CISCO CERTIFIED NETWORK ASSOCIATE (CCNA) PRACTICE EXAM (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. Which command do you use to view the OSPF v. 3 interface configuration?

A. show ipv6 ospf

B. show ipv6 ospf database

C. show ipv6 ospf interface

D. show ipv6 interfaces

2. What role does an SNMP Agent play in a managed network?

A. It performs data backup

B. It has local knowledge of management information

C. It creates network policies

D. It provides network access control

3. What is the maximum frame size of the 802.3 Ethernet standard?

A. 1518 bytes

B. 1522 bytes

C. 1548 bytes

D. 1500 bytes

4. Which of the following is a valid command to view VLAN pruning status?

A. show vtp status

B. show vlan

C. show ip interface brief

D. show interface INTERFACE NUMBER

5. Which command is used to lower the default MTU size for a PPPoE configuration?

A. ip mtu 1500

B. ip mtu 1492

C. mtu 1492

D. set mtu 1492

6. What is the first step to configure Netflow on a router?

A. Enable Netflow globally

B. Enter into interface configuration mode

C. Configure the Netflow collector IP address

D. Define flow export parameters

7. When creating a Layer 3 EtherChannel with multiple interfaces, on which interface is the IP address configured?

A. Each physical interface

B. Port-channel interface

C. The first interface in the group

D. The EtherChannel group interface

8. At which intervals are status and full-status LMIs sent from Frame Relay switches to DTE routers?

A. 5 and 30 seconds

B. 10 and 60 seconds

C. 15 and 45 seconds

D. 20 and 50 seconds

9. What command would you use to specify a not so totally stubby area with no summary in OSPF?

A. (config-router)#area AREA NUMBER nssa

B. (config-router)#area AREA NUMBER nssa summary

C. (config-router)#area AREA NUMBER nssa no-summary

D. (config-router)#area AREA NUMBER stub no-summary

10. Which mode offers greater security by encapsulating the entire IP packet?

A. Network Mode

B. Tunnel Mode

C. Transport Mode

D. Secure Mode

Answers

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

Explanations

1. Which command do you use to view the OSPF v. 3 interface configuration?

A. show ipv6 ospf

B. show ipv6 ospf database

C. show ipv6 ospf interface

D. show ipv6 interfaces

The command used to view the OSPF version 3 interface configuration is indeed "show ipv6 ospf interface." This command specifically displays detailed information about the interfaces that are participating in OSPF for IPv6. It provides key insights such as the OSPF router ID, the state of the interface, the cost associated with the interface, and the list of neighbors, which are vital for troubleshooting and verifying OSPF configurations. The other commands serve different purposes. For instance, "show ipv6 ospf" gives a broader overview of the OSPF process on the router but does not focus solely on the interface configuration. "show ipv6 ospf database" provides information about the OSPF link-state database, which contains information about all the OSPF routers and the links they have. "show ipv6 interfaces" merely lists all IPv6 interfaces and their status, without delving into the specifics of the OSPF configuration on those interfaces. Thus, the correct command to specifically view the configuration and status of OSPF interfaces is appropriately identified.

2. What role does an SNMP Agent play in a managed network?

A. It performs data backup

B. It has local knowledge of management information

C. It creates network policies

D. It provides network access control

An SNMP Agent plays a crucial role in a managed network by having local knowledge of management information. This means that the agent is responsible for collecting and storing data about the network device on which it resides. It gathers various performance metrics, status information, and configuration details, and then makes this information available for retrieval, typically through the Simple Network Management Protocol (SNMP). When a network management system (NMS) queries the SNMP agent, it can retrieve this information to monitor the state of the network, perform diagnostics, and make management decisions. The ability of the agent to maintain local awareness of management information allows for real-time monitoring and effective network management tasks such as fault detection and performance evaluation. This characteristic of the SNMP agent significantly contributes to the overall management capabilities of a network, as it serves as a source of real-time data that can be analyzed to ensure optimal network performance.

3. What is the maximum frame size of the 802.3 Ethernet standard?

A. 1518 bytes

B. 1522 bytes

C. 1548 bytes

D. 1500 bytes

The maximum frame size of the IEEE 802.3 Ethernet standard is indeed 1518 bytes. This includes 14 bytes for the Ethernet header, 4 bytes for the Frame Check Sequence (FCS), and up to 1500 bytes for the actual data (payload). The option indicating 1522 bytes accounts for an additional 4 bytes used for VLAN tagging (IEEE 802.1Q), which is not a part of the standard Ethernet frame size but rather an extension for VLANs. This means that while in VLAN-capable networks, frames can be larger, the base standard itself defines the maximum at 1518 bytes for untagged frames. Each of the other frame sizes mentioned either reflect typical values for variations of Ethernet, or are simply misinterpretations of the standard configurations for Ethernet frame sizes.

4. Which of the following is a valid command to view VLAN pruning status?

A. show vtp status

B. show vlan

C. show ip interface brief

D. show interface INTERFACE NUMBER

To view VLAN pruning status in a network with Cisco devices, the command that provides this information is indeed related to the VLAN Trunking Protocol (VTP). Using the command that shows the VTP status allows you to see details such as whether VTP pruning is enabled or disabled. When VTP pruning is enabled, it helps to optimize bandwidth by not sending unnecessary VLAN traffic across trunk links. The command provides critical information about the configuration of the VTP domain, including the pruning capability, which affects how VLAN traffic is managed. Understanding VTP and VLAN pruning is key for maintaining efficient network performance, especially in larger environments where multiple VLANs may be in use. Other commands listed do not directly provide VLAN pruning status. For instance, the command to show VLANs focuses on the VLANs defined on the switch rather than pruning information, while the command for showing IP interface brief mainly lists interface status without addressing VLANs. Lastly, the command for an interface would give details about that specific interface but would not indicate whether VLAN pruning is active. Therefore, checking the VTP status is the most relevant and accurate method for assessing VLAN pruning in a Cisco network environment.

5. Which command is used to lower the default MTU size for a PPPoE configuration?

A. ip mtu 1500

B. ip mtu 1492

C. mtu 1492

D. set mtu 1492

The command used to lower the default Maximum Transmission Unit (MTU) size for a Point-to-Point Protocol over Ethernet (PPPoE) configuration is "ip mtu 1492." This command is particularly relevant in PPPoE environments because the standard Ethernet MTU is 1500 bytes. However, PPPoE introduces a slight overhead due to the additional header it adds to each packet, which effectively reduces the available MTU size for the data being sent. By setting the MTU size to 1492, you account for this overhead (8 bytes) and ensure that the packets transmitted do not get fragmented, which can lead to performance issues and connection problems. This is crucial for maintaining efficient and reliable network communication over PPPoE connections. The other options either do not apply in the context of PPPoE or are incorrectly formatted for the purpose of configuring the MTU. The "ip mtu" command itself is necessary to specify the MTU size on a specific interface, while "mtu" alone is often used for layer two interfaces but may not always be recognized in all Cisco devices or contexts.

6. What is the first step to configure Netflow on a router?

A. Enable Netflow globally

B. Enter into interface configuration mode

C. Configure the Netflow collector IP address

D. Define flow export parameters

The first step to configure NetFlow on a router involves entering into interface configuration mode because NetFlow is closely associated with specific interfaces on the router that will be monitored for traffic flow. By configuring NetFlow on an individual interface, you can specify which traffic should be collected and analyzed. Once you are in the interface configuration mode, you can apply NetFlow settings, such as enabling NetFlow and defining flow export parameters specific to that interface. This foundational step ensures that the router starts collecting flow data from the correct interface, setting the stage for further configuration of export parameters and collector addresses later on. As a result, entering interface configuration mode is crucial to establishing the fundamental context for all subsequent NetFlow configuration actions that you'll perform.

7. When creating a Layer 3 EtherChannel with multiple interfaces, on which interface is the IP address configured?

A. Each physical interface

B. Port-channel interface

C. The first interface in the group

D. The EtherChannel group interface

In a Layer 3 EtherChannel configuration, the IP address must be configured on the Port-channel interface. The Port-channel interface represents a virtual interface that aggregates multiple physical interfaces into a single logical link. When creating EtherChannel, the physical interfaces are bundled together, and the IP address is assigned to the Port-channel interface, which then handles all traffic passing through the aggregated links. Assigning the IP address to the Port-channel allows it to abstract the individual physical interfaces, making it easier to manage routing and layer 3 functionalities while ensuring that the traffic is efficiently distributed across all member interfaces. This setup enhances redundancy and load balancing, as the Port-channel interface manages the aggregated links as a single logical entity. By doing this, the configuration becomes cleaner and more straightforward, since you only need to deal with one interface for the IP address rather than configuring it on each individual physical interface.

8. At which intervals are status and full-status LMIs sent from Frame Relay switches to DTE routers?

A. 5 and 30 seconds

B. 10 and 60 seconds

C. 15 and 45 seconds

D. 20 and 50 seconds

The correct answer is that status and full-status Local Management Interfaces (LMIs) are sent at intervals of 10 and 60 seconds. In Frame Relay networks, these LMIs are crucial for maintaining the status of the link between the Data Terminal Equipment (DTE) and the Data Communications Equipment (DCE). The status LMI provides updates about the state of the logical connections, while the full-status LMI gives a comprehensive view, including all relevant information about those connections. Understanding the timing of these signals is critical for network uptime and responsiveness. If the routers do not receive these LMIs within the specified intervals, it can indicate potential issues with the connection, prompting diagnostic measures to ensure the reliability of the Frame Relay service. The intervals (10 seconds for status LMIs and 60 seconds for full-status LMIs) are designed to balance the need for timely updates with the efficiency of network resource usage.

9. What command would you use to specify a not so totally stubby area with no summary in OSPF?

A. (config-router)#area AREA NUMBER nssa

B. (config-router)#area AREA NUMBER nssa summary

C. (config-router)#area AREA NUMBER nssa no-summary

D. (config-router)#area AREA NUMBER stub no-summary

The correct command for configuring a not-so-totally stubby area without summary routes in OSPF is indeed the one that specifies both 'nssa' and 'no-summary.' This configuration applies to an area that allows external routes while preventing summary routes from being sent into the area. In OSPF terminology, a 'not so totally stubby area' permits external routes, including Type 7 LSAs, while restricting summary routes from other areas. By using 'nssa no-summary,' you're enabling this specific area type and ensuring that summary routes from other areas are not propagated into it. This command effectively meets the requirement of controlling route propagation by combining the characteristics of an NSSA with the restriction of summarization. When considering the other options, the command that simply invokes 'nssa' does not prevent summary routes from entering the area. Meanwhile, the command with 'stub' does not accurately apply to NSSA configurations. The inclusion of 'no-summary' is crucial for achieving the desired routing behavior in scenarios requiring OSPF area control.

10. Which mode offers greater security by encapsulating the entire IP packet?

A. Network Mode

B. Tunnel Mode

C. Transport Mode

D. Secure Mode

Tunnel Mode offers greater security by encapsulating the entire IP packet, which includes the original IP header and the payload. This is particularly important in Virtual Private Networks (VPNs) where the encapsulation process helps to protect the integrity and confidentiality of the data being transmitted. When the data is encapsulated, it is not only encrypted but also given a new IP header, thus masking the original source and destination addresses. This added layer of security is essential for protecting sensitive information as it travels across untrusted networks like the Internet. Other modes, such as Transport Mode, only encrypt the payload of the IP packet and leave the original IP header intact, which does not provide the same level of security since the original addresses remain visible and could be exploited. Secure Mode is not a standard term recognized within common networking practices and may not pertain to a specific encapsulation strategy, making it irrelevant in this context. As such, Tunnel Mode is the most effective choice for enhancing security through the comprehensive encapsulation of the entire IP packet.

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://ciscoccna.examzify.com

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