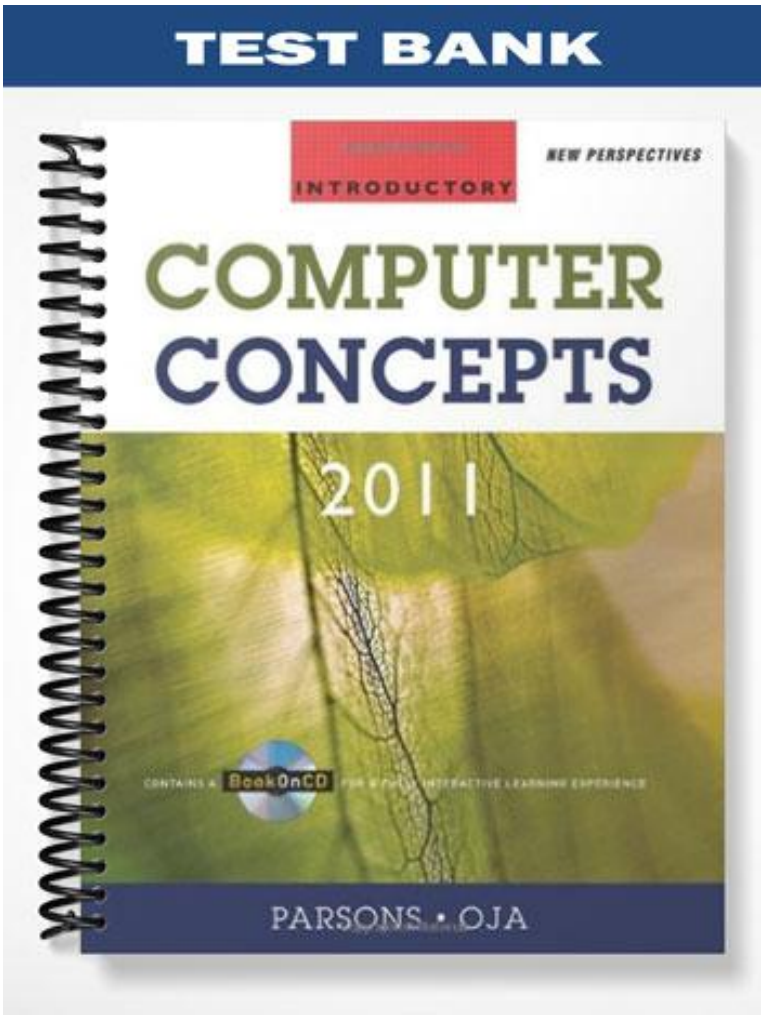
TEST BANK


INTRODUCTORY
NEW PERSPECTIVES
COMPUTER CONCEPTS
2011
PARSONS • OJA

Chapter 2: Computer Hardware

TRUE/FALSE

1. The system unit is the case that holds the main circuit boards, microprocessor, memory, power supply, and storage devices of a personal computer system.

   ANS: T PTS: 1 REF: 57

2. The term "form factor" refers to the size and dimensions of a component, such as a system board.

   ANS: T PTS: 1 REF: 58

3. Currently, there are three personal computer platforms: PC, Mac, and Linux.

   ANS: T PTS: 1 REF: 64

4. You can easily identify the microprocessor when looking inside a computer, as it is the only chip on the motherboard.

   ANS: F PTS: 1 REF: 67

5. A microprocessor's clock speed is equal to the number of instructions it can execute in one second.

   ANS: F PTS: 1 REF: 67|68

6. Processors with a smaller word size can process more data during each processor cycle.

   ANS: F PTS: 1 REF: 68

7. A fast front side bus moves data quickly and allows the processor to work at full capacity.

   ANS: T PTS: 1 REF: 68

8. All other things being equal, a computer with a 933 MHz processor is faster than a computer with a 3.3 GHz processor.

   ANS: F PTS: 1 REF: 68

9. A RISC processor has a complex instruction set, each requiring several clock cycles for execution.

   ANS: F PTS: 1 REF: 69

10. Most processors in today's personal computers use RISC technology.

    ANS: F PTS: 1 REF: 69

11. RAM is volatile, which means it must constantly receive electric power to hold data.

    ANS: T PTS: 1 REF: 72

12. Currently, hard drive capacity is measured in gigabytes (GB) or terabytes (TB).

ANS: T PTS: 1 REF: 79

13. The speed of CD, DVD and Blu-ray drives are all measured on the same scale, based upon the original 1.2 megabits per second data transfer rate of the first CD drives.

ANS: F PTS: 1 REF: 82

14. DVD-RW technology allows you to write data to a disc, and then later change that data.

ANS: T PTS: 1 REF: 83

15. A card reader is a storage device that is used to read from and write to solid state storage cards, like SecureDigital (SD) and CompactFlash cards.

ANS: T PTS: 1 REF: 84

16. The item in the accompanying figure is a portable storage device featuring a built-in connector that plugs directly into a computer's USB port.

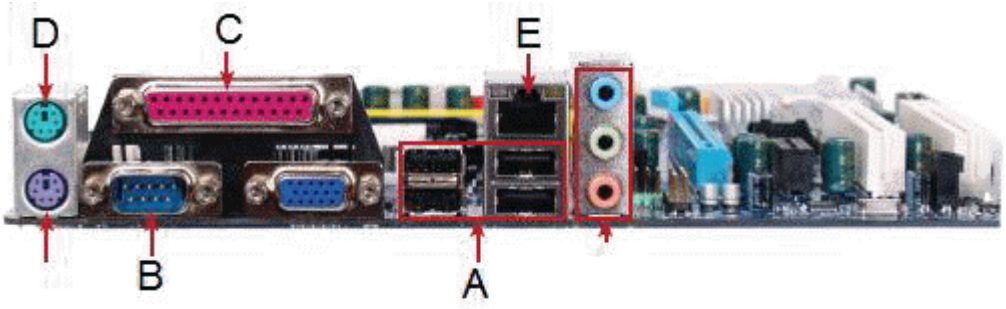
ANS: T PTS: 1 REF: 85

17. A keyboard is an example of a pointing device.

ANS: F PTS: 1 REF: 88

18. A touch screen, also known as a touch-sensitive screen, can serve as both an input and output device.

ANS: T PTS: 1 REF: 89|90



19. The item marked D in the accompanying figure is a speaker jack.

ANS: F PTS: 1 REF: 95

20. The item marked E in the accompanying figure is an Ethernet network port.

ANS: T PTS: 1 REF: 95

MODIFIED TRUE/FALSE

1. The microprocessor is the most important component of a computer, and usually the most expensive single component. _____

ANS: T PTS: 1 REF: 67

2. RAM circuitry holds "hard-wired" instructions that are a permanent part of the circuitry. _____

ANS: F
ROM
Read-only memory
Read-only memory (ROM)
ROM (Read-only memory)

PTS: 1 REF: 73

3. RAM speed is often expressed in nanoseconds (ns) or megahertz (MHz). _____

ANS: T PTS: 1 REF: 73

4. The more data and programs that can fit into EEPROM, the less time your computer will spend moving data to and from virtual memory. _____

ANS: F
RAM
Random Access Memory
Random Access Memory (RAM)
RAM (Random Access Memory)

PTS: 1 REF: 75

5. Access time is the amount of data a storage device can move each second from the storage medium to the computer. _____

ANS: F, Data transfer rate

PTS: 1 REF: 77

6. Sequential access is the ability of a device to "jump" directly to requested data. _____

ANS: F, Random access

PTS: 1 REF: 77

7. Storage mass is the maximum amount of data that can be stored on a storage medium. _____

ANS: F, capacity

PTS: 1 REF: 77

8. EIDE, Ultra ATA, SCSI and DMA refer to the different types of controllers used by hard disk drives. _____

ANS: T PTS: 1 REF: 79

9. CDs and DVDs are examples of magnetic storage media. _____

ANS: F, optical

PTS: 1 REF: 81

10. Internal drive bays provide access from outside the system unit. _____

ANS: F, External

PTS: 1 REF: 86

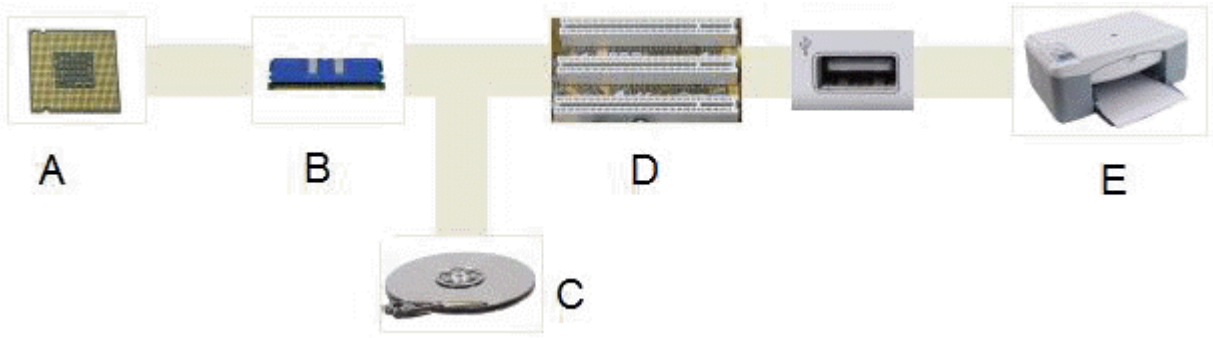
11. On a display device, the refresh rate is the distance in millimeters between like-colored pixels, and is a measure of picture clarity. _____

ANS: F, Dot pitch

PTS: 1 REF: 90

12. The number of horizontal and vertical pixels that a device displays on a screen is referred to as its resolution. _____

ANS: T PTS: 1 REF: 91



13. In the accompanying figure, the microprocessor is shown in picture B. _____

ANS: F, A

PTS: 1 REF: 94

14. In the accompanying figure, expansions slots are shown in picture D. _____

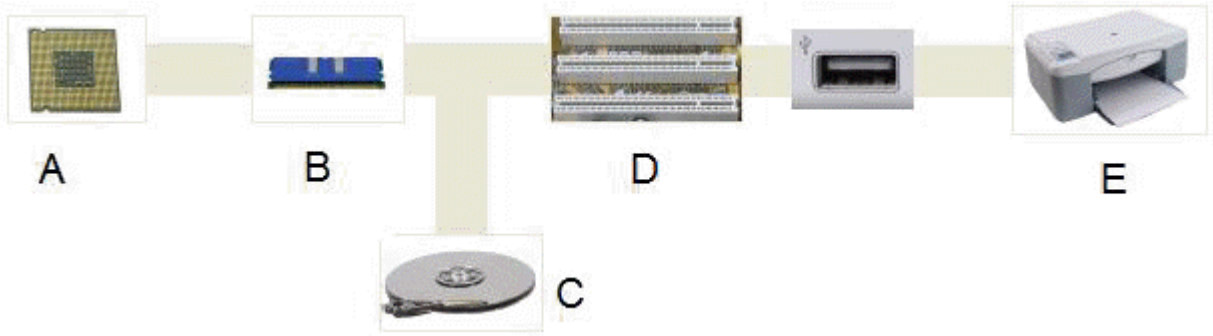
ANS: T PTS: 1 REF: 94

15. In the accompanying figure, the connection between pictures A and B represents the expansion bus. _____

ANS: F, local

PTS: 1 REF: 94

MULTIPLE CHOICE



1. In the accompanying figure, which of the following is NOT true of the component in picture C?
   a. It provides lots of storage capacity.
   b. It is volatile.
   c. It provides economical storage.
   d. It is found in personal computers and other digital devices like iPods and TiVos.

   ANS: B PTS: 1 REF: 78|94

2. The term ____ designates equipment that might be added to a computer system to enhance its functionality.
   a. digital device
   b. system add-on
   c. disk pack
   d. peripheral device

   ANS: D PTS: 1 REF: 56

3. The main component of a typical desktop computer is the ____, which houses the processor, memory, some storage devices, and display and sound circuitry.
   a. kiosk
   b. system unit
   c. form factor
   d. platform

   ANS: B PTS: 1 REF: 58

4. ____ are the form factor of choice for computer owners who might want to upgrade components in the future because it is easy to get inside the case and swap out parts.
   a. Cube units
   b. Base units
   c. Tower units
   d. Minicases

   ANS: C PTS: 1 REF: 58

5. The term ____ refers to the size and dimensions of a computer component.
   a. form factor
   b. system specification
   c. disk header
   d. peripheral metric

   ANS: A PTS: 1 REF: 58

6. A ____ computer is a small, lightweight personal computer with screen, keyboard, storage, and processing components integrated into a single unit.
   a. tower
   b. tablet
   c. desktop
   d. portable

   ANS: D PTS: 1 REF: 59

7. A ____ offers more portability than a standard notebook.
   a. digital deskbook
   b. mini-notebook
   c. netbook
   d. microtablet

   ANS: C PTS: 1 REF: 59

8. A ____ computer is a portable computing device featuring a touch-sensitive screen that can be used as a writing or drawing pad.
   a. tower
   b. tablet
   c. desktop
   d. microcomputer

   ANS: B PTS: 1 REF: 59

9. A(n) ____ tablet configuration resembles a high-tech clipboard and lacks a built-in keyboard.
   a. convertible
   b. slate
   c. ultra-mobile
   d. portable

   ANS: B PTS: 1 REF: 59

10. A ____ computer is also referred to as a laptop computer.
    a. desktop
    b. tablet
    c. notebook
    d. PDA

    ANS: C PTS: 1 REF: 59

11. Gaming computers typically include ____.
    a. very fast processors
    b. lots of memory
    c. state-of-the-art sound capabilities
    d. all of the above

    ANS: D PTS: 1 REF: 61

12. In the context of computing, a(n) ____ is a custom, hand-built modification to a computer system component.
    a. bit
    b. icon
    c. key
    d. mod

    ANS: D PTS: 1 REF: 65

13. ____ means a billion cycles per second.
    a. Gigahertz
    b. Megahertz
    c. Terahertz
    d. Nanohertz

    ANS: A PTS: 1 REF: 67

14. In an advertisement, a speed specification, such as 2.66 GHz, indicates the speed of the microprocessor ____.
    a. control unit
    b. register
    c. clock
    d. none of the above

    ANS: C PTS: 1 REF: 67

15. ____ refers to the number of bits that a microprocessor can manipulate at one time.
    a. Processor speed
    b. Word size
    c. Register space
    d. ALU

    ANS: B PTS: 1 REF: 68

16. A technology called ____ allows the processor to begin executing another instruction before it completes the previous instruction.
    a. pipelining
    b. serial processing
    c. benchmarking
    d. HyperTransport

    ANS: A PTS: 1 REF: 69

17. A microprocessor whose instruction set includes a limited set of simple instructions uses ____ technology.
    a. HyperTransport
    b. RISC
    c. CISC
    d. benchmarked

    ANS: B PTS: 1 REF: 69

18. A processor that includes circuitry for two or more processing units is called a ____ processor.
    a. HyperTransport
    b. pipelined
    c. multi-core
    d. serial

    ANS: C PTS: 1 REF: 69

19. ____ is used to enhance processor performance.
    a. Pipelining
    b. A benchmark
    c. Parallel processing
    d. both a and c

    ANS: D PTS: 1 REF: 69

20. Many of today's microprocessors perform ____, in which multiple instructions are executed at the same time.
    a. serial processing
    b. multitasking
    c. parallel processing
    d. benchmarking

    ANS: C PTS: 1 REF: 69

21. ____ are the results of a series of tests used to gauge overall microprocessor speed and are useful in comparing microprocessor performance.
    a. Benchmarks
    b. Hyper-Threads
    c. Clocking figures
    d. FSC reports

    ANS: A PTS: 1 REF: 69

22. Overclocking is a technique for increasing the speed of a computer component, such as ____. It can be very risky.
    a. the processor
    c. memory

b. graphics card
d. all of the above

ANS: D PTS: 1 REF: 70

23. ____ is a temporary holding area for data, application program instructions, and the operating system.
a. ROM
b. EEPROM
c. Disk storage
d. RAM

ANS: D PTS: 1 REF: 71

24. RAM can be thought of as the ____ for the computer's processor.
a. factory
b. operating room
c. waiting room
d. planning room

ANS: C PTS: 1 REF: 71

25. Unlike disk storage, most RAM is ____.
a. virtual
b. integrated
c. non-volatile
d. volatile

ANS: D PTS: 1 REF: 72

26. If the system runs out of RAM, the operating system uses an area of the hard disk called ____ to store parts of a program or data file until they are needed.
a. volatile memory
b. capacitor memory
c. virtual memory
d. integrated memory

ANS: C PTS: 1 REF: 72

27. RAM speed is often expressed in ____.
a. milliseconds
b. macroseconds
c. megaseconds
d. nanoseconds

ANS: D PTS: 1 REF: 73

28. ____ is used by most of today's personal computers because it is fast and relatively inexpensive.
a. RDRAM
b. EEPROM
c. SDRAM
d. none of the above

ANS: C PTS: 1 REF: 73

29. ____ is a type of memory circuitry that holds the computer's startup routine.
a. RIM (Read initial memory)
b. RAM (Random access memory)
c. ROM (Read only memory)
d. REM (Ready ever memory)

ANS: C PTS: 1 REF: 73

30. ROM BIOS is a small set of instructions that tells the computer ____.
a. how to access the hard disk
b. where to find the operating system
c. how to load the operating system into RAM
d. all of the above

ANS: D PTS: 1 REF: 73

31. A(n) ____ chip is a type of non-volatile memory chip that does not require power to hold data.
a. RAM
c. SDRAM

b. EEPROM
d. all of the above

ANS: B PTS: 1 REF: 74

32. ____ time is the average time it takes a computer to locate and read data on the storage medium.
a. Identification
b. Isolation
c. Access
d. Find

ANS: C PTS: 1 REF: 77

33. ____ is the ability of a device to "jump" directly to the requested data.
a. Sequential access
b. Quick access
c. Random access
d. all of the above

ANS: C PTS: 1 REF: 77

34. The ____ is the amount of data that a storage device can move from the storage medium to the computer per second.
a. data migration rate
b. data transfer rate
c. data digitizing rate
d. data access rate

ANS: B PTS: 1 REF: 77

35. Hard disk storage technology can be classified as ____ storage.
a. optical
b. magnetic
c. fluid-state
d. pipelined

ANS: B PTS: 1 REF: 78

36. A hard disk ____ is a flat, rigid disk made of aluminum or glass and coated with magnetic iron oxide particles.
a. window
b. fragment
c. platter
d. control unit

ANS: C PTS: 1 REF: 78

37. Personal computer hard disk platters typically have storage capacities ranging from 40 GB to ____.
a. 60 GB
b. 100 GB
c. 750 GB
d. 2 TB

ANS: D PTS: 1 REF: 79

38. Hard disk drive capacities are measured in ____.
a. milliseconds (ms)
b. gigabytes or terabytes
c. gigabits or terabits per second
d. none of the above

ANS: B PTS: 1 REF: 79

39. CD and DVD storage technologies can be classified as ____ storage.
a. solid state
b. bubble
c. magnetic
d. optical

ANS: D PTS: 1 REF: 81

40. Which of the following is an example of a rerecordable optical storage medium?
a. BD-RE
b. CD-RW
c. DVD+RW
d. all of the above

ANS: D PTS: 1 REF: 83

41. A built-in ____ in your personal computer can make it simpler to transfer photos from a solid state memory card used in your digital camera.
    a. card reader
    b. USB drive
    c. U3 drive
    d. MP3 media player

    ANS: A PTS: 1 REF: 84

42. Solid state storage, also called flash memory storage, ____.
    a. contains platters made of aluminum or glass
    b. provides fairly fast access to data
    c. includes moving parts
    d. all of the above

    ANS: B PTS: 1 REF: 84

43. The accompanying figure shows us a ____.
    a. CompactFlash card
    b. SmartMedia card
    c. USB flash drive
    d. CD drive

    ANS: C PTS: 1 REF: 85

44. The item in the accompanying figure can have capacities ranging from ____.
    a. 1 MB to 16 MB
    b. 16 MB to 64 MB
    c. 1 MB to 64 GB
    d. 16 MB to 64 GB

    ANS: D PTS: 1 REF: 85

45. A ____ is an example of a pointing device.
    a. joystick
    b. trackpad
    c. mouse
    d. all of the above

    ANS: D PTS: 1 REF: 88

46. A ____ is a touch-sensitive surface on which you can slide your fingers to move the on-screen pointer.
    a. pointing stick
    b. trackpad
    c. trackball
    d. joystick

    ANS: B PTS: 1 REF: 89

47. Tablet computers, many PDAs, retail store self checkouts, and information kiosks collect input from a ____.

a. pointing stick
b. joystick
c. trackball
d. touch screen

ANS: D PTS: 1 REF: 89

48. A(n) ____ is standard equipment on notebook computers.
a. PDA
b. HTML
c. LCD
d. URL

ANS: C PTS: 1 REF: 90

49. Dot pitch is the distance in millimeters between like-colored ____ —the small dots of light that form an image.
a. pixels
b. picas
c. points
d. icons

ANS: A PTS: 1 REF: 90

50. ____ have a faster response rate than standard LCD screens.
a. CRTs
b. OLEDs
c. MCDs
d. Lasers

ANS: B PTS: 1 REF: 90

51. The number of colors a monitor can display is referred to as ____.
a. resolution
b. color depth
c. veracity
d. GPU

ANS: B PTS: 1 REF: 91

52. Which is the highest resolution?
a. SXGA
b. VGA
c. WQXGA
d. SVGA

ANS: C PTS: 1 REF: 91

53. A printer's ____ determines how many pages a printer is able to churn out.
a. resolution
b. duplex index
c. duty cycle
d. PCL

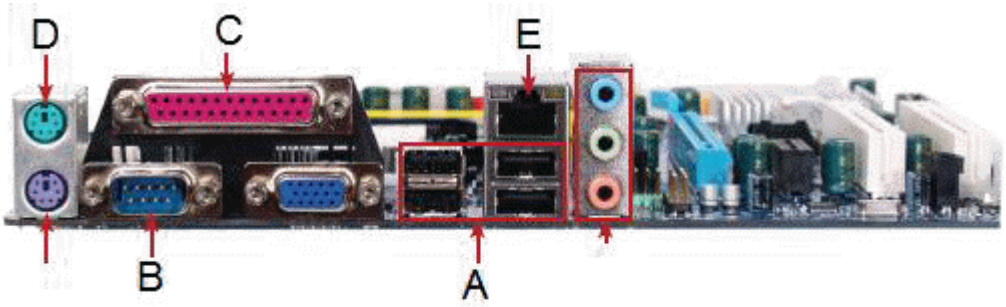
ANS: C PTS: 1 REF: 93

54. A(n) ____ printer can print on both sides of the paper.
a. duplex
b. remastered
c. dot-matrix
d. ink-jet

ANS: A PTS: 1 REF: 93

55. ____ is the most widely used language for communication between computers and printers.
a. Linux
b. PostScript
c. PCL
d. USB

ANS: C PTS: 1 REF: 94



56. In the accompanying figure, the item marked A is a ____.
    a. USB port
    b. mouse port
    c. printer port
    d. modem port

    ANS: A PTS: 1 REF: 95

57. In the accompanying figure, the item marked B is a ____.
    a. USB port
    b. serial port
    c. parallel port
    d. keyboard port

    ANS: B PTS: 1 REF: 95

58. In the accompanying figure, the item marked C is a ____.
    a. USB port
    b. serial port
    c. parallel port
    d. keyboard port

    ANS: C PTS: 1 REF: 95

59. Hot plugging is allowed with what kind of devices?
    a. PCI
    b. USB
    c. FireWire
    d. both b and c

    ANS: D PTS: 1 REF: 97

60. The ____ is a security mechanism that is factory-installed on many personal computers.
    a. STOP plate
    b. EPA
    c. Kensington Security Slot
    d. slate tablet

    ANS: C PTS: 1 REF: 98

61. A ____ is a sudden increase or spike in electrical energy, affecting the current that flows to electrical outlets.
    a. brownout
    b. UPS
    c. power surge
    d. battery blast

    ANS: C PTS: 1 REF: 99

62. It takes 800 pounds of force to remove a ____ plate, which contains a unique ID number, a warning message, and an 800 number to report a stolen computer.
    a. power
    b. STOP
    c. StealthSignal
    d. Computrace

    ANS: B PTS: 1 REF: 99

63. Which of the following is tracking and recovery software?
    a. Lojack for Laptops
    c. WebAngel

b. Laptop Location System
d. STOP

ANS: A PTS: 1 REF: 99

64. Power ____ can originate from a number of sources: downed power lines, power grid switching by the electric company, faulty wiring, and large appliances powering on and off.
a. flashes
c. cycles
b. surges
d. portages

ANS: B PTS: 1 REF: 99

65. A ____ is a device that not only provides surge protection, but also furnishes your computer with battery backup power during a power outage.
a. surge strip
c. UPS
b. USB
d. battery strip

ANS: C PTS: 1 REF: 100

66. A(n) ____ strip monitors the electrical current that passes from the outlet to all the devices plugged into the strip.
a. outlet
c. backup
b. surge
d. battery

ANS: B PTS: 1 REF: 100

67. The ____ indicates that the operating system has encountered an error from which it cannot recover, and the computer no longer accepts any commands.
a. STOP
c. RISC
b. Black screen of death
d. HTTP

ANS: B PTS: 1 REF: 103

68. A good computer maintenance routine would include regularly ____.
a. running utilities like Disk Cleanup and Disk Defragmenter
b. scanning your computer for viruses and spyware
c. deleting your browser's history and cache files
d. all of the above

ANS: D PTS: 1 REF: 103

69. To reboot a PC, hold down the ____ keys at the same time.
a. Ctrl, Alt, and Esc
c. Ctrl, Alt, and Del
b. Alt, Esc, and Del
d. Del and Alt

ANS: C PTS: 1 REF: 104

70. ____ is a limited version of Windows that allows you to use your mouse, monitor, and keyboard, but no other peripheral devices.
a. Control Panel
c. Power Mode
b. UPS State
d. Safe Mode

ANS: D PTS: 1 REF: 105

Case Based Critical Thinking Questions
Case 2-1

Perry is looking at his budget alongside his requirements for a new computer. He does not have a lot to spend but he wants to get as much for his money as he possibly can, and he wants to be very confident that the choice he is making is well-informed.

71. Which of the following would NOT be true of computers priced higher than US$2,000?
    a. These computers contain one or more fast processors.
    b. These computers have a generous amount of RAM.
    c. These computers have to be replaced fairly frequently.
    d. These computers are required by anyone working extensively with video editing.

    ANS: C PTS: 1 REF: 62 TOP: Critical Thinking

72. If Perry decides that he does not need the computer equivalent of a luxury automobile and that his needs are more in line with those of the average user, what can he expect to pay?
    a. US$100 to $700
    b. US$700 to $1000
    c. US$600 to $2,000
    d. over US$2,000

    ANS: C PTS: 1 REF: 62 TOP: Critical Thinking

Case-Based Critical Thinking Questions
Case 2-2

Laura plans to buy a new computer. She is interested in the technical features of the different types of memory she will find in her computer system - RAM, ROM, and EEPROM. She works with documents, edits and creates graphics, and likes to play 3D virtual reality games.

73. Laura wants to make sure her computer is fast enough for her everyday use. Which of the listed features is the most important?
    a. Amount of EEPROM
    b. Capacity of hard disk storage
    c. Amount of RAM
    d. Amount of ROM

    ANS: C PTS: 1 REF: 75 TOP: Critical Thinking

74. One of the computer ads Laura is looking at specifies “1 GB 400 MHz SDRAM (max 2 GB).” What does the 1 GB specify?
    a. Amount of EEPROM
    b. Amount of ROM
    c. Capacity of the hard drive
    d. Amount of RAM

    ANS: D PTS: 1 REF: 75 TOP: Critical Thinking

Case-Based Critical Thinking Questions
Case 2-3

An important part of a computer system is storage. James works with computers both at home and at work. He needs to move his spreadsheet and database files between the computers he uses at home and at work. He also enjoys downloading MP3 music files and takes lots of digital photos.

75. What is the best storage medium for storing James’ three databases, each of which is approximately 500 MB?
    a. CD-R
    b. USB flash drive
    c. DVD-ROM
    d. Internal hard disk

    ANS: B PTS: 1 REF: 85 TOP: Critical Thinking

76. Jim likes to save MP3 files and photo files to disc and take them to work. His work computer has a DVD-RW. For his home computer, which would be the best choice for an optical disc drive?
a. CD-RW
b. DVD/R/RW/CD-RW
c. CD-ROM
d. Blu-ray

ANS: B PTS: 1 REF: 83 TOP: Critical Thinking

Case-Based Critical Thinking Questions
Case 2-4

Paul decided to upgrade his computer system. He purchased a new optical disc drive to replace his old CD-ROM drive. He has decided to replace his old CRT display device and already upgraded his graphics card to support a more modern display device. He also plans to purchase a new printer to replace his old dot-matrix printer.

77. Paul has just purchased a new Blu-ray disc drive. Where would he install this drive?
a. internal drive bay
b. a serial port
c. external drive bay
d. a DVI port

ANS: C PTS: 1 REF: 86 TOP: Critical Thinking

78. What should Paul look for in a display device as a measure of image clarity?
a. dot pitch
b. color depth
c. viewing angle width
d. image size

ANS: A PTS: 1 REF: 90 TOP: Critical Thinking

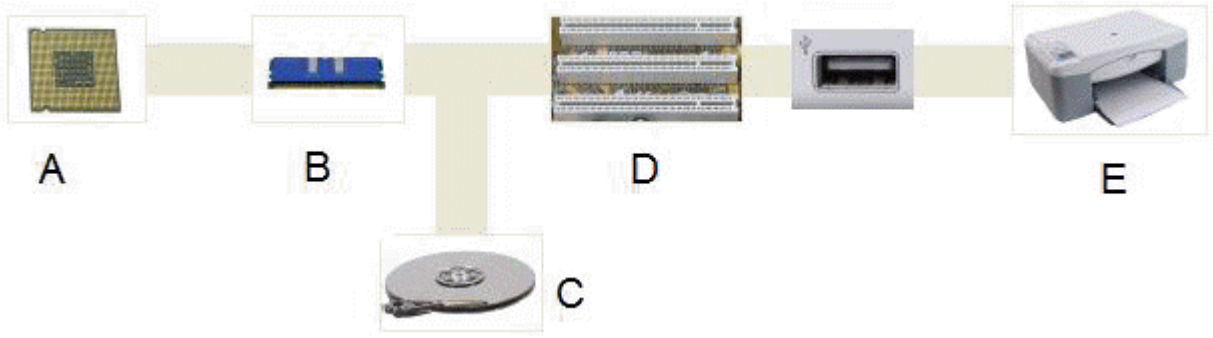
79. If Paul wants to buy an inexpensive, compact monitor, he should buy a(n) ____ monitor.
a. CRT
b. LCD
c. plasma
d. HDTV

ANS: B PTS: 1 REF: 90 TOP: Critical Thinking

80. If Paul is most concerned with the sharpness of the images and text he will be printing, he should focus on comparing the ____ of the printers he is considering purchasing.
a. resolution
b. duty cycle
c. print speed
d. duplex capability

ANS: A PTS: 1 REF: 93 TOP: Critical Thinking

COMPLETION



1. In the accompanying figure, picture E shows an example of a(n) _____ device.

ANS:
peripheral
output

PTS: 1 REF: 56

2. Computer _____ are also known as display devices.

ANS:
screens
monitors

PTS: 1 REF: 57

3. The microprocessor _____ is a timing device that sets the pace for executing instructions.

ANS: clock

PTS: 1 REF: 67

4. _____ is special high-speed memory that allows the processor to access data more rapidly than from memory located elsewhere on the system board.

ANS:
Cache
RAM cache
Cache memory
CPU cache
Internal cache

PTS: 1 REF: 68

5. In RAM, a microscopic electronic part called a(n) _____ is used to hold a bit.

ANS: capacitor

PTS: 1 REF: 72

6. In RAM, a group of _____ bits is grouped together to form a byte.

ANS:
8
eight

PTS: 1 REF: 72

7. RAM is _____, which means that it requires electrical power to hold data.

ANS: volatile

PTS: 1 REF: 72

8. The instructions that your computer performs when it is first turned on are permanently stored in _____.

   ANS:
   ROM
   Read-only memory
   ROM (Read-only memory)
   Read-only memory (ROM)
   ROM BIOS
   BIOS

   PTS: 1 REF: 73

9. System configuration information, such as the date and time, hard disk capacity, RAM capacity, and number and types of drives, is stored in a non-volatile _____ chip.

   ANS:
   EEPROM
   electrically erasable programmable read-only memory
   electrically erasable programmable read-only memory (EEPROM)
   EEPROM (electrically erasable programmable read-only memory)

   PTS: 1 REF: 74

10. A storage _____ is the disk, CD, tape, paper, or other substance that contains data.

    ANS: medium

    PTS: 1 REF: 76

11. A storage _____ is the mechanical apparatus that records and retrieves data from a storage medium.

    ANS: device

    PTS: 1 REF: 76

12. A(n) _____ can be triggered by jarring the hard disk while it is in use.

    ANS: head crash

    PTS: 1 REF: 80

13. Printers, display devices, and speakers are examples of _____ devices.

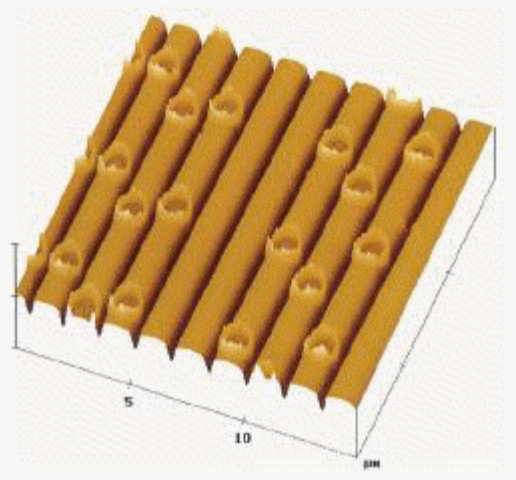
    ANS:
    output
    peripheral

    PTS: 1 REF: 56

14. _____ is a high-capacity optical storage technology with a 25 GB capacity per layer.

ANS: Blu-ray

PTS: 1 REF: 81



15. In the accompanying figure, the dark crater-like spots on the CD surface are called _____.

ANS: pits

PTS: 1 REF: 81

16. In the accompanying figure, the lighter, smooth surface areas of the CD are called _____.

ANS: lands

PTS: 1 REF: 81

17. The number of horizontal and vertical pixels that a device displays on a screen is referred to as its _____.

ANS: resolution

PTS: 1 REF: 91

18. The segment of the data bus to which peripheral devices connect is called the _____ bus.

ANS:
expansion
external

PTS: 1 REF: 94

19. Many seasoned users have encountered the Windows _____, which suddenly replaces the usual graphical screen display with an enigmatic error message written in white text against a black background.

ANS:
BSoD
black screen of death
blue screen of death
black screen of death (BSoD)
BSoD (black screen of death)

PTS: 1 REF: 103

20. _____ is a limited version of Windows that allows you to use your mouse, screen, and keyboard, but no other peripherals.

ANS: Safe mode

PTS: 1 REF: 105

MATCHING

Identify the letter of the choice that best matches the phrase or definition.

a. BSoD	g. laser
b. Blu-ray	h. system unit
c. expansion slot	i. color depth
d. ROM	j. Plug and Play
e. Level 1 cache	k. virtual memory
f. Level 2 cache	l. CISC

1. Memory circuitry that holds the computer's startup routine
2. High-speed memory located on a separate chip from the processor
3. Indicates that the operating system has encountered an error from which it cannot recover
4. A long, narrow socket on the motherboard into which you can plug an expansion card
5. An area of the hard disk used by the operating system to store parts of programs and data files if a program exceeds its allocated RAM
6. High-speed memory built into a processor chip
7. High-capacity DVD technology that uses a blue-violet colored laser
8. Number of colors a monitor can display
9. The case that holds the computer's main circuit boards, microprocessor, memory, power supply, and storage devices
10. Printer that produces characters and graphics by painting dots on a light-sensitive drum
11. A processor technology that uses a complex set of instructions
12. Automatic installation of a peripheral device

1. ANS: D PTS: 1 REF: 73
2. ANS: F PTS: 1 REF: 68
3. ANS: A PTS: 1 REF: 103
4. ANS: C PTS: 1 REF: 95
5. ANS: K PTS: 1 REF: 72
6. ANS: E PTS: 1 REF: 68
7. ANS: B PTS: 1 REF: 81
8. ANS: I PTS: 1 REF: 91
9. ANS: H PTS: 1 REF: 57
10. ANS: G PTS: 1 REF: 92

11. ANS: L PTS: 1 REF: 69
12. ANS: J PTS: 1 REF: 97

ESSAY

1. Discuss where a computer stores its basic hardware settings, why it does so, and what some of those settings are.

   ANS:
   To operate correctly, a computer must have some basic information about storage, memory, and display configurations. For example, your computer needs to know how much memory is available so that it can allocate space for all the programs you want to run.

   RAM goes blank when the computer power is turned off, so configuration information cannot be stored there. ROM would not be a good place for this information, either, because it holds data on a permanent basis. If, for example, your computer stored the memory size in ROM, you could never add more memory (you might be able to add it, but you couldn't change the size specification in ROM). To store some basic system information, your computer needs a type of memory that's more permanent than RAM, but less permanent than ROM, which is where EEPROM comes in.

   EEPROM (electrically erasable programmable read-only memory) is a non-volatile chip that requires no power to hold data. When you change the configuration of your computer system—by adding RAM, for example—the data in EEPROM must be updated. Some operating systems recognize such changes and automatically perform the update. You can manually change EEPROM settings by running your computer's setup program.

   PTS: 1 REF: 74 TOP: Critical Thinking

2. Compare storage devices using four criteria: versatility, durability, speed, and capacity.

   ANS:
   Versatility: Some storage devices can access data from only one type of medium. More versatile devices can access data from several different media. The hard drive inside your system unit, for example, contains fixed disk platters and is sealed so it is not very versatile. A typical DVD drive can access computer DVDs, DVD movies, audio CDs, computer CDs, and CD-Rs, and so is relatively versatile.

   Durability: Most storage technologies are susceptible to damage from mishandling or other environmental factors, such as heat and moisture. Some technologies are more susceptible than others to damage that could cause data loss. CDs and DVDs tend to be less susceptible than hard disks, for example.

   Speed: Quick access to data is important, so fast storage devices are preferred over slower devices. Access time is the average time it takes a computer to locate data on the storage medium and read it. Access time is best for random-access devices. Random access (also called "direct access") is the ability of a device to "jump" directly to the requested data. Hard disk, CD, and DVD drives and solid state drives are random-access devices, as is solid state storage. A tape drive, on the other hand, must use slower sequential access by reading through the data from the beginning of the tape.

   Capacity: In today's computing environment, higher capacity is almost always preferred. Storage capacity is the maximum amount of data that can be stored on a storage medium, and it is measured in kilobytes, megabytes, gigabytes, or terabytes.

PTS: 1 REF: 77 TOP: Critical Thinking

3. What features should you look for in a printer? Describe at least four in detail.

ANS:
Printers differ in resolution, speed, duty cycle, operating costs, duplex capability, and memory.
• Resolution. The quality or sharpness of printed images and text depends on the printer's resolution—the density of the gridwork of dots that create an image. Printer resolution is measured by the number of dots printed per linear inch, abbreviated as dpi. At normal reading distance, a resolution of about 900 dpi appears solid to the human eye, but a close examination reveals a dot pattern. If you want magazine-quality printouts, 900 dpi is sufficient resolution. If you are aiming for resolution similar to expensive coffee-table books, look for printer resolution of 2,400 dpi or higher.

• Print speed. Printer speeds are measured either by pages per minute (ppm) or characters per second (cps). Color printouts typically take longer than black-and-white printouts. Pages that contain mostly text tend to print more rapidly than pages that contain graphics. Typical speeds for personal computer printers range between 6 and 30 pages of text per minute.

• Duty cycle. In addition to printer speed, a printer's duty cycle determines how many pages a printer is able to churn out. Printer duty cycle is usually measured in pages per month. For example, a personal laser printer has a duty cycle of about 3,000 pages per month (ppm)—that means roughly 100 pages per day. You wouldn't want to use it to produce 5,000 campaign brochures for next Monday, but you would find it quite suitable for printing 10 copies of a five-page outline for a meeting tomorrow.

• Operating costs. The initial cost of a printer is only one of the expenses associated with printed output. Ink jet printers require frequent replacements of relatively expensive ink cartridges. Laser printers require toner cartridge refills or replacements. Dot matrix printers require replacement ribbons. When shopping for a printer, you can check online resources to determine how often you'll need to replace printer supplies and how much they are likely to cost.

• Duplex capability. A duplex printer can print on both sides of the paper. This environment-friendly option saves paper but can slow down the print process, especially on ink-jet printers that pause to let the ink dry before printing the second side.

• Memory. A computer sends data for a printout to the printer along with a set of instructions on how to print that data. Printer Control Language (PCL) is the most widely used language for communication between computers and printers, but PostScript is an alternative printer language that many publishing professionals prefer. The data that arrives at a printer along with its printer language instructions require memory. A large memory capacity is required to print color images and graphics-intensive documents. Some printers let you add memory to improve printing of such pages.

• Networkability. If your personal computer system is not networked to other computers in your house, apartment, or dorm, you can attach a printer directly to your computer. If your computer is part of a network, you can share your printer with other network users, who essentially send their print jobs to your computer for output. Another way to configure network printing for multiple users is to purchase a network-enabled printer that connects directly to the network, rather than to one of the computers on the network. The network connection can be wired or wireless. The advantage of a network-ready printer is that it can be placed in a location that is convenient for all users.

PTS: 1 REF: 93|94 TOP: Critical Thinking