

Questions:

1. **Which layer of an operating system is responsible for managing hardware resources?**
 - A) Application Layer
 - B) System Call Interface
 - C) Kernel
 - D) User Interface
2. **What is the primary function of the shell in an operating system?**
 - A) To manage memory allocation
 - B) To provide a command-line interface for user interaction
 - C) To handle system calls
 - D) To manage file systems
3. **In which operating system structure is the kernel divided into multiple distinct modules?**
 - A) Monolithic Kernel
 - B) Microkernel
 - C) Hybrid Kernel
 - D) Exokernel
4. **Which of the following is NOT typically a part of an operating system's kernel?**
 - A) Process Management
 - B) Memory Management
 - C) User Interface
 - D) Device Drivers
5. **What is the main advantage of a microkernel architecture over a monolithic kernel?**
 - A) Better performance due to less overhead
 - B) More modular and easier to maintain
 - C) Direct hardware access
 - D) Reduced complexity in user-space applications
6. **Which layer of the operating system provides services to user applications and manages system calls?**
 - A) Kernel
 - B) User Space
 - C) System Call Interface
 - D) Device Drivers
7. **What role does the operating system's scheduler play?**
 - A) Allocates memory to processes
 - B) Manages input and output devices
 - C) Determines the order in which processes are executed
 - D) Provides a graphical user interface
8. **In an operating system, what is the purpose of a process control block (PCB)?**
 - A) To store user application data
 - B) To keep track of the status and context of processes
 - C) To manage device drivers
 - D) To handle file system operations
9. **Which of the following is a characteristic of a hybrid kernel?**
 - A) Combines features of both microkernels and monolithic kernels
 - B) Operates with a single large kernel module
 - C) Segregates all kernel services into user space

- D) Provides direct access to hardware without an abstraction layer
10. Which of the following components is responsible for managing file systems in an operating system?
- A) Shell
 - B) System Call Interface
 - C) File System Manager
 - D) Network Interface