

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.

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 does AIGP stand for in BGP best path attributes?**
 - A. Attributed Inter-Gateway Protocol
 - B. Aggregate Internal Gateway Protocol
 - C. Addressed Inter-Gateway Protocol
 - D. Additional Internal Gateway Protocol

- 2. What role does a Proxy Ingress Tunnel Router (PITR) serve?**
 - A. It routes non-routable EID traffic to Internet sites
 - B. It performs mapping lookups for non-LISP-capable sites
 - C. It connects LISP sites to ETRs in the distributed database
 - D. It manages and maintains the mapping database for LISP

- 3. Which OSPF area is considered the backbone area?**
 - A. Area 1
 - B. Area 0
 - C. Area 2
 - D. Any area can serve as backbone.

- 4. Which of these values indicates a lower preference for a switch to be elected as the Root Bridge?**
 - A. 32,768
 - B. 16,384
 - C. 48,576
 - D. 32,000

- 5. 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

- 6. What is the MAC address used for STP BPDUs?**
- A. 00:00:00:00:00:00
 - B. 01:80:C2:00:00:00
 - C. FF:FF:FF:FF:FF:FF
 - D. 08:00:27:00:00:00
- 7. What purpose does a Configuration BPDU serve in Spanning Tree Protocol?**
- A. To block rogue devices from joining the network
 - B. To identify the root bridge and roles of ports
 - C. To configure VLANs on a switch
 - D. To maintain DHCP settings
- 8. Which UDP port is designated for the LISP Data Plane?**
- A. UDP 4341
 - B. UDP 4342
 - C. UDP 4789
 - D. UDP 8080
- 9. 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
- 10. What is the primary purpose of Loop Guard in a network?**
- A. To speed up the convergence time of STP
 - B. To avoid switching loops on a port
 - C. To isolate faulty ports
 - D. To send keep-alive messages

Answers

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

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Explanations

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1. What does AIGP stand for in BGP best path attributes?

- A. Attributed Inter-Gateway Protocol
- B. Aggregate Internal Gateway Protocol
- C. Addressed Inter-Gateway Protocol
- D. Additional Internal Gateway Protocol

The correct terminology for AIGP within the context of BGP (Border Gateway Protocol) is Aggregate Internal Gateway Protocol. AIGP is a path attribute used in BGP to convey information about the cost of routes learned from an IGP (Interior Gateway Protocol). It allows BGP to consider not just the usual BGP metrics but also the IGP cost associated with the route when selecting the best path. The AIGP attribute helps when redistributing routes from an IGP to BGP, making it easier for a network to manage the best paths across a hybrid environment involving both BGP and IGP routes. In scenarios where multiple paths are available, AIGP can guide the selection process based on the aggregated IGP cost. The other options, while they may contain similar terminology, do not accurately represent the meaning and function of AIGP. They do not align with the widely accepted definitions within the BGP architecture, thus making them incorrect in this context.

2. What role does a Proxy Ingress Tunnel Router (PITR) serve?

- A. It routes non-routable EID traffic to Internet sites
- B. It performs mapping lookups for non-LISP-capable sites
- C. It connects LISP sites to ETRs in the distributed database
- D. It manages and maintains the mapping database for LISP

The Proxy Ingress Tunnel Router (PITR) serves the purpose of performing mapping lookups for non-LISP-capable sites. In the context of LISP (Locator/Identifier Separation Protocol), the PITR is essential when dealing with traffic originating from or destined for endpoints that do not support the LISP protocol. Since these non-LISP-capable sites cannot directly use the LISP architecture for routing, the PITR provides a crucial service by facilitating the mapping between endpoint identifiers (EIDs) and routing locators (RLOCs) for these sites. This functionality allows the LISP-enabled network to communicate seamlessly with endpoints that are not configured to understand the LISP mappings, ensuring that the necessary translations and lookups occur to forward traffic correctly. By handling these mapping lookups, the PITR effectively bridges the gap between LISP-enabled sites and non-LISP sites, allowing for smoother interoperability in a hybrid networking environment.

3. Which OSPF area is considered the backbone area?

- A. Area 1
- B. Area 0
- C. Area 2
- D. Any area can serve as backbone.

The backbone area in OSPF (Open Shortest Path First) is always identified as Area 0. This area serves as the core of the OSPF network and is responsible for the efficient routing of information between other OSPF areas. All other areas must connect to the backbone area, making it essential for the overall structure and functioning of OSPF. Area 0 facilitates the exchange of routing information between different areas, ensuring that routers can maintain a consistent and coherent view of the network. If a router has interfaces in multiple areas, at least one of those interfaces must connect to Area 0. This design helps to reduce routing complexity and maintains the hierarchy that OSPF is built upon. Other areas, such as Area 1 and Area 2, do not have the inherent responsibilities that Area 0 does and could operate as non-backbone areas, potentially leading to fragmented routing without proper connectivity to the backbone. Thus, only Area 0 serves as the backbone area, reinforcing its crucial role in OSPF network design.

4. Which of these values indicates a lower preference for a switch to be elected as the Root Bridge?

- A. 32,768
- B. 16,384**
- C. 48,576
- D. 32,000

In the Spanning Tree Protocol (STP), the concept of bridge priority plays a crucial role in determining which switch will be elected as the Root Bridge in a network. The lower the bridge priority value, the more preferred that switch is to become the Root Bridge. A default bridge priority value is 32,768, and this is the baseline against which other values are compared. In this context, a value of 16,384 represents a lower preference compared to the default of 32,768. When evaluating the priority values, a switch with a priority of 16,384 is therefore more favorable to be elected as the Root Bridge than a switch with a higher value such as 32,768 or any other value greater than it. This is because the election process in STP chooses the switch with the lowest bridge priority value first, and in a tie, it will then use MAC addresses to break the tie. To summarize, a bridge priority of 16,384 indicates a lower preference for a switch to be elected as the Root Bridge because it is a smaller value compared to the default priority, thereby making it more likely to be chosen in the election process.

5. 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.

6. What is the MAC address used for STP BPDUs?

- A. 00:00:00:00:00:00
- B. 01:80:C2:00:00:00**
- C. FF:FF:FF:FF:FF:FF
- D. 08:00:27:00:00:00

The MAC address used for Spanning Tree Protocol (STP) Bridge Protocol Data Units (BPDUs) is indeed 01:80:C2:00:00:00. This address is specifically designated for multicasting BPDUs in the context of STP. When switches communicate using STP, they transmit these BPDUs to all other switches in the network to allow them to manage and maintain the loop-free topology in an Ethernet network. This specific MAC address is recognized by all devices as the address for STP-related communication. STP utilizes this address to ensure that all switches on the segment can receive the BPDUs while preventing broadcast storms that would occur if a normal MAC address were used. In contrast, other choices represent different types of addresses: 00:00:00:00:00:00 is a universal address indicating a null or unicast, FF:FF:FF:FF:FF:FF is a broadcast address for all devices on the LAN, and 08:00:27:00:00:00 is a standard unicast MAC address that belongs to a specific device manufacturer. These addresses do not serve the purpose of multicast communication utilized by STP.

7. What purpose does a Configuration BPDU serve in Spanning Tree Protocol?

- A. To block rogue devices from joining the network
- B. To identify the root bridge and roles of ports**
- C. To configure VLANs on a switch
- D. To maintain DHCP settings

In the context of the Spanning Tree Protocol (STP), a Configuration BPDU (Bridge Protocol Data Unit) serves a critical role in the operation of the spanning tree process. Specifically, it is used to identify the root bridge in the network and to convey the roles of the various ports in relation to that root bridge. When switches exchange Configuration BPDUs, they share information such as their bridge IDs, which helps all switches in the topology to determine the unique root bridge. The root bridge is the central point in the spanning tree, and once it is elected, the switches use the information contained in these BPDUs to ascertain the best paths to the root bridge and to determine which ports should be forwarding or blocking traffic to prevent loops. This process ensures that there is a single loop-free logical topology in the network, allowing for efficient data transmission. Configuration BPDUs contain vital information that helps maintain the integrity and performance of Ethernet networks by preventing broadcast storms and ensuring that data packets are routed correctly based on the established hierarchy given by the root bridge and its associated port roles. Other options do not accurately reflect the function of a Configuration BPDU in the context of STP; blocking rogue devices or configuring VLANs involve different mechanisms and protocols

8. 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.

9. 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.

10. What is the primary purpose of Loop Guard in a network?

- A. To speed up the convergence time of STP
- B. To avoid switching loops on a port**
- C. To isolate faulty ports
- D. To send keep-alive messages

The primary purpose of Loop Guard in a network is to avoid switching loops on a port. Loop Guard is a feature of the Spanning Tree Protocol (STP) designed specifically to enhance the stability of the network by preventing unnecessary loops that can arise from topology changes. When a network device, such as a switch, loses connection to its designated port over a link, it could erroneously assume that the port is still active and continue to forward traffic. This can lead to a situation known as a bridging loop, where packets are continuously circulated between switches, causing broadcast storms and network outages. By implementing Loop Guard, a switch monitors the status of its non-designated ports. If a port that normally receives Bridge Protocol Data Units (BPDUs) stops receiving them, Loop Guard will put that port into a loop-inconsistent state rather than transitioning it to a forwarding state. This means that the port will not forward traffic, thus preventing potential loops while allowing network engineers to investigate and resolve the underlying issues that caused the loss of connectivity. This feature is particularly useful in environments where STP is already managing traffic flow and helps maintain network integrity by ensuring that loops are effectively avoided, promoting overall stability.

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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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