

Operating System Fundamentals

Computer Science · Answer Key · 23 Questions

1. What is the primary role of an Operating System?

- A) To manage user applications only
- B) To act as an interface between hardware and the user**
- C) To design new hardware components
- D) To provide internet connectivity

2. Which of the following is NOT a major functionality of an Operating System?

- A) Process management
- B) Memory management
- C) Hardware design**
- D) File management

3. What is a program in execution called?

- A) A process**
- B) A thread
- C) A task
- D) A module

4. Who decides the order in which multiple processes get access to the processor?

- A) The user
- B) The hardware
- C) The Operating System**
- D) The compiler

5. For a program to execute, it must first be loaded into:

- A) Secondary storage
- B) The hard disk
- C) Main memory**
- D) The CPU cache

6. Which OS component is responsible for managing devices like I/O devices?

- A) File management
- B) Process management
- C) Device management**
- D) Network management

7. What is the process of controlling the flow of data into and out of a computer system called?

- A) Device management
- B) I/O management**
- C) Memory management
- D) Process management

8. Which OS strategy allows certain devices to access main memory without CPU intervention?

- A) Polling
- B) Interrupt-driven I/O
- C) Direct Memory Access (DMA)**
- D) Buffering

9. What is the smallest addressable unit in the disk?

- A) A block
- B) A sector
- C) A file**
- D) A directory

10. Which OS function maintains the integrity of data stored in files and protects unauthorized access?

- A) Process management
- B) Memory management
- C) File management**
- D) Network management

11. What connects two or more computing devices for transmitting and sharing information?

- A) A file system
- B) A network**
- C) A device driver
- D) A user interface

12. What hardware component connects a computer to a network?

- A) CPU
- B) RAM
- C) NIC (Network Interface Card)**
- D) Hard Disk Drive

13. Who ensures that data reaches its desired destination safely in a network?

- A) The user
- B) The hardware
- C) The Operating System**
- D) The compiler

14. What technique involves breaking down a complex system into smaller, manageable parts called modules?

- A) Abstraction
- B) Encapsulation
- C) Modularity**
- D) Inheritance

15. Which of the following is a major component of an OS that manages process, device, and memory management?

- A) User Interface
- B) System Utilities
- C) Device Drivers
- D) Kernel**

16. What component of an OS is a program that receives requests from users and interprets them for the OS?

- A) Kernel
- B) Device Drivers
- C) User Interface**
- D) System Utilities

17. Which OS component helps in managing system resources like disk space and ensures security?

- A) Kernel
- B) User Interface
- C) Device Drivers
- D) System Utilities**

18. A program P is stored on the hard disk. Is P a process?

- A) Yes
- B) No**
- C) Only if it's running
- D) It depends on the OS

19. When a user starts running program P, P becomes a:

- A) Program
- B) Process**
- C) File
- D) Module

20. If an internet browser opens first and a text editor second, what is the state of the text editor while waiting?

- A) Running
- B) Terminating
- C) Waiting**
- D) Ready

21. Can a CPU execute a program without using the main memory?

- A) Yes
- B) No**
- C) Only for simple programs
- D) It depends on the OS

22. Jack connects a new mouse to his desktop and it works. How did the OS get updated about the new mouse?

- A) The mouse sends the update itself
- B) The user manually installs drivers
- C) The OS detects the new hardware**
- D) The mouse communicates directly with the CPU

23. If two processes request to print but only one printer is available, who decides which process prints first?

- A) The processes themselves
- B) The user
- C) The Operating System**
- D) The printer hardware