical networks. They allow network administrators to create distinct networks that can still share the same physical infrastructure. The correct answer highlights that VLANs function virtually, meaning they do not rely on the physical layout of the network. Instead, devices can be grouped according to organizational needs or function, regardless of their physical connection point. This flexibility is crucial in managing different user groups, services, or traffic types within the same network infrastructure, helping to reduce congestion and improve overall performance. The other options provided do not accurately represent the concept of VLANs in networking, making them less relevant. For example, "Virtual Layered Access Network" and "Visual Local Area Network" do not describe the technical framework and function of VLANs, while "Variable Local Area Network" implies a changeability that does not align with the defined purpose of a VLAN.

10. What is the purpose of a VLAN (Virtual Local Area Network)?

- A. To connect several physical networks as one logical network
- B. To allow devices to communicate over long distances
- C. To separate network traffic for security and performance benefits**
- D. To manage physical network topologies

A VLAN, or Virtual Local Area Network, serves primarily to separate network traffic, which enhances both security and performance. By segmenting a network into different VLANs, devices in one VLAN can communicate with each other while being isolated from devices in other VLANs. This isolation is beneficial for security, as it reduces the risk of unauthorized access from other segments of the network. Additionally, separating traffic can optimize performance by limiting broadcast traffic and reducing congestion, which is particularly valuable in larger networks. While there is a logical element to why a VLAN might seem related to connecting physical networks, that aspect is more accurately covered by other networking solutions like bridging or routing. VLANs operate within the same physical network infrastructure but create independent logical networks. This purity of logical separation is crucial for maintaining clear traffic management and security protocols. Thus, the main function of a VLAN revolves around traffic separation, making the chosen answer the most accurate descriptor of its purpose.

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://nokianrs1.examzify.com>

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

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