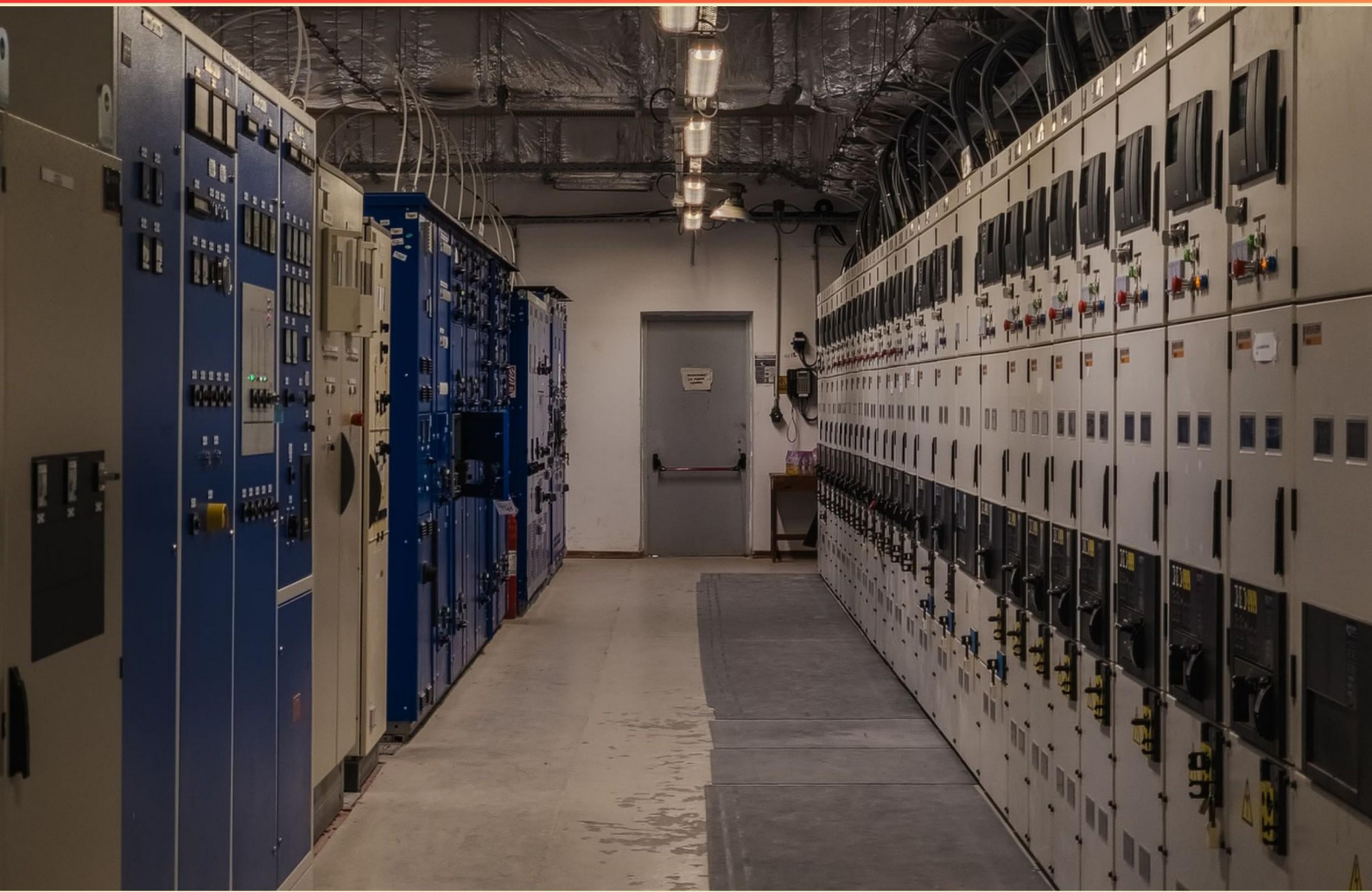


# **BCM INFORMATION TECHNOLOGY SPECIALIST (25B) PRACTICE EXAM (SAMPLE) STUDY GUIDE**



## **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.

# 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 is the function of Active Directory in a network?**
  - A. To enable remote access to mobile devices
  - B. To manage and organize network resources, including users and computers
  - C. To provide antivirus security protocols
  - D. To schedule system backups and recovery
- 2. What is one of the challenges posed by multiple devices in an electromagnetic environment?**
  - A. Enhancement of signal clarity
  - B. Combination of frequencies
  - C. Generation of noise and interference
  - D. Reduction of energy consumption
- 3. What is the role of a DNS server?**
  - A. To store user credentials securely
  - B. To translate domain names into IP addresses
  - C. To monitor network traffic
  - D. To encrypt data during transmission
- 4. In the context of the OSI model, what does the term "switching" refer to?**
  - A. Connecting physical devices
  - B. Managing data sessions
  - C. Routing data packets
  - D. Physical addressing of frames
- 5. Which OSI model layer deals with session management?**
  - A. Application Layer
  - B. Presentation Layer
  - C. Network Layer
  - D. Session Layer

- 6. What element in storytelling aids in clarifying information through visual means?**
- A. Data
  - B. Narrative
  - C. Visualization
  - D. Analysis
- 7. Which layer is responsible for ensuring reliable end-to-end communication services?**
- A. Transport layer
  - B. Network layer
  - C. Application layer
  - D. Physical layer
- 8. Which of the following describes the capability of the AN/PRC-117G in terms of data transmission?**
- A. It cannot transmit data
  - B. It transmits data only in secure mode
  - C. It supports voice and data transmissions
  - D. It is limited to local area transmission only
- 9. Which is a characteristic of Frequency Modulation (FM) compared to Amplitude Modulation (AM)?**
- A. It is easier to implement
  - B. It requires a smaller bandwidth
  - C. It is more resistant to noise
  - D. It produces lower quality signals
- 10. What are the two main parts of IP Addressing?**
- A. Network Part and Host Part
  - B. Gateway Part and Host Part
  - C. Subnet Part and Network Part
  - D. Device Part and Protocol Part



## **Answers**

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

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## **Explanations**

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## 1. What is the function of Active Directory in a network?

- A. To enable remote access to mobile devices
- B. To manage and organize network resources, including users and computers**
- C. To provide antivirus security protocols
- D. To schedule system backups and recovery

Active Directory plays a critical role in managing and organizing network resources within an organization. Its primary function is to provide a centralized location for storing information about all network resources, such as users, computers, groups, and printers. By utilizing a hierarchical structure, Active Directory allows administrators to efficiently manage permissions and access rights, ensuring that users can properly access the resources they need while maintaining security across the network. Through Active Directory, administrators can create various organizational units to better segment and manage data. This organization enhances the ability to enforce policies, apply security settings, and delegate administrative control based on the specific needs of different departments or teams. The other options, while relevant in different contexts, do not reflect the core purpose of Active Directory. Remote access, antivirus protocols, and backup scheduling are functionalities that can be facilitated in a networked environment but are not the primary purpose of Active Directory. Instead, those functions fall under different domains within IT management.

## 2. What is one of the challenges posed by multiple devices in an electromagnetic environment?

- A. Enhancement of signal clarity
- B. Combination of frequencies
- C. Generation of noise and interference**
- D. Reduction of energy consumption

In an electromagnetic environment, multiple devices can lead to the generation of noise and interference, which is a significant challenge. This occurs because various devices emit electromagnetic signals that can overlap and interact, creating unwanted disturbances in the communication signals. These interferences can result in a degradation of signal quality, making it difficult for devices to communicate effectively with one another. When multiple devices operate within the same frequency spectrum or nearby bandwidths, they can interfere with each other's operations. For example, two devices transmitting on similar frequencies can cause signal collisions or overlapping, leading to data loss, delays, or corrupted communication. This challenge emphasizes the need for effective frequency management, such as frequency hopping or spread spectrum techniques, to minimize interference and ensure reliable communications in environments saturated with multiple electromagnetic signals.

### 3. What is the role of a DNS server?

- A. To store user credentials securely
- B. To translate domain names into IP addresses**
- C. To monitor network traffic
- D. To encrypt data during transmission

The role of a DNS (Domain Name System) server is to translate domain names into IP addresses. This is essential for the functioning of the internet, as humans access websites using domain names like "www.example.com," while computers communicate using IP addresses, such as "192.168.1.1." When a user enters a domain name in a web browser, the DNS server is responsible for resolving that name to the corresponding IP address, allowing the browser to connect to the correct web server. This process occurs behind the scenes and is fundamental to navigating the internet efficiently. Without DNS servers performing this function, users would have to remember numerical IP addresses for every website they wanted to visit, which would be impractical and cumbersome. Therefore, DNS servers play a critical role in facilitating ease of access to web resources and improving user experience on the internet.

### 4. In the context of the OSI model, what does the term "switching" refer to?

- A. Connecting physical devices
- B. Managing data sessions
- C. Routing data packets
- D. Physical addressing of frames**

In the context of the OSI model, "switching" primarily refers to the way data frames are directed through a network. This involves the physical addressing of frames, specifically using MAC addresses at the Data Link Layer (Layer 2). Switches operate by examining the MAC address of incoming frames and then forwarding those frames to the appropriate port based on that address. This process is crucial for ensuring that data reaches the correct destination efficiently within a local area network (LAN). Switching enhances network performance and reduces traffic by creating dedicated communication paths between devices as needed, rather than broadcasting data to all devices. Therefore, understanding that switching is fundamentally about the physical addressing of frames helps clarify how devices on a network communicate and how data is transmitted reliably.

### 5. Which OSI model layer deals with session management?

- A. Application Layer
- B. Presentation Layer
- C. Network Layer
- D. Session Layer**

The layer of the OSI model that specifically handles session management is the Session Layer. This layer is responsible for establishing, maintaining, and terminating communication sessions between applications. It plays a crucial role in managing the dialogues between two systems, allowing for control over the conversation and ensuring that it proceeds in a structured manner. This includes managing the opening and closing of sessions, and handling the exchange of data during the course of a session to ensure that the communication can resume seamlessly if interrupted. In contrast, the Application Layer focuses primarily on providing network services to end-user applications, while the Presentation Layer is concerned with the translation of data formats and encryption/decryption tasks. The Network Layer is responsible for routing and forwarding packets of data across different networks. Each of these layers serves distinct purposes, but it is the Session Layer that is directly tied to the management of sessions in network communication.

**6. What element in storytelling aids in clarifying information through visual means?**

- A. Data
- B. Narrative
- C. Visualization**
- D. Analysis

*Visualization is a crucial element in storytelling that enhances understanding by presenting information in a visual format. By using images, graphs, charts, and other visual elements, complex data and concepts can be simplified and made more accessible. This allows audiences to grasp the main ideas quickly and effectively, as visuals can convey relationships and trends that might be more difficult to articulate through text alone. When storytelling incorporates visualization, it not only engages the audience but also highlights key points, making the information more memorable. The combination of visual cues with narrative elements creates a richer experience, as it caters to different learning styles. While data, narrative, and analysis are also important components of storytelling, they can often benefit from the clarification and impact that visualization provides.*

**7. Which layer is responsible for ensuring reliable end-to-end communication services?**

- A. Transport layer**
- B. Network layer
- C. Application layer
- D. Physical layer

*The transport layer is essential for ensuring reliable end-to-end communication services in network protocols. It provides mechanisms for error detection and correction, data flow control, and ensures the reliable delivery of messages between devices across potentially unreliable networks. This layer handles the segmentation of data and controls the sequence in which packets are sent and received, which is crucial for maintaining the integrity and order of data being transmitted. Examples of transport layer protocols include TCP (Transmission Control Protocol), which guarantees delivery and error recovery, and UDP (User Datagram Protocol), which provides a connectionless communication service. The other layers serve different purposes: the network layer is focused on routing packets between devices on different networks, the application layer is responsible for interfacing with user applications and processes, and the physical layer pertains to the transmission of raw bitstreams over a physical medium. None of these layers provide the same level of reliable communication services that the transport layer does.*

**8. Which of the following describes the capability of the AN/PRC-117G in terms of data transmission?**

- A. It cannot transmit data
- B. It transmits data only in secure mode
- C. It supports voice and data transmissions**
- D. It is limited to local area transmission only

*The chosen answer correctly highlights that the AN/PRC-117G is a versatile communication device capable of supporting both voice and data transmissions. This capability is essential for modern military communications, enabling personnel to engage in real-time exchange of information while ensuring operational effectiveness. The AN/PRC-117G's advanced technology allows for secure voice communication as well as encrypted data transfer, making it a robust tool in various tactical scenarios. The device's ability to transmit data is critical for functions such as sending situation reports, sharing intelligence, and coordinating missions among units. In comparison, other descriptions do not accurately represent the full capabilities of the AN/PRC-117G. For example, saying it cannot transmit data is incorrect as it does support data functions. The assertion that it transmits data only in secure mode overlooks the flexibility it offers in communication options. Stating that it is limited to local area transmission also fails to recognize its ability to operate over long distances, utilizing satellite and beyond-line-of-sight communications. Thus, the option indicating its support for both voice and data accurately reflects the technology's multifaceted role in tactical operations.*

**9. Which is a characteristic of Frequency Modulation (FM) compared to Amplitude Modulation (AM)?**

- A. It is easier to implement
- B. It requires a smaller bandwidth
- C. It is more resistant to noise**
- D. It produces lower quality signals

*Frequency Modulation (FM) is indeed more resistant to noise compared to Amplitude Modulation (AM). This characteristic is primarily due to the way FM encodes information. In FM, the frequency of the carrier wave varies in accordance with the amplitude of the input signal, while the amplitude of the carrier wave remains constant. This constant amplitude provides a level of immunity to signal degradation caused by noise, which often affects amplitude rather than frequency. When noise enters the signal, it may alter the amplitude, but since FM relies on frequency changes to convey information, the desired signal can remain intact. This is particularly significant in environments with various types of interference, which commonly impact AM signals. In contrast, AM signals can suffer from distortion caused by noise, as changes in amplitude can directly affect the signal's quality and clarity. Thus, when evaluating the resilience to noise, FM presents a clear advantage, making it a preferred choice for high-fidelity audio transmission and broadcasting.*

## 10. What are the two main parts of IP Addressing?

A. Network Part and Host Part

B. Gateway Part and Host Part

C. Subnet Part and Network Part

D. Device Part and Protocol Part

*The two main parts of IP addressing are known as the Network Part and the Host Part. This division is crucial because it allows for the identification of both the specific network a device is on and the individual device within that network. The Network Part of an IP address indicates the specific network segment where the device is located. It helps routers and switches to determine how to route packets across various networks. The Host Part, on the other hand, uniquely identifies a device within that network, ensuring that data sent to that network arrives at the correct endpoint. This structure is fundamental for effective IP communication, as it allows for proper routing and addressing at scale. Understanding this distinction is essential for network configuration, troubleshooting, and security purposes. Properly configuring the network and host portions of an IP address enables seamless communication between devices while managing connectivity and access 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](mailto:hello@examzify.com).

Or visit your dedicated course page for more study tools and resources:

<https://bcm25b.examzify.com>

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

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