

JNCIS - Enterprise Routing and Switching (JNCIS-ENT) 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. When using IS-IS, to which multicast address will the peers send their hello packets?
 - A. 224.0.0.5
 - B. 224.0.0.6
 - C. 01:80:C2:00:00:14
 - D. 49.0001.0224.0000.0015.00
2. Which configuration correctly sets interface ge-0/0/4 in trunk mode, carrying VLANs v10 and v20?
 - A. A. ge-0/0/4 { unit 0 { family ethernet-switching { vlan { members [v10 v20]; } } } }
 - B. B. ge-0/0/4 { unit 0 { family ethernet-switching { port-mode trunk; vlan { members [v10 v20]; } } } }
 - C. C. ge-0/0/4 { vlan-tagging; unit 0 { family ethernet-switching { port-mode trunk; vlan { members [v10 v20]; } } } }
 - D. D. ge-0/0/4 { unit 10 { family ethernet-switching; } unit 20 { family ethernet-switching; } }
3. Which two scenarios might prevent an IS-IS adjacency from forming?
 - A. The interface MTU value is set lower than 1492.
 - B. An IP address is not configured on the lo0 interface.
 - C. There are mismatched Level 1 areas.
 - D. There are mismatched Level 2 areas.
4. What might cause an IP-IP tunnel to appear established but not transmit traffic?
 - A. The tunnel's TTL has not been modified
 - B. Configured MTU is greater than the tunnel's MTU
 - C. A route into the tunnel is not present
 - D. BGP has not been enabled between endpoints

- 5. Which three statements are correct about the processing order of firewall filters on a Junos device?**
- A. A router-based firewall filter applied to an RVI applies to switched packets in the same VLAN.**
 - B. A port-based firewall filter applied to an RVI does not apply to switched packets in the same VLAN.**
 - C. The egress processing order is router, VLAN, port.**
 - D. The ingress processing order is port, VLAN, router.**
- 6. What are three common characteristics of OSPF and IS-IS?**
- A. Both routing protocols maintain a link-state database calculated using the Dijkstra shortest path first algorithm.**
 - B. Both routing protocols use hello packets to form and maintain adjacencies.**
 - C. Both routing protocols employ distance-vector metrics to determine the best path.**
 - D. Both routing protocols support route redistribution from other protocols.**
- 7. How does root protection protect your network?**
- A. It dynamically modifies the STP bridge priority**
 - B. It ignores superior BPDUs from being accepted**
 - C. It changes protected ports to the blocking state**
 - D. It negotiates a better bridge priority than its neighbors**
- 8. Which statement best describes a routing instance on a Junos device?**
- A. A routing instance provides separation of processing resources.**
 - B. A routing instance provides control plane separation.**
 - C. A routing instance virtualizes a Junos-based device, enabling it to run multiple copies of the Junos OS on the same system.**
 - D. A routing instance is a unique collection of routing tables, interfaces, and routing protocol parameters.**

- 9. Which OSPF reference bandwidth setting would give a 1-Gbps link a metric of 10?**
- A. 10**
 - B. 1000**
 - C. 10,000,000**
 - D. 10,000,000,000**
- 10. Which OSPF LSA type is sent by all routers in an area to advertise its connected subnets?**
- A. A. router**
 - B. B. network**
 - C. C. external**
 - D. D. summary**

Answers

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

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Explanations

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1. When using IS-IS, to which multicast address will the peers send their hello packets?

A. 224.0.0.5

B. 224.0.0.6

C. 01:80:C2:00:00:14

D. 49.0001.0224.0000.0015.00

In IS-IS (Intermediate System to Intermediate System), the multicast address used for sending hello packets, which are essential for the establishment of neighbor relationships, is indeed represented by the MAC address 01:80:C2:00:00:14. This specific multicast MAC address is defined for the Link Layer Discovery Protocol (LLDP) and is utilized by IS-IS to identify multicast traffic meant for routing protocol operations. When IS-IS routers need to dynamically discover neighbors on a network segment, they use this address to send hello packets, ensuring that all IS-IS peers on the local link receive them. The use of a dedicated multicast MAC allows IS-IS to efficiently communicate with multiple neighbors without needing to address each one individually. The other listed addresses pertain to different protocols or functions within networking. For instance, the address 224.0.0.5 is used by OSPF (Open Shortest Path First) for hello packets, while 224.0.0.6 is used for OSPF designated routers. The notation "49.0001.0224.0000.0015.00" doesn't align with standard multicast operations in the context of IS-IS either. Hence, the correct focus is on

2. Which configuration correctly sets interface ge-0/0/4 in trunk mode, carrying VLANs v10 and v20?

A. `ge-0/0/4 { unit 0 { family ethernet-switching { vlan { members [ v10 v20 ]; } } } }`

B. `ge-0/0/4 { unit 0 { family ethernet-switching { port-mode trunk; vlan { members [ v10 v20 ]; } } } }`

C. `ge-0/0/4 { vlan-tagging; unit 0 { family ethernet-switching { port-mode trunk; vlan { members [ v10 v20 ]; } } } }`

D. `ge-0/0/4 { unit 10 { family ethernet-switching; } unit 20 { family ethernet-switching; } }`

The correct configuration for setting interface ge-0/0/4 in trunk mode while allowing it to carry VLANs v10 and v20 involves specifying the port mode as 'trunk' along with the VLAN membership settings. In this context, stating the port mode as 'trunk' is essential because, in trunk mode, the interface can carry traffic for multiple VLANs. By setting the port mode to 'trunk' and then specifying the VLAN members, this configuration ensures that both VLANs v10 and v20 can traverse the trunk link without any issues. The structure of the command clearly organizes the port mode and VLAN memberships within the appropriate syntax for the Ethernet switching family, making it functional and easy to interpret. The elements in other configurations might lack specific requirements or misplace elements. For instance, not declaring the port mode explicitly as 'trunk' or not utilizing the correct unit configuration would not allow proper trunking functionality. This precise arrangement in configuration B meets all requirements for the desired functionality.

3. Which two scenarios might prevent an IS-IS adjacency from forming?

- A. The interface MTU value is set lower than 1492.**
- B. An IP address is not configured on the lo0 interface.**
- C. There are mismatched Level 1 areas.**
- D. There are mismatched Level 2 areas.**

In the context of IS-IS (Intermediate System to Intermediate System) routing protocol, one important factor that can affect the formation of an IS-IS adjacency is the Maximum Transmission Unit (MTU) settings on the interfaces. When the MTU on an interface is set lower than the expected value of 1492 bytes, it can prevent adjacency from forming if the connecting routers are unable to handle the different MTU settings. IS-IS uses the MTU to ensure that it can transmit data packets without fragmentation; if one device has a different MTU size than its neighbor, it can lead to packet drops or other connectivity issues that prevent the adjacency from being established. In contrast, the other scenarios listed revolve around configurations that relate to IP addressing and area mismatches in the IS-IS hierarchy. Although having an IP address configured is generally necessary for routing, the main focus for adjacency formation in IS-IS is on the IS-IS-specific configurations, such as mismatches in Level 1 and Level 2 areas. These mismatches can indeed prevent adjacency from forming; however, the correct choice emphasizes an MTU-related issue, which is a fundamental aspect of the link layer interactions before any IS-IS states can be established. This understanding is

4. What might cause an IP-IP tunnel to appear established but not transmit traffic?

- A. The tunnel's TTL has not been modified**
- B. Configured MTU is greater than the tunnel's MTU**
- C. A route into the tunnel is not present**
- D. BGP has not been enabled between endpoints**

An IP-IP tunnel can appear established, indicating that the endpoints have successfully configured the tunnel, but may not transmit traffic if there is no proper routing in place to direct packets into the tunnel. For traffic to be sent through the tunnel, there must be a route specified in the routing table that points to the tunnel interface for the destination IP addresses that should utilize the tunnel. If a route into the tunnel is not present, the traffic destined for the target network or host will not know that it should be sent through the tunnel, leading to a situation where the tunnel is established but not actively transmitting any data. This routing configuration is critical because without it, the router won't have any instructions on how to forward the packets, resulting in silence despite an established connection. Other factors such as TTL settings, MTU configurations, or BGP relationships could impact traffic flow under different circumstances, but the fundamental need for a proper routing path into the tunnel makes the lack of a route the primary reason for the observed behavior of the tunnel appearing established yet not carrying traffic.

5. Which three statements are correct about the processing order of firewall filters on a Junos device?

- A. A router-based firewall filter applied to an RVI applies to switched packets in the same VLAN.**
- B. A port-based firewall filter applied to an RVI does not apply to switched packets in the same VLAN.**
- C. The egress processing order is router, VLAN, port.**
- D. The ingress processing order is port, VLAN, router.**

The choice stating that the egress processing order is router, VLAN, port is accurate because it reflects how traffic is handled as it leaves an interface on a Junos device. Specifically, when packets exit the device, they are first evaluated against any router-based firewall filters that might be applied. After passing through these filters, the packets are then subjected to VLAN filters, followed lastly by any port filters that may apply. This sequential approach ensures that the most general filtering (router-based) occurs before the more specific filtering (port-based), allowing for a structured and hierarchical processing of packets. This order is essential for administrators to understand when configuring firewall filters, as it affects which filters will be applied and in what sequence when traffic is processed. Recognizing this order improves their ability to troubleshoot and optimize packet filtering effectively in their network setups.

6. What are three common characteristics of OSPF and IS-IS?

- A. Both routing protocols maintain a link-state database calculated using the Dijkstra shortest path first algorithm.**
- B. Both routing protocols use hello packets to form and maintain adjacencies.**
- C. Both routing protocols employ distance-vector metrics to determine the best path.**
- D. Both routing protocols support route redistribution from other protocols.**

The correct answer highlights that both OSPF (Open Shortest Path First) and IS-IS (Intermediate System to Intermediate System) share common characteristics in their operational framework. Specifically, both protocols utilize a link-state database that is constructed based on the Dijkstra shortest path first algorithm. This foundational feature allows for the computation of the shortest paths within a network, enabling efficient routing decisions. Employing the Dijkstra algorithm means that both protocols assess the entire topology of the network rather than relying on the routes shared from neighboring routers. As each router independently builds a complete map of the network, it can make intelligent decisions based on overall network conditions instead of just local information. This enhances the convergence time and stability of the network, as any changes in the topology can be quickly propagated and reflected in the routing decisions made by the routers. While other options address valid functions and features of these protocols, they don't accurately capture this fundamental characteristic that is shared by both OSPF and IS-IS. This makes the choice that refers to the link-state database and the algorithm utilized the most accurate representation of their common operational principles.

7. How does root protection protect your network?

- A. It dynamically modifies the STP bridge priority
- B. It ignores superior BPDUs from being accepted
- C. It changes protected ports to the blocking state**
- D. It negotiates a better bridge priority than its neighbors

Root protection is designed to maintain the stability of a network by preventing certain ports from becoming designated ports during the Spanning Tree Protocol (STP) process. When root protection is configured on a switch port, it ensures that if a superior Bridge Protocol Data Unit (BPDU) is received on that port, the port will transition to the blocking state. This action effectively prevents the port from participating in the STP process, thus safeguarding against potential loops and topology changes that could disrupt the network. By blocking those ports that attempt to introduce a new root bridge—which could ultimately weaken the overall network design—root protection helps to ensure that the existing root bridge remains stable and in control. Overall, this feature is crucial for maintaining a reliable and predictable STP environment. The other options do not accurately represent the function of root protection. Modifying the STP bridge priority or negotiating bridge priorities does not inherently provide stability or protection in the same direct manner that blocking certain ports does. Ignoring superior BPDUs might seem relevant, but the essence of root protection specifically revolves around the behavior of protected ports transitioning to a blocking state.

8. Which statement best describes a routing instance on a Junos device?

- A. A routing instance provides separation of processing resources.
- B. A routing instance provides control plane separation.
- C. A routing instance virtualizes a Junos-based device, enabling it to run multiple copies of the Junos OS on the same system.
- D. A routing instance is a unique collection of routing tables, interfaces, and routing protocol parameters.**

A routing instance on a Junos device is best described as a unique collection of routing tables, interfaces, and routing protocol parameters. This definition encapsulates the fundamental purpose of a routing instance, which is to create a distinct operational domain within a single device. Routing instances allow for the segmentation of network traffic and routing policies on the same physical hardware by maintaining separate routing tables. This is particularly useful in scenarios where different networks or customers require isolation from each other, such as in service provider environments or multi-tenant data centers. Each routing instance can run its own set of routing protocols and is configured independently, which simplifies management and enhances security. The clarity and effectiveness of this framework enable the implementation of complex networking scenarios where multiple virtual routers can operate simultaneously on the same device.

9. Which OSPF reference bandwidth setting would give a 1-Gbps link a metric of 10?

- A. 10**
- B. 1000**
- C. 10,000,000**
- D. 10,000,000,000**

In OSPF (Open Shortest Path First), the reference bandwidth is a value used to calculate the OSPF cost of a link. The cost is calculated using the formula: $\text{Cost} = \text{Reference Bandwidth} / \text{Interface Bandwidth}$. To achieve a specific metric, such as a cost of 10 for a 1-Gbps link, you can set the reference bandwidth accordingly. Given that the interface bandwidth is 1 Gbps (which is equivalent to 1,000,000,000 bits per second), if you want the cost to equal 10, you can manipulate the reference bandwidth as follows: Setting the reference bandwidth to 10,000,000,000 (which is 10 Gbps) allows the OSPF cost calculation to proceed as follows: $\text{Cost} = 10,000,000,000 / 1,000,000,000 = 10$. This results in the desired OSPF metric of 10 for the 1-Gbps link. Hence, the correct setting of the reference bandwidth for achieving a metric of 10 for a 1-Gbps link is indeed 10,000,000,000.

10. Which OSPF LSA type is sent by all routers in an area to advertise its connected subnets?

- A. A. router**
- B. B. network**
- C. C. external**
- D. D. summary**

The type of OSPF LSA that is sent by all routers in an area to advertise its connected subnets is the router LSA. This is known as Type 1 LSA and is generated by each router to describe its interfaces, their states, and the networks they are connected to. It provides crucial information about the local topology within an OSPF area. Each router creates its own Type 1 LSA to communicate information about the link state and to ensure that OSPF can efficiently create a complete and accurate representation of the network topology. These LSAs are then flooded throughout the area to allow all OSPF routers to synchronize their link state databases and compute the best paths for routing. In contrast, network LSAs, which are generated by designated routers, describe the networks to which the OSPF routers are connected but do not advertise individual router connections. External and summary LSAs carry different types of routing information and are related to inter-area and external routing, rather than specific subnet information within an area, making them irrelevant for the goal of advertising interconnected subnets.

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://jncisent.examzify.com>

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