CISCO CERTIFIED ENTRY NETWORKING TECHNICIAN (CCENT) PRACTICE EXAM (SAMPLE)

STUDY GUIDE

SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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. In an ACL, what does a final rule 'Permit all other traffic' accomplish?

A. It allows all traffic not explicitly denied by earlier rules

B. It denies all traffic not listed

C. It forwards traffic without applying the ACL

D. It only applies to inbound interfaces

2. What is a defining characteristic of a global unicast IPv6 address?

A. It is globally routable

B. It is only used on the local link

C. It is used for multicast

D. It is private and not routable

3. What is the effect of enabling port security on a switch port?

A. It encrypts all traffic on the port.

B. It enables all MAC addresses to connect with no shutdown behavior.

C. It restricts access by MAC address and can shut down the port on violations.

D. It changes the VLAN of the port dynamically to match traffic.

4. Migrating your on-premise email capability to a cloud-hosted email service offering is an example of what as a service model?

A. SaaS

B. PaaS

C. IaaS

D. DaaS

5. Which IP/mask combination would configure a router interface to create a connected route for the entire classful network 172.16.0.0/16?

A. 172.16.1.1/16

B. 172.16.1.1/24

C. 172.16.0.1/24

D. 172.16.0.1/32

6. Which statement best describes how ARP cache entries are refreshed when they age out?

A. The ARP entry ages out and must be refreshed through a new ARP request.

B. The ARP entry never expires.

C. The ARP cache stores DNS records.

D. The ARP cache only stores IPv6 addresses.

7. What type of memory do switches use to build the MAC address table?

A. CAM

B. RAM

C. ROM

D. NVRAM

8. In IPv4 subnetting, how many host addresses are available in each /20 subnet?

A. 4094

B. 1024

C. 65534

D. 256

9. How does a wildcard mask relate to an ACL and subnet mask?

A. It defines the allowed IP addresses in a route filter.

B. It is the inverse of a subnet mask and specifies the bits to match in an ACL.

C. It is identical to a subnet mask.

D. It is the difference between networks used in ACL evaluation.

10. In IPv6, what is the purpose of a default route?

A. To forward packets with destinations not in the routing table to a next-hop

B. To resolve hostnames

C. To assign IPv6 addresses to interfaces

D. To provide security filtering

Answers

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

Explanations

1. In an ACL, what does a final rule 'Permit all other traffic' accomplish?

A. It allows all traffic not explicitly denied by earlier rules

B. It denies all traffic not listed

C. It forwards traffic without applying the ACL

D. It only applies to inbound interfaces

ACLs are checked from top to bottom, and once a packet matches a rule, that rule's action is taken and processing stops. If nothing matches, the packet would be dropped by the default behavior (implicit deny). When the final rule explicitly says "permit all other traffic," it provides a catch-all that allows any traffic not matched by earlier rules. This makes the rest of the ACL effectively permissive for everything not previously denied, which is why this final rule best describes its effect. The other ideas don't fit how ACLs operate: nothing in an ACL inherently denies all unmatched traffic unless you've configured that explicit deny, ACLs are applied on the interface you bind them to (inbound or outbound), and they do affect traffic on that interface rather than forwarding without applying.

2. What is a defining characteristic of a global unicast IPv6 address?

A. It is globally routable

B. It is only used on the local link

C. It is used for multicast

D. It is private and not routable

Global unicast IPv6 addresses are designed to be reachable anywhere on the Internet. They are globally routable, assigned in blocks by regional registries, and intended for hosts that need public reachability across networks. This makes packets with these addresses forwardable across the global routing system. In contrast, an address used only on the local link isn't routable beyond that single network segment, multicast addresses target multiple destinations, and private (ULA) addresses aren't meant for global Internet reachability. So the defining trait is that it is globally routable.

3. What is the effect of enabling port security on a switch port?

A. It encrypts all traffic on the port.

B. It enables all MAC addresses to connect with no shutdown behavior.

C. It restricts access by MAC address and can shut down the port on violations.

D. It changes the VLAN of the port dynamically to match traffic.

Port security controls which devices can use a switch port by binding specific MAC addresses to that port, limiting how many unique addresses can send frames. If a frame from a MAC address that isn't allowed appears, or if the number of allowed addresses is exceeded, the switch can take a violation action, most commonly shutting the port down to prevent access. This helps protect the network from unauthorized devices and MAC spoofing. It does not encrypt traffic, does not allow every MAC address to connect, and does not dynamically change the VLAN on the port.

4. Migrating your on-premise email capability to a cloud-hosted email service offering is an example of what as a service model?

A. SaaS

B. PaaS

C. IaaS

D. DaaS

Software as a Service is being demonstrated. Migrating on-premises email to a cloud-hosted email service means you're using a ready-made email application that runs on the provider's infrastructure and is accessed over the internet. You don't manage or install the software, the servers, the storage, or the operating system; the provider handles maintenance, updates, and security. You simply use the email service, paying for and configuring it at a user level. This differs from Platform as a Service, where you're given a platform to develop or deploy your own applications, and from Infrastructure as a Service, where you rent virtual machines and recreate the stack yourself. DaaS would not fit this scenario, since the focus is on using a software application (email) rather than delivering a desktop or data service.

5. Which IP/mask combination would configure a router interface to create a connected route for the entire classful network 172.16.0.0/16?

A. 172.16.1.1/16

B. 172.16.1.1/24

C. 172.16.0.1/24

D. 172.16.0.1/32

The main idea is that a router builds a directly connected network from the IP address and the subnet mask configured on the interface. For a classful Class B network, 172.16.0.0 uses the default /16 mask (255.255.0.0). When you configure an interface with an address that falls inside 172.16.0.0/16 and use a /16 mask, the router computes the network as 172.16.0.0/16, creating a connected route for the entire classful network. Configuring 172.16.1.1 with a /16 mask does exactly this: the network becomes 172.16.0.0/16, so the router has a connected route to the whole 172.16.0.0/16 block. In contrast, a /24 mask would split into smaller networks (like 172.16.1.0/24 or 172.16.0.0/24), not the entire 172.16.0.0/16 block, and a /32 mask would only reference a single host. So the address that best creates a connected route for the entire 172.16.0.0/16 is the one with the /16 mask.

6. Which statement best describes how ARP cache entries are refreshed when they age out?

A. The ARP entry ages out and must be refreshed through a new ARP request.

B. The ARP entry never expires.

C. The ARP cache stores DNS records.

D. The ARP cache only stores IPv6 addresses.

ARP cache entries map an IPv4 address to a MAC address and are time-limited to prevent using stale hardware addresses. When an entry ages out, the next time the device needs to reach that IP, it must rediscover the MAC by sending a fresh ARP request (who-has) for that IP. The responding device provides the MAC, and the cache is updated so subsequent transmissions can proceed directly. ARP caches are not DNS caches and do not store DNS records, and ARP is used for IPv4 rather than IPv6 (which uses a different mechanism).

7. What type of memory do switches use to build the MAC address table?

A. CAM

B. RAM

C. ROM

D. NVRAM

Switches use Content-Addressable Memory (CAM) to build and search the MAC address table. When frames arrive, the switch needs to map the source (and later the destination) MAC addresses to the correct output port with ultra-fast lookups. CAM compares the incoming MAC address against all stored entries in parallel and returns the matching entry instantly, enabling per-frame forwarding at line rate. Other memory types like RAM, ROM, or NVRAM don't provide that rapid, content-driven lookup capability; RAM is generic storage with slower searches, ROM is fixed firmware storage, and NVRAM is non-volatile config storage, not suited for fast forwarding decisions.

8. In IPv4 subnetting, how many host addresses are available in each /20 subnet?

A. 4094

B. 1024

C. 65534

D. 256

In IPv4 subnetting, usable host addresses depend on how many bits are left for hosts after defining the network prefix. A /20 leaves 12 bits for hosts, so 2^12 = 4096 total addresses. Of those, two are reserved: the network address and the broadcast address, leaving 4094 usable host addresses. This is why the correct count is 4094.

9. How does a wildcard mask relate to an ACL and subnet mask?

A. It defines the allowed IP addresses in a route filter.

B. It is the inverse of a subnet mask and specifies the bits to match in an ACL.

C. It is identical to a subnet mask.

D. It is the difference between networks used in ACL evaluation.

A wildcard mask in an ACL defines which bits of an IP address must be examined and which bits can vary when deciding if a packet matches. It works as the inverse of a subnet mask: a 0 in the wildcard mask means that bit must match exactly, while a 1 means that bit can differ. In other words, wildcardMask is the bitwise inverse of subnetMask. This lets you express address ranges succinctly. For example, pairing 192.168.1.0 with a wildcard of 0.0.0.255 matches any address from 192.168.1.0 to 192.168.1.255. If you used a subnet mask of 255.255.255.0 in a routing context, the corresponding wildcard would be 0.0.0.255, illustrating the inverse relationship. A wildcard of 0.0.0.0 with a specific address matches only that exact host, while other patterns allow broader ranges. So the wildcard mask is the tool the ACL uses to specify which bits to check for a match, and its relationship to a subnet mask explains how those ranges are derived. It's not identical to a subnet mask, and it's not about defining allowed addresses by itself; it's about how the ACL evaluates whether an IP address fits the specified pattern.

10. In IPv6, what is the purpose of a default route?

A. To forward packets with destinations not in the routing table to a next-hop

B. To resolve hostnames

C. To assign IPv6 addresses to interfaces

D. To provide security filtering

A default route acts as the last-resort path for destinations not explicitly listed in the routing table. When a packet's destination doesn't match any specific route, it is forwarded to the next-hop address (or exit interface) specified by the default route, typically toward the gateway that reaches the broader network or internet. In IPv6 this is represented by the ::/0 route, which directs all non-local traffic to the configured gateway. This keeps routing tables manageable and ensures connectivity beyond the local network. Other functions—resolving hostnames, assigning IPv6 addresses to interfaces, and applying security filtering—are handled by DNS, SLAAC/DHCPv6, and firewalls/ACLs, respectively, not by the default route.

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://ciscoccent.examzify.com

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