Cisco Enterprise Network Core Technologies (ENCOR) Practice Exam (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

1. What is the default mode for an Access Point (AP)?

A. Monitor mode

B. Local mode

C. Bridge mode

D. Private mode

2. Which statement accurately describes the Forwarding Information Base (FIB)?

A. It maintains routing protocols for traffic

B. It contains both next-hop address and MAC address information

C. It maintains next-hop address information based on the IP routing table

D. It directly manages the broadcast domain

3. How does a Proxy Egress Tunnel Router (PETR) function in a LISP environment?

A. It provides ITR services for non-LISP sites

B. It handles EID-to-RLOC mapping as part of a non-LISP site

C. It implements ETR functions for LISP-capable sites

D. It forwards packets from LISP sites to non-LISP sites

4. What is an Area Border Router (ABR) in OSPF?

A. A router that connects multiple external networks.

B. A router that connects to Area 0 and another area.

C. A router that only connects to Area 0.

D. A router that handles OSPF redistributions only.

5. What does Forward Delay time specify in STP?

A. Duration for which a port stays in a forwarding state

B. Time a port remains in listening and learning states

C. Period for which a switch waits to receive BPDUs

D. Time taken to flush old MAC addresses

6. What does the CRUD verb 'Put' signify in RESTful API interactions?

A. Create or replace

B. Create

C. Read

D. Delete

7. What does the 'ip tcp adjust-mss' command do?

A. It increases the maximum segment size for UDP connections

B. It can help prevent TCP sessions from being dropped

C. It enables segmentation on large data packets

D. It adjusts the size of TCP window to optimize throughput

8. 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

9. Which version of VTP is used by default?

A. Version 2

B. Version 3

C. Version 1

D. Version 4

10. What is the primary responsibility of a Map Resolver (MR) in a LISP network?

A. To accept and process EID registration requests

B. To forward encapsulated Map-Request messages to the MS

C. To encapsulate packets for non-LISP sites

D. To manage non-LISP customer connections to LISP networks

Answers

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

Explanations

1. What is the default mode for an Access Point (AP)?

A. Monitor mode

B. Local mode

C. Bridge mode

D. Private mode

The default mode for an Access Point (AP) is Local mode. In this mode, the AP acts as a bridge between wireless clients and the wired network, allowing for full access to the resources on the local network. Local mode supports all wireless WLAN features, including the ability to connect clients to multiple WLANs, provide Quality of Service (QoS), and allow for advanced security mechanisms. In Local mode, the AP is actively involved in the distribution of client traffic and performing functions like Layer 2 forwarding and management frame processing. It helps clients establish connections effectively, handles authentication, encryption, and maintains session management. Other modes, such as Monitor mode, are used for different purposes. Monitor mode, for example, allows an AP to observe traffic on the network for security purposes but does not facilitate client connections. Likewise, Bridge mode is typically used to connect two wired networks through wireless means, while Private mode doesn't align with typical configurations for APs in enterprise networks.

2. Which statement accurately describes the Forwarding Information Base (FIB)?

A. It maintains routing protocols for traffic

B. It contains both next-hop address and MAC address information

C. It maintains next-hop address information based on the IP routing table

D. It directly manages the broadcast domain

The Forwarding Information Base (FIB) is a crucial component in networking that functions primarily to facilitate the rapid forwarding of packets. The FIB is derived from the IP routing table, which contains the routes the router has learned from various sources, including static routes and dynamic routing protocols. When a packet arrives at a router, the FIB is consulted to determine the next-hop address to forward the packet toward its destination. The FIB is optimized for speed and efficiency, allowing routers to perform this action as quickly as possible by using a simpler and faster lookup process compared to the more detailed routing table. Because the FIB is a simplified structure focused on forwarding decisions, it specifically maintains next-hop address information, reflecting the best paths as determined by the IP routing table. This understanding of the FIB's dependence on the IP routing table helps clarify why the choice that describes it maintaining next-hop address information is the most accurate representation of its function. The other options misrepresent the FIB's purpose, such as suggesting it manages broadcast domains or maintains routing protocols, which are not functions attributed to the FIB specifically.

3. How does a Proxy Egress Tunnel Router (PETR) function in a LISP environment?

A. It provides ITR services for non-LISP sites

B. It handles EID-to-RLOC mapping as part of a non-LISP site

C. It implements ETR functions for LISP-capable sites

D. It forwards packets from LISP sites to non-LISP sites

In a LISP (Locator/Identifier Separation Protocol) environment, the Proxy Egress Tunnel Router (PETR) plays a crucial role in enabling communication between LISP and non-LISP networks. The function of forwarding packets from LISP sites to non-LISP sites is essential because it allows LISP-enabled devices to communicate beyond their designated architecture. The PETR acts as a bridge by encapsulating packets from LISP sites and sending them to non-LISP destinations. This entails the use of tunneling techniques to ensure that LISP packets are properly constructed and transmitted across the network, ensuring compatibility with legacy systems. Since LISP separates endpoint identifiers (EIDs) from routing locators (RLOCs), the PETR understands and processes this separation to manage the translation and communication effectively. By ensuring proper forwarding and encapsulation, the PETR helps in maintaining efficient routing, minimizing overhead, and allowing for seamless mobile and dynamic hosting capabilities that are characteristic of LISP implementations. This enables a smoother integration of LISP architecture into existing networking infrastructures that may not fully support LISP, thus enhancing connectivity and interoperability.

4. What is an Area Border Router (ABR) in OSPF?

A. A router that connects multiple external networks.

B. A router that connects to Area 0 and another area.

C. A router that only connects to Area 0.

D. A router that handles OSPF redistributions only.

An Area Border Router (ABR) is specifically designed to connect Area 0, which is considered the backbone area in OSPF (Open Shortest Path First), to other non-backbone areas. This function is crucial in OSPF's hierarchical design, where it helps maintain the segmentation of routing information and enforces the organization of areas to optimize routing efficiency. The role of the ABR is important because it allows for the distribution of routing information between the backbone and other areas, which ensures that all areas can communicate while keeping the routing domain organized and less complex. By serving as the link between these areas, the ABR facilitates efficient routing, updates, and optimizes the use of bandwidth. Understanding the responsibilities of an ABR is critical when designing and managing OSPF networks. It helps maintain the integrity and performance of a routed network by ensuring that the backbone area remains responsible for distributing routing information accurately to adjacent areas, helping avoid routing loops and other complications in the network.

5. What does Forward Delay time specify in STP?

A. Duration for which a port stays in a forwarding state

B. Time a port remains in listening and learning states

C. Period for which a switch waits to receive BPDUs

D. Time taken to flush old MAC addresses

In Spanning Tree Protocol (STP), the Forward Delay time specifies the duration a port remains in both the listening and learning states before transitioning to the forwarding state. This delay is crucial to ensure a stable and loop-free topology in the network. When a switch port is transitioning from a blocking state to a forwarding state, it cannot immediately begin to forward traffic because it needs time to gather information about the network. The listening state allows the switch to receive Bridge Protocol Data Units (BPDUs) and to ensure that there is no network loop forming. During the subsequent learning state, the switch populates its MAC address table with information about the devices on the network. The Forward Delay time serves as a safeguard, preventing rapid transitions that could lead to instability. This thorough process of carefully managing state transitions helps maintain a reliable network by allowing necessary information to be exchanged and preventing potential loops during these critical phases.

6. What does the CRUD verb 'Put' signify in RESTful API interactions?

A. Create or replace

B. Create

C. Read

D. Delete

In the context of RESTful API interactions, the CRUD verb 'Put' is used to signify the operation of creating or replacing resources on a server. When a 'Put' request is sent to a specific URI (Uniform Resource Identifier), the expectation is that the data included in the request body will either create a new resource if none exists at that URI or update an existing resource with the provided data. This dual functionality is grounded in the HTTP specification where 'Put' is intended for idempotent operations. Idempotency means that making the same 'Put' request multiple times results in the same state on the server, which aligns with the notion of replacing an existing resource rather than duplicating it. Options related to just 'Create', 'Read', or 'Delete' do not capture the full scope of 'Put' since those operations have distinct meanings and functions in the CRUD model. 'Create' refers solely to the addition of new data, while 'Read' pertains to retrieving data without modifying it, and 'Delete' signifies the removal of resources. Thus, the correct interpretation of 'Put' encompasses both creating (when no resource exists) and replacing (when a resource already does exist) in the RESTful API ecosystem.

7. What does the 'ip tcp adjust-mss' command do?

A. It increases the maximum segment size for UDP connections

B. It can help prevent TCP sessions from being dropped

C. It enables segmentation on large data packets

D. It adjusts the size of TCP window to optimize throughput

The command 'ip tcp adjust-mss' is used to modify the maximum segment size (MSS) of TCP packets that are sent over a network. MSS refers to the largest segment of data that the TCP protocol is willing to receive in a single TCP segment. By adjusting this size, particularly at routers that connect different network segments, it can help prevent issues related to TCP sessions being dropped. When packets traverse networks with varying maximum transmission units (MTUs), if a packet exceeds the MTU of a network link, it may need to be fragmented; otherwise, it can be discarded. This is especially important in scenarios involving Virtual Private Networks (VPNs) or tunnels, where additional headers may be added to the packets, effectively reducing the MTU. Using the 'ip tcp adjust-mss' command helps ensure that the TCP segments do not exceed the MTU after including the headers, which can lead to a more stable connection. Thus, it effectively helps maintain reliable TCP sessions by preventing fragmentation that could lead to dropped connections. While it's important to note that this command does not directly increase the segment size for UDP connections, enable segmentation for large data packets, or adjust the TCP window size, its primary function is centered on managing TCP segment sizes to

8. 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

9. Which version of VTP is used by default?

A. Version 2

B. Version 3

C. Version 1

D. Version 4

The default version of VLAN Trunking Protocol (VTP) is Version 1. This protocol is used in Cisco environments to manage VLAN configurations across switches in a network. When a switch is initially set up for VTP without specific configuration to declare a different version, it automatically operates using Version 1. Version 1 introduced the concepts of VTP, such as the maintenance of VLAN databases and propagation of VLAN information between switches. While subsequent versions like Version 2 and Version 3 introduced enhancements and additional features (such as support for token ring VLANs and better database management), they do not supersede Version 1 as the default setting on a switch that has not been configured explicitly otherwise. It's also worth noting that VTP Version 3 provides significant improvements, such as extended VLAN support and better management features, but these capabilities require explicit configuration to be adopted. Thus, without any modifications to the defaults, switches will operate under Version 1.

10. What is the primary responsibility of a Map Resolver (MR) in a LISP network?

A. To accept and process EID registration requests

B. To forward encapsulated Map-Request messages to the MS

C. To encapsulate packets for non-LISP sites

D. To manage non-LISP customer connections to LISP networks

In a Locator/Identifier Separation Protocol (LISP) network, the primary responsibility of a Map Resolver (MR) is to forward encapsulated Map-Request messages to the Map Server (MS). When a host wants to communicate with another host whose Endpoint Identifier (EID) it does not know, it sends a Map-Request to the Map Resolver. The MR then takes this request and forwards it to the appropriate Map Server, which is responsible for maintaining the mapping of EIDs to Routing Locators (RLOCs). This function is critical because it facilitates the communication process within the LISP architecture, enabling hosts to discover the locations of other hosts based on their identifiers without needing to know their specific routing information ahead of time. The encapsulation of the Map-Request messages ensures these requests can traverse different network segments, and forwarding them to the Map Server is essential for obtaining the necessary mapping information. The other responsibilities mentioned in the other options do not accurately represent the primary function of the Map Resolver in the context of a LISP network. For example, accepting and processing EID registration requests is a task generally associated with the Map Server, not the Map Resolver. Encapsulating packets for non-LISP sites and managing non-LISP customer connections

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!