NOKIA CERTIFIED NETWORK ROUTING SPECIALIST I (NRS I) 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

1. What does the abbreviation EIGRP stand for?

A. Enhanced Internet Gateway Routing Protocol

B. Enhanced Interior Gateway Routing Protocol

C. External Intelligent Gateway Routing Protocol

D. Effective Internal Gateway Routing Protocol

2. Which routing protocol utilizes a distance-vector methodology?

A. OSPF

B. EIGRP

C. RIP

D. BGP

3. What does EIGRP stand for?

A. Enhanced Internet Gateway Routing Protocol

B. Enhanced Interior Gateway Routing Protocol

C. Efficient Internet Group Routing Protocol

D. Exterior Integrated Gateway Routing Protocol

4. Which address type is used to send frames to all devices in a Local Area Network?

A. Anycast

B. Multicast

C. Broadcast

D. Unicast

5. Which DHCP message is used by a client to inform a DHCP server that it accepts the assigned IP address?

A. Discover

B. Request

C. Offer

D. Acknowledgement

6. What does the term 'metric' refer to in networking protocols?

A. A method of reducing latency

B. A measurement for route selection

C. A type of routing table

D. A protocol for network security

7. How is static routing defined in networking?

A. A method where routes are automatically determined

B. A method that uses dynamic protocols

C. A method where routes are manually configured

D. A method that optimizes routing tables

8. What does load balancing in routing aim to achieve?

A. Increase the complexity of routing protocols

B. Centralize traffic management

C. Distribute traffic across multiple paths

D. Reduce the overall number of routes in use

9. Which of the following is NOT a type of Layer 2 network?

A. Point-to-point network

B. Circuit-based network

C. Virtual private routed network

D. Shared network

10. What is "QoS Traffic Classification"?

A. A method for maximizing data throughput

B. The process of categorizing network traffic to manage performance according to specific requirements

C. A technique for encrypting network data

D. A strategy for reducing network latency

Answers

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

Explanations

1. What does the abbreviation EIGRP stand for?

A. Enhanced Internet Gateway Routing Protocol

B. Enhanced Interior Gateway Routing Protocol

C. External Intelligent Gateway Routing Protocol

D. Effective Internal Gateway Routing Protocol

The abbreviation EIGRP stands for Enhanced Interior Gateway Routing Protocol. This protocol is developed by Cisco as an advanced distance-vector routing protocol that offers several improvements over traditional protocols. EIGRP is characterized by its ability to send routing updates based on changes in the network, rather than routinely sending updates at set intervals. This efficiency leads to faster convergence times and reduced bandwidth consumption. Additionally, EIGRP combines the benefits of both link-state and distance-vector protocols, which enables it to maintain a comprehensive view of the network topology while effectively managing routing metrics. The inclusion of the word "Interior" in its name signifies that it is designed for use within an autonomous system, rather than between autonomous systems. In contrast, the other options contain inaccuracies that prevent them from being correct interpretations of the EIGRP acronym, as they either mix up the terminology associated with routing protocols or assign incorrect meanings to the components of the acronym.

2. Which routing protocol utilizes a distance-vector methodology?

A. OSPF

B. EIGRP

C. RIP

D. BGP

The choice of the routing protocol that utilizes a distance-vector methodology is based on how routes are calculated and shared between routers. In the case of RIP (Routing Information Protocol), it employs a straightforward distance-vector approach where routers periodically share their routing tables with neighboring routers. The term "distance vector" refers to the fact that each router sends a vector of distances (i.e., the number of hops to reach different networks) to its neighbors. Distance-vector protocols operate by having routers share their knowledge of the whole network with immediate neighbors, allowing them to learn about the reachability of other networks indirectly over a series of hops. RIP uses a maximum hop count of 15, which limits its use in larger networks, but this method makes it simple and easy to implement. In contrast, other protocols mentioned, such as OSPF (Open Shortest Path First), utilize a link-state methodology, while EIGRP (Enhanced Interior Gateway Routing Protocol) is classified as a hybrid protocol that combines features from both distance-vector and link-state protocols. BGP (Border Gateway Protocol) operates differently as a path vector protocol, focusing on the policies of how routes are chosen between autonomous systems rather than just distance.

3. What does EIGRP stand for?

A. Enhanced Internet Gateway Routing Protocol

B. Enhanced Interior Gateway Routing Protocol

C. Efficient Internet Group Routing Protocol

D. Exterior Integrated Gateway Routing Protocol

EIGRP stands for Enhanced Interior Gateway Routing Protocol. It is a Cisco proprietary routing protocol that is designed to facilitate efficient and effective routing within an autonomous system. EIGRP is considered an advanced distance-vector routing protocol that includes features from both distance-vector and link-state protocols, which allows it to provide rapid convergence and scalability. The term "Interior" in its name signifies that it operates within a single autonomous system, as opposed to "Exterior" protocols, which manage routing between different autonomous systems. Enhanced indicates that it includes improvements over earlier routing protocols such as IGRP (Interior Gateway Routing Protocol). Understanding EIGRP's role and functionality is crucial as it allows for optimized routing decisions based on various metrics, including bandwidth, delay, reliability, and load. This contributes to maintaining efficient communication in larger networks, making it a vital concept in networking courses and certifications.

4. Which address type is used to send frames to all devices in a Local Area Network?

A. Anycast

B. Multicast

C. Broadcast

D. Unicast

In a Local Area Network (LAN), the address type that is employed to send frames to all devices is known as a broadcast address. When a frame is broadcasted, it is intended for every device on the network segment rather than a specific individual device. This is particularly critical in scenarios where information needs to be disseminated to all devices without the sender needing to address each one individually. When a device sends out a broadcast frame, it uses a special broadcast MAC address, typically represented as FF:FF:FF:FF:FF:FF, which is recognized by all devices on the same LAN, prompting them to receive and process the message. In contrast, unicast addresses are used for one-to-one communication, anycast addresses are designated for routing to one of the multiple possible receivers, and multicast addresses are meant for one-to-many communication, where a message is sent to a specific group of devices rather than to all devices within the network. Understanding this distinction helps in grasping how data is managed and transmitted within a network environment.

5. Which DHCP message is used by a client to inform a DHCP server that it accepts the assigned IP address?

A. Discover

B. Request

C. Offer

D. Acknowledgement

The DHCP message used by a client to inform a DHCP server that it accepts the assigned IP address is the Request message. After a DHCP server offers an IP address to a client via the Offer message, the client must explicitly indicate acceptance of that offer by sending a Request message back to the server. This Request message not only confirms acceptance of the offered IP address but can also request the additional parameters offered by the DHCP server. Thus, the Request message plays a crucial role in the DHCP leasing process, ensuring that the server knows the client has accepted the address. Other message types serve different purposes in the DHCP process. The Discover message is sent by the client to locate available DHCP servers; the Offer message is the server's response with an IP address for the client; and the Acknowledgement message is a confirmation sent by the server to finalize the lease after receiving the Request. Therefore, the Request message is essential in establishing a valid lease between the client and server.

6. What does the term 'metric' refer to in networking protocols?

A. A method of reducing latency

B. A measurement for route selection

C. A type of routing table

D. A protocol for network security

The term 'metric' in networking protocols refers to a measurement used to determine the cost associated with a route, which plays a crucial role in route selection. Different routing protocols calculate metrics based on various criteria, such as hop count, bandwidth, delay, and reliability. The route with the lowest metric is typically preferred, which directly influences how data packets are forwarded across the network. Metrics are essential for enabling routers to make informed decisions about the best path to take for data transmission, ensuring that the most efficient and reliable routes are utilized. This concept is foundational in routing protocols like OSPF (Open Shortest Path First) or RIP (Routing Information Protocol), where metrics help to establish the optimal paths in dynamic routing environments. The other options do not align with the definition of 'metric' in this context. Reducing latency pertains to network performance optimization rather than route selection, routing tables are structured data used to store routing information without directly referring to metrics, and network security protocols focus on safeguarding data and do not involve metrics for routing.

7. How is static routing defined in networking?

A. A method where routes are automatically determined

B. A method that uses dynamic protocols

C. A method where routes are manually configured

D. A method that optimizes routing tables

Static routing is defined as a method where routes are manually configured by the network administrator. This involves physically entering the route information into the routing table using predefined paths. Unlike dynamic routing, which automatically adapts routes based on changing network conditions and utilizes protocols to share route information among devices, static routing requires a conscious decision to specify the routes. This can lead to straightforward route management, as the configured routes remain unchanged unless they are manually modified. Manual configuration can be beneficial in smaller, simpler networks where the path does not change frequently, as it allows for deterministic routing. However, it also means that any changes in the network topology require manual updates to the routes. Therefore, understanding that static routing relies entirely on manual input is key to appreciating how route management operates in a network setting.

8. What does load balancing in routing aim to achieve?

A. Increase the complexity of routing protocols

B. Centralize traffic management

C. Distribute traffic across multiple paths

D. Reduce the overall number of routes in use

Load balancing in routing is a technique aimed at distributing traffic evenly across multiple paths within a network. This is particularly useful in scenarios where there are multiple links or paths available to reach a destination. By spreading the traffic load, load balancing helps to optimize network performance, enhance redundancy, and improve fault tolerance. When multiple paths are utilized, it can lead to more efficient use of resources, minimizing congestion on individual links and often providing quicker response times for data traffic. This distribution can be based on various algorithms, like round-robin, least connections, or even bandwidth considerations, depending on the specific requirements and characteristics of the network. The other options do not accurately represent the goal of load balancing. Increasing the complexity of routing protocols is generally not a desired outcome; centralizing traffic management contradicts the decentralized nature of load balancing; and reducing the number of routes in use may limit the available paths, which is counterproductive to the fundamental purpose of load balancing, which thrives on utilizing multiple routes to manage traffic effectively.

9. Which of the following is NOT a type of Layer 2 network?

A. Point-to-point network

B. Circuit-based network

C. Virtual private routed network

D. Shared network

In the context of networking, Layer 2 refers to the data link layer of the OSI model, which is responsible for node-to-node data transfer and error correction from the physical layer. The types of Layer 2 networks typically include point-to-point networks, where a direct link exists between two nodes; circuit-based networks that establish a dedicated circuit for communication; and shared networks, where multiple devices share the same communication medium. A virtual private routed network, on the other hand, primarily operates at Layer 3 (the network layer), which deals with packet forwarding including routing through different networks. This network type establishes a virtual private network (VPN) primarily for the purpose of routing, not direct data link layer functions. Therefore, it does not fall under the classification of Layer 2 networks. Understanding these distinctions helps clarify the architecture of networking protocols and the roles played by different layers in the OSI model.

10. What is "QoS Traffic Classification"?

A. A method for maximizing data throughput

B. The process of categorizing network traffic to manage performance according to specific requirements

C. A technique for encrypting network data

D. A strategy for reducing network latency

QoS Traffic Classification is fundamentally about the process of categorizing network traffic to manage performance according to specific requirements. In network management, Quality of Service (QoS) mechanisms are vital because they allow networks to prioritize certain types of traffic over others. This classification helps ensure that high-priority applications, such as voice over IP or video conferencing, receive the necessary bandwidth and minimal delay, thereby maintaining a level of service that meets user expectations and operational standards. By identifying the characteristics of different types of traffic, the network can apply appropriate controls, such as bandwidth allocation, to enhance performance in line with the organization's priorities. The other options do not align with the specific function of QoS Traffic Classification. While maximizing data throughput, encrypting data, and reducing latency are all important considerations in network management, they are not what QoS Traffic Classification specifically addresses. Instead, they may be goals or outcomes influenced by effective traffic classification and management.

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:

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