CISCO ENTERPRISE NETWORK CORE TECHNOLOGIES (ENCOR) PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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Table of Contents

Copyright 1

Table of Contents 2

Introduction 3

How to Use This Guide 4

Questions 5

Answers 8

Explanations 10

Next Steps 16

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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.

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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!

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Questions

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1. **Which Cisco operating system does not support Cisco EEM?**

   A. IOS-XR

   B. NX-OS

   C. IOS

   D. Windows OS

2. **How is area filtering implemented in OSPF?**

   A. Through LSA flooding

   B. Using a prefix filter list at the ABR

   C. Implementing route maps in the area

   D. Defining area types

3. **Which UDP port is designated for the LISP Data Plane?**

   A. UDP 4341

   B. UDP 4342

   C. UDP 4789

   D. UDP 8080

4. **What technology is used to enable fast transitions between basic service sets (BSS) in 802.11 protocols?**

   A. 802.11n

   B. 802.11r

   C. 802.11g

   D. 802.11ac

5. **What function does an Ingress Tunnel Router (ITR) perform in LISP?**

   A. It encapsulates packets with a LISP header for EID addresses

   B. It decapsulates Map-Request messages from egress tunnel routers

   C. It manages the distributed mapping database for LISP

   D. It routes non-LISP traffic to ITRs in LISP sites

6. **What is the first step in creating a GRE tunnel?**

   A. Assign an IP address to the tunnel interface

   B. Create a tunnel interface

   C. Specify the tunnel source

   D. Define the tunnel destination

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7. What is the primary purpose of Cisco Express Forwarding (CEF)?

A. To reduce the size of the routing table

B. To optimize database lookup and forwarding decisions

C. To maintain the Adjacency Table

D. To analyze network traffic patterns

8. What is the primary function of an EIGRP successor route?

A. To provide a backup route to a primary route

B. To be the best EIGRP route added to the Routing Table

C. To establish adjacencies with neighboring routers

D. To handle excessive inbound traffic

9. During which state can a switch port receive and send BPDUs, but not forward user traffic?

A. Disabled

B. Blocking

C. Listening

D. Forwarding

10. What is the primary function of NBAR?

A. To provide redundancy for critical connections

B. To perform deep packet inspection and categorize traffic

C. To encrypt VPN connections between sites

D. To manage access control lists on routers

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Answers

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

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Explanations

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1. Which Cisco operating system does not support Cisco EEM?

A. IOS-XR

B. NX-OS

C. IOS

D. Windows OS

Cisco's Embedded Event Manager (EEM) is an automation tool integrated into several Cisco operating systems, allowing network administrators to create scripts that respond to various events or changes in network conditions. The correct choice reflects the fact that Windows OS, while a widely used operating system in enterprise environments, is not a Cisco operating system and hence does not support Cisco EEM. Cisco EEM is specifically designed to work with Cisco's networking devices, which utilize Cisco's proprietary operating systems such as IOS, IOS-XR, and NX-OS. On the other hand, IOS-XR is utilized mainly in service provider environments and supports EEM for event management on high-end routers. NX-OS, designed for data center environments, also supports EEM to enhance automation and management capabilities. Similarly, IOS, the traditional operating system for many Cisco routers and switches, supports EEM, allowing for scripting and automation. In summary, the identification of Windows OS as not supporting Cisco EEM is accurate because it does not function within the Cisco ecosystem and is not designed to manage network hardware like the other Cisco operating systems.

2. How is area filtering implemented in OSPF?

A. Through LSA flooding

B. Using a prefix filter list at the ABR

C. Implementing route maps in the area

D. Defining area types

Area filtering in OSPF (Open Shortest Path First) is primarily implemented using a prefix filter list at the Area Border Router (ABR). The ABR serves as a boundary between different OSPF areas and can control the flow of routing information between these areas. By utilizing prefix lists, the ABR can selectively permit or deny specific routes from being advertised between areas. This allows for controlling which routes are shared and preventing unnecessary or undesired routes from being flooded into particular OSPF areas, thus managing the overall routing information exchanged. LSA flooding is a normal part of OSPF's operation where Link State Advertisements are propagated to ensure all routers have a synchronized view of the network topology. However, this process does not inherently provide the ability to filter areas. Route maps can be used in conjunction with prefix lists to enhance routing policies, but the fundamental implementation of area filtering would be through the prefix filter list itself. Defining area types, such as stub or not-so-stubby areas, alters routing behavior and influences route advertisement but does not specifically relate to filtering based on prefixes. Instead, these types indicate how external routes are handled within an area. Thus, using a prefix filter list at the ABR is the correct answer for

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3. Which UDP port is designated for the LISP Data Plane?

A. UDP 4341

B. UDP 4342

C. UDP 4789

D. UDP 8080

The designated UDP port for the LISP (Locator/ID Separation Protocol) Data Plane is UDP 4341. LISP is used to separate the identity and location of network devices, allowing for more efficient routing and better scalability in large networks. In LISP, the Data Plane involves the actual data packets that are transported across the network. UDP 4341 is specifically assigned for the LISP Data Plane communication, establishing a standard for interoperability among networking devices that implement this protocol. By adhering to this standardized port, devices can correctly send and receive LISP data traffic without conflict with other applications or services. Other ports mentioned, such as UDP 4342, UDP 4789, or UDP 8080, are not related to the LISP Data Plane. UDP 4342 is commonly used for the LISP Control Plane, which deals with the mapping of identifiers to locators, while UDP 4789 is designated for VXLAN (Virtual Extensible LAN). UDP 8080 is typically used for web services and does not pertain to LISP functionality at all. Therefore, the correct identification of UDP 4341 is crucial for networking professionals to ensure proper implementation and operation of the LISP protocol.

4. What technology is used to enable fast transitions between basic service sets (BSS) in 802.11 protocols?

A. 802.11n

B. 802.11r

C. 802.11g

D. 802.11ac

The technology that facilitates fast transitions between basic service sets (BSS) in 802.11 protocols is defined by 802.11r. This protocol, also known as Fast BSS Transition (FT), is specifically designed to enhance the performance of wireless networks by allowing devices to move or roam quickly between different access points within the same network. When clients move from one access point to another, various processes, such as authentication and association, traditionally introduce delays. 802.11r minimizes these delays by enabling pre-authentication and establishing security keys in advance. This allows devices to authenticate and reconnect rapidly when they transition between BSSs, thereby significantly improving the user experience in environments with high mobility, such as in conference centers or campuses. In contrast, the other standards, while they contribute to overall wireless performance, do not have the specific design features aimed at fast BSS transitions. 802.11n, 802.11g, and 802.11ac focus on improving throughput, range, and capacity, but they do not specifically address the speed of transitioning between access points in the same way that 802.11r does.

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5. What function does an Ingress Tunnel Router (ITR) perform in LISP?

A. It encapsulates packets with a LISP header for EID addresses

B. It decapsulates Map-Request messages from egress tunnel routers

C. It manages the distributed mapping database for LISP

D. It routes non-LISP traffic to ITRs in LISP sites

An Ingress Tunnel Router (ITR) in LISP (Locator/Identifier Separation Protocol) primarily encapsulates packets that are destined for an Endpoint Identifier (EID) address. This function is crucial in the LISP architecture because it allows for the separation of address spaces, where the EID represents the actual destination, while the Routing Locator (RLOC) corresponds to the network location. By encapsulating the packets with a LISP header, the ITR ensures that the data packets can be properly routed across the LISP network, maintaining the separation of control and data planes. Additionally, ITRs are responsible for sending packets to the appropriate Egress Tunnel Router (ETR), which then decapsulates them for delivery to the destination EID. This encapsulation process allows for better mobility and scalability of the network, as it abstracts the addressing schema and enables more efficient routing without impacting the core network infrastructure. Other functions mentioned in the choices pertain to different components and processes within the LISP framework, which helps to clarify the specific role of the ITR in the encapsulation process.

6. What is the first step in creating a GRE tunnel?

A. Assign an IP address to the tunnel interface

B. Create a tunnel interface

C. Specify the tunnel source

D. Define the tunnel destination

The process of creating a GRE (Generic Routing Encapsulation) tunnel begins with creating a tunnel interface. This step is essential as the tunnel interface acts as a virtual point-to-point connection between two endpoints and allows for encapsulating packets. Once the tunnel interface is created, other configurations can follow, such as assigning an IP address to that interface, specifying the tunnel source and defining the tunnel destination. Each of these subsequent steps is important, but they all rely on the existence of the tunnel interface first to provide a context for the GRE tunnel's configuration. Therefore, initiating the process with the creation of the tunnel interface establishes the necessary foundation for the GRE tunnel to function properly.

7. What is the primary purpose of Cisco Express Forwarding (CEF)?

A. To reduce the size of the routing table

B. To optimize database lookup and forwarding decisions

C. To maintain the Adjacency Table

D. To analyze network traffic patterns

The primary purpose of Cisco Express Forwarding (CEF) is to optimize database lookup and forwarding decisions. CEF is an advanced, efficient method of packet forwarding used in Cisco devices, which enhances the performance of network operations by making routing decisions based on pre-calculated information. In CEF, the forwarding information is maintained in two main data structures: the Forwarding Information Base (FIB) and the Adjacency table. The FIB contains routes derived from the routing table, while the Adjacency table stores Layer 2 information needed to forward packets to the next hop. This design allows for quick and efficient lookups, significantly reducing latency when routing packets, as decisions can be made without having to perform extensive database lookups for every packet. In contrast, while maintaining an Adjacency Table and analyzing network traffic patterns are related to network operations, they do not represent the core goal of CEF. Additionally, reducing the size of the routing table is not a function CEF specifically aims to achieve. Instead, CEF focuses on optimizing how packets are handled and routed through the network, facilitating faster and more efficient data transfers.

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8. What is the primary function of an EIGRP successor route?

A. To provide a backup route to a primary route

B. To be the best EIGRP route added to the Routing Table

C. To establish adjacencies with neighboring routers

D. To handle excessive inbound traffic

The primary function of an EIGRP successor route is to be the best EIGRP route added to the Routing Table. In EIGRP (Enhanced Interior Gateway Routing Protocol), the successor is the route that has the lowest metric to a destination and is used for packet forwarding. When a router builds its routing table, it evaluates multiple routes to the same destination and selects the one with the most optimal path based on metrics like bandwidth, delay, load, and reliability. This route is actively used for forwarding traffic. If the successor route becomes unavailable, EIGRP can promptly use a feasible successor as a backup, ensuring minimal downtime and maintaining network efficiency. The distinction between successor and feasible successor routes is crucial, as it demonstrates EIGRP's ability to provide rapid convergence through its unique distance vector routing method. Other choices, while they may hold elements of truth in different contexts, do not encapsulate the primary function of a successor route within EIGRP's operational framework. For instance, a backup route is related to feasible successors but not directly to successor routes, and establishing adjacencies is part of the initial setup and communication process of EIGRP rather than the function of a specific routing decision. Handling inbound traffic pertains more to traffic management and

9. During which state can a switch port receive and send BPDUs, but not forward user traffic?

A. Disabled

B. Blocking

C. Listening

D. Forwarding

In the context of Spanning Tree Protocol (STP), the correct state where a switch port can receive and send Bridge Protocol Data Units (BPDUs), but not forward user traffic, is the Listening state. During the Listening state, the switch port is actively participating in the STP by processing BPDUs to learn about the network topology. This is crucial for preventing loops in a layer 2 network. However, while the port is involved in this process, it does not forward any user data frames. The main purpose of the Listening state is to ensure that the switch can make informed decisions about the port's role in the network without allowing any data to traverse that could create a loop. In contrast, other states do not align with this description: - In the Disabled state, a port is completely inactive and cannot send or receive any traffic, including BPDUs. - In the Blocking state, the port receives BPDUs but does not forward user traffic to prevent loops. However, it is less active than the Listening state since its role is primarily to maintain the blocking decision. - In the Forwarding state, the port can send and receive both BPDUs and user traffic, which does not fit the criteria of sending and

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10. What is the primary function of NBAR?

A. To provide redundancy for critical connections

B. To perform deep packet inspection and categorize traffic

C. To encrypt VPN connections between sites

D. To manage access control lists on routers

The primary function of NBAR (Network-Based Application Recognition) is to perform deep packet inspection and categorize traffic. This technology enables more granular classification of network traffic by recognizing and categorizing applications based on their unique signatures. Deep packet inspection allows NBAR to analyze packet data beyond just the header information, which is essential for understanding the type of traffic traversing the network. By accurately identifying different applications, NBAR helps network administrators manage bandwidth usage and prioritize traffic, leading to better performance and enhanced user experience. It also plays a crucial role in implementing quality of service (QoS) policies, as it helps distinguish between different types of traffic, such as voice, video, and data. The other options do not align with the primary purpose of NBAR. While redundancy, encryption, and access control are important aspects of network management, they fall into different categories and utilize different technologies that do not pertain to the traffic classification and application awareness that NBAR provides.

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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://cisco-encor.examzify.com

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

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