

chapter 1

Indicate whether the statement is true or false.

1. A PC power supply adjusts the 110-volt AC, found in your office or home, to the various alternating current levels required by a PC.
 - a. True
 - b. False
2. The system board contains the logic circuitry that performs the instructions of a computer's applications.
 - a. True
 - b. False
3. Most types of random access memory are considered volatile and do not require a constant flow of electricity to preserve its contents.
 - a. True
 - b. False
4. The use of software that enables the physical hardware of a PC to be simulated is referred to as virtualization.
 - a. True
 - b. False
5. ESD is the discharge of static electricity between two conductors of different potential.
 - a. True
 - b. False

Indicate the answer choice that best completes the statement or answers the question.

6. Which of the following devices would NOT be considered a communication device and support the transmission of data between devices?
 - a. modulator-demodulator
 - b. NIC
 - c. Ethernet
 - d. wireless adapter
7. Which component is found in modern video adapters to allow the adapter to store images for the display?
 - a. RAM
 - b. ROM
 - c. CMOS
 - d. BIOS
8. Which computer component can be described as a printed circuit that can be inserted into a system board to add additional functionality to a PC?
 - a. power supply
 - b. expansion card

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- c. CPU socket
- d. com port

9. Which of the following is referred to as the guest operating system when using virtualization software?

- a. OS running on the physical machine
- b. OS that is available through multiboot installations
- c. OS running on the virtual machine
- d. OS that is accessed remotely

10. Which type of printer uses the same kind of technology found in copy machines?

- a. dot matrix
- b. ink-jet
- c. laser jet
- d. laser

11. Which type of computer monitor utilizes two sheets of polarizing material to encompass a liquid crystal solution?

- a. LED panel
- b. CRT monitor
- c. CRT panel
- d. LCD panel

12. Which type of connector was developed to simplify the connection of peripheral devices to a PC?

- a. DVI
- b. Universal Serial Bus
- c. RJ-45
- d. HDMI

13. Which networking cable connector, compatible with eight-wire twisted pair cable, is the standard Ethernet connector?

- a. RJ-45
- b. USB
- c. RJ-11
- d. DVI

14. Before you begin to clean the inside of a PC case, it is important to take precaution and complete what critical first step?

- a. discharge all static electricity
- b. power down the PC
- c. ground the PC case
- d. disconnect the power cord

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15. Which controller type transfers data bits over multiple data lines in parallel?

- a. USB controller
- b. SAS controller
- c. SATA controller
- d. PATA controller

16. Which is a common storage device that uses lasers to produce light to store data on devices such as DVDs and Blu-ray disks?

- a. tape drive
- b. flash drive
- c. magnetic drive
- d. optical drive

17. Which of the following terms refers to the size and configuration of a computer case?

- a. physical arrangement
- b. case factor
- c. case specifications
- d. form factor

18. Which of the following video cable connectors has 29 pins and can be directly converted to HDMI format?

- a. VGA
- b. DVI
- c. USB
- d. LED

19. Which of these PC components is NOT considered a peripheral device?

- a. pointing device
- b. sound adapter
- c. keyboard
- d. printer

20. Which of the following is NOT found on a system board?

- a. AC power connectors
- b. processor socket
- c. SATA connectors
- d. DIMM sockets

21. You have just received a new laptop computer to enhance your company's digital security. You have just noticed a recessed small glass device adjacent to the touch pad. What is the most likely function of this new device?

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- a. light sensor
- b. fingerprint scanner
- c. retina scanner
- d. on/off button

22. Which specific type of expansion card slot allows for different physical size slots and utilizes up to x16 lanes?

- a. PCIx1
- b. PCI-x
- c. PCI-16
- d. PCI Express

23. Which of the following PC hardware components encompasses a set of circuits to transfer data from one part of the computer to another?

- a. microprocessor
- b. RAM
- c. firmware
- d. system board

24. Which of the following connection types would NOT be found on a PC to connect a hard drive?

- a. SATA
- b. SCSI
- c. USB
- d. DIMM

25. Which data cable uses four or six pins and is commonly used for connecting portable devices, such as camcorders?

- a. eSATA
- b. USB
- c. IEEE 1394
- d. FireCable

26. What type of storage media does a digital video camera utilize to store frames?

- a. optical drive
- b. NIC
- c. digital card
- d. modem

27. The rectangular connector that is found on every Standard USB connector is identified by what official name?

- a. USB-A

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- b. Mini-USB
- c. USB-C
- d. USB-B

28. Which of the following accurately describes how to clean an LCD panel?

- a. Use a clean cloth with a mild cleaning solution
- b. Use a clean and dry lint free cloth only
- c. Use a lint free cloth with water
- d. Use a lint free cloth with an ammonia base solution

29. Which type of memory is erasable by exposing it to an electrical charge?

- a. EPROM
- b. ROM
- c. EEPROM
- d. PROM

30. What type of storage device uses flash memory to store data for backup or transfers between PCs?

- a. optical drive
- b. USB drive
- c. hard drive
- d. tape drive

Match each item with a statement below.

- a. RS-232
- b. memory
- c. PCI slot
- d. system board
- e. bus
- f. RAM
- g. expansion card
- h. ROM
- i. firmware
- j. microprocessor

31. An industry-accepted standard for serial communications

32. An area where data can be stored and retrieved

33. A connector on a system board used to insert an adapter card

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34. The main circuit board that contains a PC's primary components
35. The set of hardware lines used to transfer data among the components of a PC
36. Semiconductor memory that can be read or written by the microprocessor or other devices
37. Circuit card that is plugged into a PC's bus to add extra functions
38. A semiconductor circuit in which data is permanently installed by the manufacturer
39. Software routines that are stored in read-only memory
40. Central processing unit (CPU) on a single chip

41. Explain why some computer components may need special handling and care when being discarded.
42. List and describe the function of at least five different PC hardware components.
43. List and describe three different types of communication devices that support data transmission from one PC to another.
44. Describe the purpose of two different types of expansion cards.
45. Describe the role and importance of a computer's power supply.
46. Describe the difference between an SSD drive and a USB drive.
47. List three advantages of using virtualization software versus adding additional physical computers.
48. Describe two or more possible hazards found when maintaining a computer.
49. Describe the difference between computer input and output devices. Name a specific input and output device.
50. Describe the difference between a guest operating system and a host operating system, with respect to virtual machines.

Name _____ Class _____ Date _____
: _____ : _____ e: _____

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Answer Key

1. False
2. False
3. False
4. True
5. True
6. c
7. a
8. b
9. c
10. d
11. d
12. b
13. a
14. d
15. d
16. d
17. d
18. b
19. b
20. a
21. b
22. d
23. d
24. d

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25. c

26. c

27. a

28. c

29. c

30. b

31. a

32. b

33. c

34. d

35. e

36. f

37. g

38. h

39. i

40. j

41. Many PC components contain harmful ingredients and toxins, including lead, mercury, arsenic, cadmium, selenium, and hexavalent chromium. These toxins can cause allergic reactions, brain damage, and cancer.

42. Power supply-Provides the necessary voltages.

Cooling system-Removes the heat generated by the PC.

System board-The main circuit board for the PC.

Microprocessor-The central processing unit (CPU) for the PC.

Memory-The electronic holding area for programs and data.

Firmware-Computer programming instructions in read-only memory, used to test and start the PC.

Ports-Used to connect external devices to the PC.

Adapters-Cards that provide capabilities to the PC.

43. Modem is short for modulator-demodulator. A cable modem enables extremely fast access to the World Wide Web. A network interface card is an expansion board that you insert into a computer so that it can be connected to a local area network (LAN).

A wireless adapter permits a mobile user to connect to a LAN through a wireless (radio) connection. Access is similar to NIC access, but a

wireless adapter allows more freedom of movement.

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44. Video adapters allow the computer to have display capabilities. These capabilities, however, depend on both the logical circuitry and the display monitor. A sound adapter, which is also called a sound board or sound card, is an adapter card that records and plays back sound. Sound adapters support both digital audio and Musical Instrument Digital Interface (MIDI) formats.

Sound cards provide an input port for a microphone or other sound source and output ports for speakers and amplifiers.

45. The power supply converts the 110-volt alternating current (AC) in your office or household (220 volts in some countries) to the various direct current (DC) levels required by your PC. The power supply provides clean power feeds to the components in your computer: the system board, disk drives, cooling fans, and so on.

46. Solid-state drives (SSDs) use electronic circuits for storage and do not have moving parts, which allows faster access to data.

SSDs have several advantages, including lower power consumption, which can improve battery life in portable.

A USB drive is a small, portable flash memory device that plugs into any computer with a USB port and functions as a portable drive with up to 1 TB of storage capacity. These drives have less storage capacity than an external hard drive, but they are smaller and more durable because they have no internal moving parts. computers.

47. Multiple guest operating systems can be installed on one host operating system.

Virtual machines eliminate the need for additional costly computers or creating unwieldy multiboot installations.

Changes you make in virtual machines do not affect your physical computer.

Snapshots of the virtual machine's state can also be saved. The snapshot allows you to revert to a previous point in time, reversing any changes made inside the guest operating system since that snapshot.

48. The interiors of PC power supplies, monitors, and laser printers contain capacitors that may retain a charge long after power is removed from a circuit; this charge can cause damage to connected equipment and shock and individual. While CRTs are becoming a rarity, it is important to know that the voltages inside a CRT monitor can kill you! Another dangerous part of the monitor is the flyback transformer, which generates up to 20,000 volts.

49. Input devices feed data into the PC. Examples include keyboards, pointing devices, biometric devices, and digital/video cameras. Output devices such as monitors and printers provide output from a PC.

50. The guest operating system is the OS running on the virtual machine. The guest operating system is isolated completely from the host operating system that is running the virtualization software on a physical computer.