Operating System Modes Comparison

Computer Science · Practice Test · 19 Questions

1. What are the two main modes of operation in an operating system described in the text?

A) User Mode and Application Mode
B) Kernel Mode and Driver Mode
C) User Mode and Kernel Mode
D) System Mode and Hardware Mode

2. In Windows, which component resides in User Mode?

A) Operating System Kernel
B) Drivers
C) Applications
D) Hardware Abstraction Layer

3. In Windows, which components are part of Kernel Mode?

A) Applications
B) User-Mode Drivers
C) Windows API
D) Kernel-Mode Drivers

4. What does the Windows API (Application Programming Interface) facilitate?

A) Direct hardware access
B) Communication between user-mode and kernel-mode
C) Kernel-mode driver support
D) Process scheduling

5. What is the primary function of the Operating System Kernel in Windows?

A) Running user applications
B) Managing hardware access directly
C) Providing exported driver support routines
D) Acting as the core of the OS

6. In the Linux Operating System diagram, what is the term used for the environment where applications and system libraries run?

A) Kernel Space
B) User Space
C) Hardware Abstraction Layer
D) Virtual File System

7. Which component in Linux is responsible for managing memory?

A) Process Scheduler
B) Memory Manager
C) File System
D) Inter-Process Communication

8. What is the role of the Process Scheduler in the Linux Operating System?

A) Managing file storage
B) Allocating memory to processes
C) Determining which process runs next
D) Handling communication between processes

9. What does the Hardware Abstraction Layer (HAL) in Linux do?

A) Manages network interfaces
B) Provides a consistent interface to hardware
C) Schedules processes
D) Handles inter-process communication

10. Which of the following is NOT explicitly listed as a component within the Linux Kernel Space in the diagram?

A) Memory Manager
B) File System
C) Applications
D) Process Scheduler

11. The provided image links are for illustrations of which concepts?

A) Linux kernel structure and Windows OS modes
B) CPU and RAM components
C) Network interface and file system examples
D) Application development and system calls

12. What is a common characteristic of both Windows and Linux operating systems in terms of their architecture?

A) They both exclusively use user mode
B) They both have distinct user and kernel modes
C) They do not interact with hardware
D) They lack a kernel

13. What does 'API' stand for in the context of the Windows Operating System?

A) Application Processing Interface
B) Advanced Programming Interface
C) Application Programming Interface
D) Automated Process Interaction

14. In the context of operating systems, what is a 'driver'?

A) A type of application
B) A program that allows the OS to interact with hardware
C) A component of the user interface
D) A mechanism for inter-process communication

15. Which part of the Linux OS handles communication between different processes?

A) Virtual File System
B) Inter-Process Communication
C) Hardware Abstraction Layer
D) Network Interface

16. The diagram for the Linux Operating System shows 'Applications, System Libraries' residing in which space?

A) Kernel Mode
B) User Space
C) Hardware Layer
D) Driver Space

17. What does the 'Virtual File System' in Linux abstract?

A) The physical location of files
B) The network connection
C) The processor speed
D) The amount of RAM

18. What is the purpose of 'Exported Driver Support Routines' in the Windows Operating System Kernel?

A) To allow user applications to access hardware directly
B) To provide services that kernel-mode drivers can use
C) To manage the user interface
D) To schedule tasks

19. Which of the following are listed as hardware components in the diagrams?

A) Applications, Drivers
B) CPU, RAM, IO
C) API, Kernel
D) Drivers, System Libraries