Information System Technician (NAVEDTRA 15028) Training Series Practice Test (Sample)

Study Guide

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Questions

1. How many digits are in a single byte?

A. 4

B. 6

C. 8

D. 16

2. What is the primary function of an operating system?

A. To manage and coordinate hardware resources

B. To create user interfaces

C. To develop software programs

D. To facilitate internet browsing

3. Which type of software does the term "applications" refer to?

A. Only system software

B. Web browsers and email clients

C. Desktop applications and utilities

D. Operating systems only

4. What is the function of an extended partition?

A. To create a primary boot record

B. To utilize remaining free space on a hard drive

C. To store system files only

D. To limit the number of logical drives

5. What term is commonly used to describe storage capacity in computing?

A. Data rate

B. Memory allocation

C. Storage medium

D. Storage capacity

6. What does NIC stand for?

A. Network Interface Card

B. Network Internal Connector

C. Network Integrated Circuit

D. Network Interface Cable

7. How is the processing power of a CPU primarily measured?

- **A. By the type of programs it can run**
- **B. By the speed and amount of data it can process**
- **C. By the number of cores it has**
- **D. By the capacity of its memory cache**

8. What does API stand for, and what is its purpose?

- **A. Application Programming Interface; allows system calls to be simplified**
- **B. Abstract Programming Interface; enables web integration**
- **C. Application Programming Interface; provides consistent access to OS resources**
- **D. Active Protocol Interface; manages network communications**

9. What is the primary function of a Network Operating System (NOS)?

- **A. To design graphics**
- **B. To manage network resources**
- **C. To provide internet access**
- **D. To create spreadsheets**

10. Which of the following is NOT a type of CPU core?

- **A. Single core**
- **B. Quad core**
- **C. Hexa-core**
- **D. Octa-type**

Answers

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

Explanations

1. How many digits are in a single byte?

A. 4

B. 6

C. 8

D. 16

A single byte consists of 8 bits. Each bit can be either a 0 or a 1, which allows a byte to represent 256 different values (from 0 to 255 in decimal form). The confusion may arise when considering how we represent data; while in decimal notation we often count digits, in the context of binary and bytes, the focus is on bits and the range of values they provide. Thus, the correct understanding is that a byte itself is defined by 8 bits, making 8 the correct answer for the number of digits in a single byte.

2. What is the primary function of an operating system?

A. To manage and coordinate hardware resources

B. To create user interfaces

C. To develop software programs

D. To facilitate internet browsing

The primary function of an operating system is to manage and coordinate hardware resources. This includes overseeing the computer's CPU, memory, disk space, and peripheral devices, ensuring that all components work together efficiently and effectively. The operating system acts as an intermediary between hardware and applications, allocating resources, managing processes, and facilitating communication between software and hardware components. By handling these tasks, the operating system allows users to run applications seamlessly without having to interact directly with the hardware. This function is fundamental, as it supports the stability and performance of the entire computing environment. Understanding this role is essential because it lays the groundwork for further learning about software applications, system performance, and even network management.

3. Which type of software does the term "applications" refer to?

A. Only system software

B. Web browsers and email clients

C. Desktop applications and utilities

D. Operating systems only

The term "applications" refers to software designed to help users perform specific tasks or activities. This includes a broad range of programs that facilitate various functions, such as word processing, spreadsheet calculations, or graphic design. Desktop applications are a key part of this category and are typically installed directly on a user's computer to perform tasks ranging from office productivity to specialized software solutions. Utilities, on the other hand, are tools that help maintain, manage, or optimize the computer's functioning, such as antivirus programs, disk management tools, and backup software. Together, desktop applications and utilities encompass the wide array of software applications that users utilize daily, making this option the most accurate in defining what "applications" means. While web browsers and email clients are certainly types of applications, they are specific categories within a wider context of desktop applications and utilities, reinforcing that the term "applications" encompasses a much broader scope.

4. What is the function of an extended partition?

A. To create a primary boot record

B. To utilize remaining free space on a hard drive

C. To store system files only

D. To limit the number of logical drives

The function of an extended partition is primarily to utilize the remaining free space on a hard drive effectively. In the context of hard drive partitioning, a primary partition has certain limitations, particularly in the number of primary partitions that can exist on a single disk—typically up to four. When additional partitioning is necessary beyond these primary partitions, an extended partition serves as a solution. An extended partition acts as a container for logical drives. By creating an extended partition, users can create multiple logical drives within this partition. This allows for better management of data and makes use of the unallocated space on the hard drive. Therefore, the extended partition maximizes the available disk space, enabling the system to house more data partitions than would be possible with just primary partitions alone. In summary, the extended partition plays a crucial role in expanding the partitioning capabilities of a hard drive by efficiently utilizing leftover space.

5. What term is commonly used to describe storage capacity in computing?

A. Data rate

B. Memory allocation

C. Storage medium

D. Storage capacity

The term "storage capacity" specifically refers to the total amount of data that can be stored on a device or medium, typically measured in bytes, kilobytes, megabytes, gigabytes, and so forth. This term is often used to describe the capabilities of various storage devices, such as hard drives, solid-state drives, and removable media like USB flash drives. Understanding storage capacity is essential for anyone working with computers, as it directly affects how much information can be saved, managed, and processed. While other terms mentioned can relate to aspects of data handling or performance, they do not specifically point to the total amount of storage available on a device. For example, "data rate" generally refers to the speed at which data can be read from or written to a storage medium, while "memory allocation" deals with the distribution of memory resources in computing tasks. "Storage medium" refers to the physical device or technology that holds data, but does not quantify how much data it can hold. Thus, "storage capacity" is the most precise and relevant term for expressing the quantitative aspect of data storage.

6. What does NIC stand for?

A. Network Interface Card

B. Network Internal Connector

C. Network Integrated Circuit

D. Network Interface Cable

The term NIC stands for Network Interface Card. This device is essential in computer networking because it allows a computer or other network devices to connect to a network. The NIC can be either wired or wireless, facilitating communication between the computer and the network infrastructure. It converts digital data from the computer into a format suitable for transmission over the network and vice versa. This function is critical for enabling data exchange between devices, contributing to the overall operation of both local area networks (LANs) and broader networking environments. Understanding the role of a Network Interface Card is crucial for effective troubleshooting and network setup. It provides the necessary hardware interface for networking, which is essential in both home and enterprise environments. In contrast, the other terms listed do not accurately reflect the standard terminology or function associated with NIC in computer networking.

7. How is the processing power of a CPU primarily measured?

A. By the type of programs it can run

B. By the speed and amount of data it can process

C. By the number of cores it has

D. By the capacity of its memory cache

The processing power of a CPU is primarily measured by the speed and amount of data it can process. This is often quantified in terms of clock speed, typically expressed in gigahertz (GHz), which indicates how many cycles per second the CPU can perform. In addition to clock speed, the data bus width and throughput capabilities play a significant role in determining how much information can be processed at any given time. While the number of cores and the capacity of memory cache do contribute to a CPU's overall performance and can enhance multitasking and efficiency, the direct measure of processing power fundamentally lies in its speed and data handling capabilities. This means that a faster CPU with greater data processing capacity will typically outperform a slower one, regardless of how many cores or cache memory it possesses. Thus, option B captures the essential criteria for measuring a CPU's processing power.

8. What does API stand for, and what is its purpose?

A. Application Programming Interface; allows system calls to be simplified

B. Abstract Programming Interface; enables web integration

C. Application Programming Interface; provides consistent access to OS resources

D. Active Protocol Interface; manages network communications

The term API stands for Application Programming Interface. It refers to a set of rules and protocols for building and interacting with software applications. The primary purpose of an API is to enable different software systems to communicate with one another, providing developers with predefined methods and functions to interact with the functionalities of an operating system, service, or library. The choice that states it provides consistent access to operating system resources is accurate because APIs abstract the complexities of system calls, enabling programmers to perform operations without needing to understand the underlying system internals. APIs ensure that developers can achieve consistent results across different systems while accessing the same underlying features, which is crucial for building applications that function on various platforms or use different programming languages. In contrast, options that reference other types of interfaces or functionalities do not capture the full scope and definition of what an API is intended to do or how it operates within software communication.

9. What is the primary function of a Network Operating System (NOS)?

A. To design graphics

B. To manage network resources

C. To provide internet access

D. To create spreadsheets

The primary function of a Network Operating System (NOS) is to manage network resources. A NOS facilitates the communication and resource sharing among devices on a network, allowing different computers and devices to manage and coordinate their activities effectively. This includes handling tasks such as user authentication, data management, file sharing, and printer access, ensuring that all connected devices can work seamlessly together. While providing internet access may be a feature of a NOS, it is not its primary purpose, as internet access can be achieved through routers and other network devices independently of the operating system. Designing graphics and creating spreadsheets are specific applications that typically run on user-end software rather than functions intrinsic to a Network Operating System, which focuses on network connectivity and resource management.

10. Which of the following is NOT a type of CPU core?

A. Single core

B. Quad core

C. Hexa-core

D. Octa-type

The term "Octa-type" is not recognized within the context of CPU cores. Generally, CPU cores are classified based on the number of individual cores they possess, which directly affects their processing capabilities. A "single core" refers to a CPU that has one core to handle tasks. As technology advanced, "quad core" describes processors with four cores, allowing for better multitasking and performance. Similarly, "hexa-core" refers to six cores in a CPU, and "octa-core" typically indicates eight cores. Each of these types illustrates an increasing number of cores that enhance performance by allowing more simultaneous processes and thread handling. The presence of "Octa-type" as a choice indicates a misunderstanding or mislabeling within CPU terminology since the correct term would be "octa-core." Therefore, when identifying what is not a type of CPU core, "Octa-type" stands out as the only incorrect option in this context.