

Chapter 1

Multiple Choice

1. In what way is an operating system like a government?
 - A) It seldom functions correctly.
 - B) It creates an environment within which other programs can do useful work.
 - C) It performs most useful functions by itself.
 - D) It is always concerned primarily with the individual's needs.
2. ____ operating systems are designed primarily to maximize resource utilization.
 - A) PC
 - B) Handheld computer
 - C) Mainframe
 - D) Network
3. The most common secondary storage device is ____.
 - A) random access memory
 - B) solid state disks
 - C) tape drives
 - D) magnetic disk
4. Which of the following would lead you to believe that a given system is an SMP-type system?
 - A) Each processor is assigned a specific task.
 - B) There is a boss-worker relationship between the processors.
 - C) Each processor performs all tasks within the operating system.
 - D) None of the above
5. A ____ can be used to prevent a user program from never returning control to the operating system.
 - A) portal
 - B) program counter
 - C) firewall
 - D) timer
6. Embedded computers typically run on a ____ operating system.
 - A) real-time
 - B) Windows XP
 - C) network
 - D) clustered
7. Bluetooth and 802.11 devices use wireless technology to communicate over several feet, in essence creating a ____.
 - A) local-area network
 - B) wide-area network

- C) small-area network
- D) metropolitan-area network

8. A clustered system ____.

- A) gathers together multiple CPUs to accomplish computational work
- B) is an operating system that provides file sharing across a network
- C) is used when rigid time requirements are present
- D) can only operate one application at a time

9. Which of the following is a property of peer-to-peer systems?

- A) Clients and servers are not distinguished from one another.
- B) Separate machines act as either the client of the server but not both.
- C) They do not offer any advantages over traditional client-server systems.
- D) They suffer from the server acting as the bottleneck in performance.

10. Two important design issues for cache memory are ____.

- A) speed and volatility
- B) size and replacement policy
- C) power consumption and reusability
- D) size and access privileges

11. What are some other terms for kernel mode?

- A) supervisor mode
- B) system mode
- C) privileged mode
- D) All of the above

12. Which of the following statements concerning open source operating systems is true?

- A) Solaris is open source.
- B) Source code is freely available.
- C) They are always more secure than commercial, closed systems.
- D) All open source operating systems share the same set of goals.

13. Which of the following operating systems is not open source?

- A) Windows
- B) BSD UNIX
- C) Linux
- D) Ubuntu

14. A ____ provides a file-system interface which allows clients to create and modify files.

- A) compute-server system
- B) file-server system
- C) wireless network
- D) network computer

15. _____ is a set of software frameworks that provide additional services to application

developers.

- A) System programs
- B) Virtualization
- C) Cloud computing
- D) Middleware

16. Which of the following statements is false?

- A) Mobile devices must be concerned with power consumption.
- B) Mobile devices can provide features that are unavailable on desktop or laptop computers.
- C) The difference in storage capacity between a mobile device and laptop is shrinking.
- D) Mobile devices usually have fewer processing cores than a standard desktop computer.

17. A(n) _____ is the unit of work in a system.

- A) process
- B) operating system
- C) timer
- D) mode bit

18. The two separate modes of operating in a system are

- A) supervisor mode and system mode
- B) kernel mode and privileged mode
- C) physical mode and logical mode
- D) user mode and kernel mode

True/False

- 19. The operating system kernel consists of all system and application programs in a computer.
- 20. Flash memory is slower than DRAM but needs no power to retain its contents.
- 21. A system call is triggered by hardware.
- 22. UNIX does not allow users to escalate privileges to gain extra permissions for a restricted activity.
- 23. Processors for most mobile devices run at a slower speed than a processor in a desktop PC.
- 24. Interrupts may be triggered by either hardware or software
- 25. A dual-core system requires each core has its own cache memory.
- 26. Virtually all modern operating systems provide support for SMP
- 27. Solid state disks are generally faster than magnetic disks.
- 28. Solid state disks are considered volatile storage.
- 29. There is no universally accepted definition of an operating system.