NCTI FIELD TECH II TO III 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.

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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. **What is an important factor to consider when selecting an antenna for a specific application?**

   A. Color and style of the antenna

   B. Coverage area and type of signal pattern

   C. Distance from the power source

   D. Weather resistance ratings

2. **What type of star topology in a PON puts splitters closer to customer premises?**

   A. Centralized star

   B. Ring topology

   C. Distributed star

   D. Linear bus

3. **Why is consistency in speed and stability critical for the core layer of networks?**

   A. To support real-time applications

   B. To reduce operational costs

   C. To allow for easier troubleshooting

   D. To increase redundancy

4. **What access point (AP) details are important to specify in a WLAN site survey?**

   A. Type of operating system

   B. Location within the facility and power settings

   C. Cost of the AP units

   D. Vendor reputation

5. **How is silver satin cable typically pinned when connecting telephone equipment to wall outlets?**

   A. Cross-pinned at both ends

   B. Reversed at opposite ends

   C. Pinned straight through

   D. Wired in sequential order

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6. What is a fiber pigtail?

A. Fiber-optic cable with pre-connectorized ends

B. A connector for short fiber lengths

C. A type of fiber amplifier

D. An extension of a fiber-optic cable

7. What describes a wireless system with an access point that does not transmit the WLAN's SSID in beacon frames?

A. Open system

B. Public system

C. Closed system

D. Secure system

8. Which of the following describes the connectivity level of wireless bridges according to the OSI model?

A. Layer 1 connectivity

B. Layer 2 connectivity

C. Layer 3 connectivity

D. Layer 4 connectivity

9. What is the result of (250 x 10 to the power of -6) - (7 x 10 to the power of -5)?

A. 180 x 10 to the power of -5

B. 180 x 10 to the power of -6

C. 180 x 10 to the power of -7

D. 180 x 10 to the power of -4

10. What is WPS used for in relation to Wi-Fi networks?

A. To create a stronger signal

B. To enable connection to a Wi-Fi network without a Windows interface

C. To manage network security

D. To improve bandwidth allocation

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Answers

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

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Explanations

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1. What is an important factor to consider when selecting an antenna for a specific application?

A. Color and style of the antenna

B. Coverage area and type of signal pattern

C. Distance from the power source

D. Weather resistance ratings

When selecting an antenna for a specific application, the coverage area and type of signal pattern are critical factors. The coverage area determines how far the signal can reach and whether it can effectively serve the intended geographic region or users. Different applications might require antennas that provide wide coverage or highly directional patterns depending on whether you want to cover a broad area or focus the signal in a particular direction. The type of signal pattern is equally important because it influences how the antenna transmits and receives signals. For example, an omnidirectional antenna radiates signals in all directions and is suitable for applications where users may be located in various directions from the antenna. In contrast, a directional antenna concentrates the signal in a specific direction, which is ideal for point-to-point communications or when targeting a specific reception area. While color and style of the antenna, distance from the power source, and weather resistance ratings can all play a role in the overall selection process, they do not have as direct an impact on the antenna's functionality and suitability for a specific communication purpose as coverage area and signal pattern do. Therefore, focusing on these aspects ensures that the antenna will perform effectively in its designated application.

2. What type of star topology in a PON puts splitters closer to customer premises?

A. Centralized star

B. Ring topology

C. Distributed star

D. Linear bus

The type of star topology in a Passive Optical Network (PON) that puts splitters closer to customer premises is the distributed star topology. In this configuration, optical splitters are placed in various locations throughout the network, allowing for shorter distances between the splitter and the end user. This leads to reduced signal degradation and improved network efficiency, as the optical signal doesn't have to travel as far to reach each subscriber. The distributed nature of this topology enhances scalability and flexibility in adding new users or adapting the network to evolving demand. As the splitters are positioned closer to the customers, the overall network performance is optimized, which is particularly crucial in scenarios where high bandwidth is essential. In contrast, a centralized star generally means that all connections terminate at a single central node, which may result in longer connections to individual users and potential bottlenecks. A ring topology typically interconnects nodes in a circular format, which doesn't prioritize splitter placement near customer premises. Lastly, a linear bus layout connects all nodes along a single cable, which is not suitable for high efficiency and high-density user environments like PONs.

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3. Why is consistency in speed and stability critical for the core layer of networks?

A. To support real-time applications

B. To reduce operational costs

C. To allow for easier troubleshooting

D. To increase redundancy

Consistency in speed and stability within the core layer of networks is essential because core networks serve as the backbone for transmitting data between various network segments and devices. The core layer is responsible for aggregating traffic from multiple access networks and then forwarding this data efficiently to its destination. Real-time applications, such as video conferencing, online gaming, and VoIP services, require a reliable and continuous flow of data with minimal latency. Fluctuations in speed or stability can cause interruptions, delays, and quality degradation in these applications, leading to user dissatisfaction. Therefore, maintaining consistent performance enables these applications to function optimally, ensuring smooth and uninterrupted communication. While the other choices may address important aspects of network management, such as operational cost reduction, troubleshooting facilitation, or redundancy, they do not capture the critical need for performance consistency that directly impacts real-time applications.

4. What access point (AP) details are important to specify in a WLAN site survey?

A. Type of operating system

B. Location within the facility and power settings

C. Cost of the AP units

D. Vendor reputation

In a WLAN site survey, specifying access point details such as location within the facility and power settings is crucial for several reasons. First, the location of the access points directly influences the coverage and performance of the wireless network. An optimal placement ensures that users receive sufficient signal strength and coverage throughout the intended areas, reducing dead spots and improving overall user experience. Power settings are also essential to consider as they can affect the range and quality of the wireless signal. Adjusting power levels helps to manage interference and enables the network to accommodate various environmental factors, such as building materials and physical obstructions. By fine-tuning these settings, a technician can enhance network capacity and efficiency. In contrast, details like the type of operating system, the cost of AP units, and the vendor reputation may play a role in the selection process or budget considerations but do not directly impact the immediate performance and practicality of the deployment in the site survey phase. Thus, focusing on location and power settings is fundamental for creating a robust wireless network design.

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5. How is silver satin cable typically pinned when connecting telephone equipment to wall outlets?

A. Cross-pinned at both ends

B. Reversed at opposite ends

C. Pinned straight through

D. Wired in sequential order

The appropriate method for pinning silver satin cable, also known as 4-pair telephone cable or commonly used telephone wiring, when connecting telephone equipment to wall outlets is to reverse the pinning at opposite ends. This practice is essential in creating a proper crossover connection that helps to ensure functionality in telephone lines. Reversed pinning typically means that the wiring at one end of the cable is organized in a different sequence compared to the other end, which allows for the correct pairing of transmit and receive signals. This configuration is often necessary for delivering clear audio and ensuring reliable communication between devices, particularly in applications where devices need to communicate directly with each other, like in a telephone system. The other options suggest ways of pinning that either do not follow standard practices for connecting telephone equipment or do not facilitate the required electronic communication efficiently. Understanding the importance of reversing the pin configuration is key for anyone working in telecommunications, as it impacts signal integrity and overall system performance.

6. What is a fiber pigtail?

A. Fiber-optic cable with pre-connectorized ends

B. A connector for short fiber lengths

C. A type of fiber amplifier

D. An extension of a fiber-optic cable

A fiber pigtail is indeed a fiber-optic cable with pre-connectorized ends. This type of fiber is used primarily in telecommunication applications to facilitate connections between different components in a fiber-optic system. The pre-connectorized design simplifies installation, as it allows for quicker and easier connections compared to splicing individual fibers. By having connectors already attached, technicians can expedite the setup process, ensuring that network deployment or repairs are efficient. This is particularly beneficial in environments where minimizing downtime is essential. In contrast, the other options refer to different concepts. A connector for short fiber lengths does not accurately describe a pigtail, as pigtails are typically longer and designed to connect to other cables or devices. A type of fiber amplifier does not relate to the physical characteristics of a fiber pigtail, which does not amplify signals. An extension of a fiber-optic cable could imply a particular function, but it does not capture the essence of what a pigtail is; pigtails are not extensions but rather integral connecting components.

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7. What describes a wireless system with an access point that does not transmit the WLAN's SSID in beacon frames?

A. Open system

B. Public system

C. Closed system

D. Secure system

A wireless system that does not transmit the WLAN's SSID (Service Set Identifier) in beacon frames is referred to as a closed system. This setting enhances security by making the network less visible to potential unauthorized users, as the SSID broadcast is suppressed. In a closed system, devices must know the SSID in advance to connect. When the SSID is not visible, users cannot simply scan for available networks. This approach can help reduce the likelihood of unauthorized access attempts, although it is worth mentioning that it does not provide robust security by itself since knowledgeable attackers can still discover hidden networks through other means. Understanding this is crucial as it highlights one aspect of network security that involves not only encryption and authentication but also the visibility of the network. Other systems, such as open, public, or secure systems, do not require or enforce the same level of hidden access points as closed systems.

8. Which of the following describes the connectivity level of wireless bridges according to the OSI model?

A. Layer 1 connectivity

B. Layer 2 connectivity

C. Layer 3 connectivity

D. Layer 4 connectivity

The correct answer identifies wireless bridges as functioning primarily at Layer 2 of the OSI model, which is the Data Link layer. This layer is crucial for the management of data frames between devices on the same local area network (LAN). Wireless bridges facilitate the connection of two or more network segments by forwarding data between them based on MAC addresses, which operate at Layer 2. Layer 2 connectivity is responsible for error detection and frame synchronization, which are vital for ensuring that data is transmitted efficiently and accurately over the wireless link. Wireless bridges handle these functions by ensuring that frames are appropriately acknowledged and retransmitted if necessary. In contrast, other layers serve different purposes. Layer 1, the Physical layer, deals with the actual physical connection and transmission of raw data bits over a medium, without regards to the structure or meaning of these bits. Layer 3, the Network layer, focuses on routing and forwarding packets based on logical addressing (like IP addresses), which is not the primary role of a wireless bridge. Finally, Layer 4, the Transport layer, oversees end-to-end communication and error recovery, which again is beyond the specific responsibilities of a wireless bridge. Therefore, identifying the connectivity level as Layer 2 accurately reflects the primary function and operational scope

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9. What is the result of (250 x 10 to the power of -6) - (7 x 10 to the power of -5)?

A. 180 x 10 to the power of -5

B. 180 x 10 to the power of -6

C. 180 x 10 to the power of -7

D. 180 x 10 to the power of -4

To solve the expression (250 x 10 to the power of -6) - (7 x 10 to the power of -5), it's essential to express both terms in a consistent format, typically using the same exponent in the power of ten. First, convert the second term (7 x 10 to the power of -5) to have the same exponent as the first term. Since -5 is greater than -6, we can express it as follows: 7 x 10 to the power of -5 = 700 x 10 to the power of -6. Now, the expression looks like this: (250 x 10 to the power of -6) - (700 x 10 to the power of -6). Next, subtract the coefficients: 250 - 700 = -450. This gives us: -450 x 10 to the power of -6. To represent this result in a more standard scientific notation format, we can convert -450 into -4.5 x 10 to the power of 2 (since -450 = -4.5 x 100, and 100 is 10 squared). Therefore, we can rewrite: -450 x 10 to the power of -6

10. What is WPS used for in relation to Wi-Fi networks?

A. To create a stronger signal

B. To enable connection to a Wi-Fi network without a Windows interface

C. To manage network security

D. To improve bandwidth allocation

WPS, or Wi-Fi Protected Setup, is a standard designed to simplify the process of connecting devices to a secure wireless network. It allows users to connect devices to the Wi-Fi network without needing to manually input a password or navigate through a user interface, such as the one found in Windows. Instead, WPS provides a more straightforward method, often involving a push-button feature or a PIN entry that facilitates the connection process with minimal effort. This practical approach is particularly beneficial for devices that may not have an intuitive interface to enter long Wi-Fi passwords, thereby enhancing user experience and reducing the likelihood of errors during connection setup. While WPS does relate to security through its encrypted connections, its primary function is focused on easing the connection process for users.

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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://nctifieldtech2to3.examzify.com

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

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