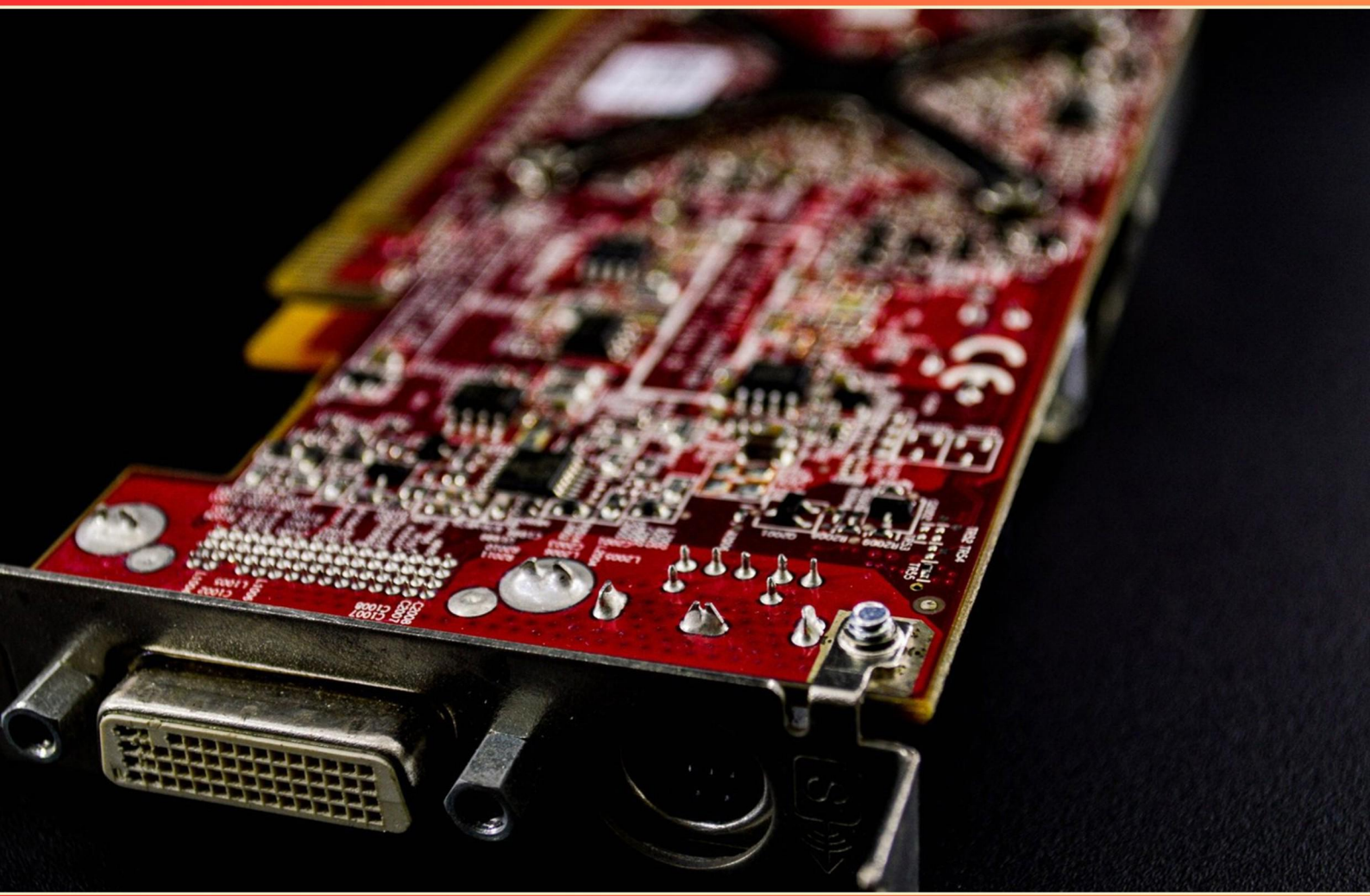
ADVANCED ROUTER TECH PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR THE FULL VERSION STUDY GUIDE

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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 command is utilized to advertise a default route into OSPF?**

   A. router ospf default

   B. default-information originate always

   C. advertise default route

   D. network default route

2. **Which command is used to configure a new TACACS+ server on a Cisco device?**

   A. tacacs server

   B. tacacs set server

   C. tacacs add server-name

   D. tacacs server server-name

3. **What command displays the current OSPF neighbor relationships on a Cisco router?**

   A. show ip ospf neighbors

   B. show ip route ospf

   C. show ospf status

   D. show ip routing ospf

4. **Which VTP modes support the extended range of VLANs?**

   A. Transparent

   B. Client

   C. Off

   D. Server

5. **What command might be part of a working EIGRP configuration on R2 to ensure R1 and R2 become neighbors?**

   A. router eigrp 99

   B. network 10.0.0.0

   C. network 10.0.0.2 0.0.0.0

   D. ip eigrp 99

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6. Which OSPF network statement will include all interfaces with an IP address of 172.16.0.0/16?

A. network 172.16.0.0 0.0.255.255 area 0

B. network 172.16.0.0 0.0.255.0 area 0

C. network 172.16.0.0 255.255.255.0 area 0

D. network 172.16.0.0 0.0.0.255 area 0

7. What could be a reason for VTP not functioning between two switches?

A. Mismatched VLAN IDs

B. Incorrect subnet mask

C. Mismatched VTP passwords

D. Faulty cables

8. In a network using RSTP, which statement about port roles is correct?

A. SW1's port Gi0/1 must be in designated port role

B. SW2's port Gi0/1 must be in an alternate port role

C. SW3's port Gi0/1 must be in a blocked role

D. SW4 must not have any root ports

9. Where does a VTP server or client store the interface voice VLAN configuration?

A. Startup-config

B. Running-config

C. Flash memory

D. ROM

10. What happens if the VTP domain name does not match on two connected switches?

A. They will not exchange VTP information

B. They will still form a trunk

C. Switches will operate in isolated mode

D. They will create a loop

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Answers

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

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Explanations

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1. Which command is utilized to advertise a default route into OSPF?

A. router ospf default

B. default-information originate always

C. advertise default route

D. network default route

The command used to advertise a default route into OSPF is "default-information originate." This command is essential because it allows a router to inject a default route (typically 0.0.0.0/0) into the OSPF routing domain. When you use this command, OSPF will advertise the default route to its neighboring routers, enabling them to know how to reach destinations that are not explicitly listed in their OSPF routing tables. The "always" keyword in the command allows the router to send out the default route even if it does not have a default route in its own routing table. This is especially useful in environments where you want all routers to have a uniform understanding of the way to reach all unknown addresses, typically directed towards a gateway or internet access point. The other options do not correctly serve the purpose of advertising a default route in OSPF. For instance, terms such as "router ospf default," "advertise default route," and "network default route" do not correspond to valid commands in OSPF configuration. Understanding the functionality and proper syntax of OSPF commands is crucial for efficient routing and network management.

2. Which command is used to configure a new TACACS+ server on a Cisco device?

A. tacacs server

B. tacacs set server

C. tacacs add server-name

D. tacacs server server-name

The command to configure a new TACACS+ server on a Cisco device is structured in such a way that it clearly identifies the server being added. The command starts with "tacacs server," which indicates that you are entering the configuration mode for specifying a TACACS+ server. Following this, you include the server name to uniquely identify the server you wish to configure. This format allows for the clear establishment of the server parameters within the device's configuration. It aligns with Cisco's command syntax, which generally involves using verbs followed by specific keywords to invoke particular functionalities or configurations. By providing the server name directly after this command, the device knows which TACACS+ server is being configured and how to refer to it in subsequent configurations or commands. The other options do not fit the established command syntax for Cisco devices. They either lack the necessary keywords or structure, rendering them ineffective for the intended purpose of configuring a TACACS+ server.

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3. What command displays the current OSPF neighbor relationships on a Cisco router?

A. show ip ospf neighbors

B. show ip route ospf

C. show ospf status

D. show ip routing ospf

The command "show ip ospf neighbors" is used to display the current OSPF (Open Shortest Path First) neighbor relationships on a Cisco router. OSPF relies on establishing adjacencies between routers to exchange routing information, and this command provides crucial details such as the state of the neighbor relationships, the router IDs of the neighbors, and their IP addresses. When executed, this command reveals a summary of the OSPF neighbors, including their current status—whether they are in a full state, which indicates they have successfully exchanged routing information and are fully adjacent. Additionally, it shows the priority and dead interval settings, which are essential for understanding how OSPF elects designated routers and maintains relationships. This command is fundamental for troubleshooting OSPF connectivity issues and ensuring that routing information is being shared effectively among routers in an OSPF network. The other commands listed do not serve the same purpose. For example, "show ip route ospf" focuses on displaying the routing table specifically for OSPF learned routes, while "show ospf status" and "show ip routing ospf" do not exist as valid commands in Cisco IOS, highlighting the specificity required in command syntax within the OSPF context.

4. Which VTP modes support the extended range of VLANs?

A. Transparent

B. Client

C. Off

D. Server

The transparent mode of VLAN Trunking Protocol (VTP) is significant because it allows a network device to pass VTP advertisements through without participating in the VTP domain. This mode enables the switch to maintain its own VLAN database independently of VTP, allowing for the configuration of extended VLANs (VLANs 1006 to 4094). In transparent mode, a switch does not synchronize its VLAN information with the other switches in the VTP domain. However, it can still forward VTP advertisements sourced from other switches while retaining its own VLAN configurations, including support for the extended range. This capability to manage an expanded set of VLANs independently makes transparent mode inherently suitable for environments where extended VLANs are required, especially in large or complex network designs.

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5. What command might be part of a working EIGRP configuration on R2 to ensure R1 and R2 become neighbors?

A. router eigrp 99

B. network 10.0.0.0

C. network 10.0.0.2 0.0.0.0

D. ip eigrp 99

The command that ensures R1 and R2 become neighbors is related to how the Enhanced Interior Gateway Routing Protocol (EIGRP) forms adjacencies between routers. When configuring EIGRP, the "network" command is critical because it tells the router which interfaces to include in the EIGRP process based on the specified IP address range. In this case, using "network 10.0.0.0" designates that any interface with an IP address that falls within the 10.0.0.0 subnet is to participate in EIGRP. This means that if R1 is within that subnet, it can potentially discover and establish a neighbor relationship with R2. For EIGRP to function correctly, both routers need to be in the same EIGRP Autonomous System (in this example, assumed to be 99) and be on directly connected networks. Other options do not wholly fulfill the requirement for establishing neighbor relationships as effectively. For instance, specifying a network with a mask (like "10.0.0.2 0.0.0.0") aligns a specific interface to EIGRP but might limit where neighbors can be formed. Similarly, "router eigrp 99" indicates the

6. Which OSPF network statement will include all interfaces with an IP address of 172.16.0.0/16?

A. network 172.16.0.0 0.0.255.255 area 0

B. network 172.16.0.0 0.0.255.0 area 0

C. network 172.16.0.0 255.255.255.0 area 0

D. network 172.16.0.0 0.0.0.255 area 0

The inclusion of all interfaces with an IP address of 172.16.0.0/16 hinges on the functionality of the OSPF network statement syntax, particularly how the wildcard mask operates in conjunction with the network address. The correct statement is designed to match all possible host addresses within the specified subnet. In this case, using the network statement "network 172.16.0.0 0.0.255.255 area 0," the wildcard mask of 0.0.255.255 indicates that the first two octets (172.16) must match exactly, while the remaining two octets can take on any value. This configuration encompasses all IP addresses from 172.16.0.0 to 172.16.255.255, effectively covering the entire /16 subnet as required. This syntax is crucial for OSPF to dynamically identify the appropriate interfaces to include in area 0, facilitating efficient routing updates and maintaining network convergence. The choice that utilizes the proper wildcard mask ensures that all interfaces within the specified range are included in OSPF routing processing. The other options either apply incorrect wildcard masks or restrict the range inappropriately, which would not match the entirety of the /16 subnet.

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7. What could be a reason for VTP not functioning between two switches?

A. Mismatched VLAN IDs

B. Incorrect subnet mask

C. Mismatched VTP passwords

D. Faulty cables

Mismatched VTP passwords can indeed prevent VTP (VLAN Trunking Protocol) from functioning effectively between two switches. VTP relies on a shared password for management and operation. If the switches do not have the same VTP password configured, they will not exchange VTP advertisements, leading to a failure in propagating VLAN information between them. When the VTP password is set differently on the switches, even if they are in the same VTP domain and connected properly, they won't be able to communicate. This will result in VLAN configurations not being synchronized as intended, which is critical for maintaining consistent VLAN information across the network. Understanding the role of the VTP password is key in troubleshooting issues in VLAN propagation; thus, ensuring that all switches have the same configuration settings, including the VTP password, is essential for a successful VTP implementation between switches.

8. In a network using RSTP, which statement about port roles is correct?

A. SW1's port Gi0/1 must be in designated port role

B. SW2's port Gi0/1 must be in an alternate port role

C. SW3's port Gi0/1 must be in a blocked role

D. SW4 must not have any root ports

In a network utilizing Rapid Spanning Tree Protocol (RSTP), each port on a switch can assume a specific role based on the network topology and the position of the switch within that topology. The alternate port role is specifically used to provide a backup path to the root bridge in case the currently active path fails. When a port is designated as an alternate port, it means that while it is not forwarding traffic, it is ready to take over if the active path (root port) goes down. This feature allows RSTP to respond quickly to changes in the network, significantly reducing the time required to re-establish a loop-free topology after a link failure. For a switch like SW2, having its port Gi0/1 in an alternate role implies that this port is not the main forwarding path to the root bridge, but it serves as a potential backup that can immediately take over if the primary path is disrupted. This is crucial to maintaining network reliability and minimizing downtime. The other roles outlined in the other options provide valid scenarios, but they do not necessarily mean that they must apply in every situation or context. The presence of designated, alternate, blocked, or root ports will vary based on the specific connections and the network's topology. Thus

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9. Where does a VTP server or client store the interface voice VLAN configuration?

A. Startup-config

B. Running-config

C. Flash memory

D. ROM

The interface voice VLAN configuration is stored in the running-config. This is because the running-config is the current operational configuration of a device, which includes configurations that have been applied or modified but not yet saved to the startup-config. When you configure a voice VLAN on an interface, that configuration is immediately applied to the device and is reflected in the running-config. If the device were to restart or lose power, this configuration would not persist unless it is saved to the startup-config. Therefore, to see the current state of the device settings, you would refer to the running-config, where all active configurations, including voice VLAN settings, are held. The startup-config, while critical for saving settings across reboots, would only contain the information that has been saved. Flash memory is used primarily for storing the operating system and other files necessary for booting, while ROM typically holds the bootstrap and basic IOS images that facilitate device initialization. Thus, the location that directly holds the interface voice VLAN configuration at any given time is the running-config.

10. What happens if the VTP domain name does not match on two connected switches?

A. They will not exchange VTP information

B. They will still form a trunk

C. Switches will operate in isolated mode

D. They will create a loop

When the VTP (VLAN Trunking Protocol) domain name does not match on two connected switches, they will not exchange VTP information. This is because VTP operates within a specific domain to manage VLAN information and the propagation of that data. For switches to share VTP updates such as adding, deleting, or modifying VLANs, they must belong to the same VTP domain. If the domain names differ, the switches cannot recognize that they are part of the same management framework, leading them to operate independently when it comes to VLAN management. Establishing a trunk between the switches is still possible even with differing VTP domain names, but without a matching domain, there will be no exchange of VTP information. This means that while the physical connection is established for VLAN tagging, they will each manage their VLANs without any synchronization, which could lead to inconsistencies in VLAN memberships across the switches. In summary, the correct answer highlights the significance of matching VTP domain names for the exchange of VLAN information, which is a crucial aspect of managing VLANs in a network environment effectively.

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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://advroutertech.examzify.com

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

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