Chapter 05

The System Unit

**Multiple Choice Questions**

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| 1. | With these systems, input and output devices are located outside the system unit.      |  |  | | --- | --- | | A. | Desktop systems |  |  |  | | --- | --- | | B. | Personal digital assistants |  |  |  | | --- | --- | | C. | Smartphones |  |  |  | | --- | --- | | D. | Laptop computers | |

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| 2. | This type of computer is a thin slab that is almost all monitor with the system unit located behind the monitor.      |  |  | | --- | --- | | A. | Laptop |  |  |  | | --- | --- | | B. | Tablet |  |  |  | | --- | --- | | C. | Desktop |  |  |  | | --- | --- | | D. | Smartphone | |

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| 3. | A byte is formed by a group of \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | 4 bits |  |  |  | | --- | --- | | B. | 8 bits |  |  |  | | --- | --- | | C. | 12 bits |  |  |  | | --- | --- | | D. | 16 bits | |

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| 4. | Which of the following is not a character encoding standard?      |  |  | | --- | --- | | A. | EBCDIC |  |  |  | | --- | --- | | B. | ASCII |  |  |  | | --- | --- | | C. | CISC |  |  |  | | --- | --- | | D. | Unicode | |

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| 5. | This character encoding scheme allows non-English characters and special characters to be represented.      |  |  | | --- | --- | | A. | ASCII |  |  |  | | --- | --- | | B. | Unicode |  |  |  | | --- | --- | | C. | EBCDIC |  |  |  | | --- | --- | | D. | ANSIC | |

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| 6. | The system board is also known as the \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | expansion slot |  |  |  | | --- | --- | | B. | motherboard |  |  |  | | --- | --- | | C. | expansion card |  |  |  | | --- | --- | | D. | bus | |

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| 7. | On the motherboard, the connection points for chips are referred to as \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | slots |  |  |  | | --- | --- | | B. | sockets |  |  |  | | --- | --- | | C. | ports |  |  |  | | --- | --- | | D. | lines | |

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| 8. | Tiny circuit-boards etched onto squares of sand-like material, called silicon, are called \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | buses |  |  |  | | --- | --- | | B. | slots |  |  |  | | --- | --- | | C. | sockets |  |  |  | | --- | --- | | D. | chips | |

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| 9. | Integrated circuits must be mounted on \_\_\_\_\_\_\_, which are then plugged into the motherboard.      |  |  | | --- | --- | | A. | slots |  |  |  | | --- | --- | | B. | pins |  |  |  | | --- | --- | | C. | ports |  |  |  | | --- | --- | | D. | chip carriers | |

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| 10. | Which of the following is a function of the control unit?      |  |  | | --- | --- | | A. | It provides pathways that support communication among the various electronic components. |  |  |  | | --- | --- | | B. | It directs the movement of electronic signals between memory and the arithmetic-logic unit. |  |  |  | | --- | --- | | C. | It performs fundamental math operations like addition, subtraction, and so on. |  |  |  | | --- | --- | | D. | It uses the logic to compare two pieces of data. | |

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| 11. | Pathways that support communication among the various electronic components on the system board are called \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | bus lines |  |  |  | | --- | --- | | B. | network lines |  |  |  | | --- | --- | | C. | logic paths |  |  |  | | --- | --- | | D. | gate ways | |

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| 12. | In most personal computer systems, the CPU is contained on a single chip called the \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | semiconductor |  |  |  | | --- | --- | | B. | ALU |  |  |  | | --- | --- | | C. | microprocessor |  |  |  | | --- | --- | | D. | control unit | |

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| 13. | Term used to describe the number of bits that a CPU can access at one time.      |  |  | | --- | --- | | A. | Bitrate |  |  |  | | --- | --- | | B. | Word |  |  |  | | --- | --- | | C. | Pulse width |  |  |  | | --- | --- | | D. | Character | |

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| 14. | A 32-bit-word computer can access \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | 2 bytes at a time |  |  |  | | --- | --- | | B. | 16 bytes at a time |  |  |  | | --- | --- | | C. | 4 bytes at a time |  |  |  | | --- | --- | | D. | 8 bytes at a time | |

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| 15. | The processing speed of a microprocessor is typically represented by its \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | bus line |  |  |  | | --- | --- | | B. | control unit |  |  |  | | --- | --- | | C. | clock speed |  |  |  | | --- | --- | | D. | ALU | |

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| 16. | Which of the following allows a computer to run two or more operations simultaneously?      |  |  | | --- | --- | | A. | Coprocessors |  |  |  | | --- | --- | | B. | Multiplexing |  |  |  | | --- | --- | | C. | Multicore chip |  |  |  | | --- | --- | | D. | Binary system | |

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| 17. | For multicore processors to be used effectively, computers must understand how to divide tasks into parts that can be distributed across each core—an operation called \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | arithmetic-logic processing |  |  |  | | --- | --- | | B. | multiplexer processing |  |  |  | | --- | --- | | C. | parallel processing |  |  |  | | --- | --- | | D. | graphics coprocessing | |

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| 18. | A type of specialty processor devoted exclusively to protecting your privacy.      |  |  | | --- | --- | | A. | Data cards |  |  |  | | --- | --- | | B. | Micro cards |  |  |  | | --- | --- | | C. | Cryptoprocessor |  |  |  | | --- | --- | | D. | Embedded cards | |

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| 19. | These specialty processors are designed to improve specific computing operations such as displaying 3-D images and encrypting data.      |  |  | | --- | --- | | A. | Smartcards |  |  |  | | --- | --- | | B. | CPUs |  |  |  | | --- | --- | | C. | Coprocessors |  |  |  | | --- | --- | | D. | NIC cards | |

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| 20. | Frequently-accessed information is held in \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | hard drive |  |  |  | | --- | --- | | B. | cache memory |  |  |  | | --- | --- | | C. | flash memory |  |  |  | | --- | --- | | D. | read only memory | |

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| 21. | With this type of memory, large programs are divided into parts and the parts are stored on a secondary device, usually a hard disk.      |  |  | | --- | --- | | A. | Flash |  |  |  | | --- | --- | | B. | Cache |  |  |  | | --- | --- | | C. | Virtual |  |  |  | | --- | --- | | D. | Extended | |

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| 22. | Which of the following offers a combination of the features of RAM and ROM?      |  |  | | --- | --- | | A. | DRAM |  |  |  | | --- | --- | | B. | DDR |  |  |  | | --- | --- | | C. | Flash Memory |  |  |  | | --- | --- | | D. | Cache Memory | |

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| 23. | All of the following are commonly used units of measurement to describe memory capacity, except \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | Megabyte (MB) |  |  |  | | --- | --- | | B. | Gigabyte (GB) |  |  |  | | --- | --- | | C. | Terabyte (TB) |  |  |  | | --- | --- | | D. | Nanobyte (NB) | |

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| 24. | When you reboot your system, the computer follows startup instructions stored in this type of memory.      |  |  | | --- | --- | | A. | DRAM |  |  |  | | --- | --- | | B. | SDRAM |  |  |  | | --- | --- | | C. | Cache |  |  |  | | --- | --- | | D. | Flash | |

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| 25. | Most personal computers allow users to expand their systems by providing these on the system board.      |  |  | | --- | --- | | A. | Expansion slots |  |  |  | | --- | --- | | B. | Ports |  |  |  | | --- | --- | | C. | Sound cards |  |  |  | | --- | --- | | D. | Network cards | |

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| 26. | Which of the following can be used to connect several devices to the system unit and are widely used to connect keyboards, mice, printers, storage devices, and a variety of specialty devices?      |  |  | | --- | --- | | A. | USB port |  |  |  | | --- | --- | | B. | SATA |  |  |  | | --- | --- | | C. | Parallel port |  |  |  | | --- | --- | | D. | Firewire bus | |

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| 27. | These types of ports typically provide connections to specialized devices such as camcorders and storage devices.      |  |  | | --- | --- | | A. | FireWire |  |  |  | | --- | --- | | B. | Serial |  |  |  | | --- | --- | | C. | Parallel |  |  |  | | --- | --- | | D. | AGP | |

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| 28. | Which of the following ports is used for connecting musical instruments to a sound card?      |  |  | | --- | --- | | A. | MiniDP |  |  |  | | --- | --- | | B. | S/PDIF |  |  |  | | --- | --- | | C. | MIDI |  |  |  | | --- | --- | | D. | eSATA | |

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| 29. | Which of the following ports provide high-speed connections for external hard disk drives, optical disks, and other large secondary storage devices?      |  |  | | --- | --- | | A. | eSATA |  |  |  | | --- | --- | | B. | S/PDIF |  |  |  | | --- | --- | | C. | HDMI |  |  |  | | --- | --- | | D. | MiniDP | |

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| 30. | Laptops and tablets use \_\_\_\_\_\_\_ that are typically located outside the system unit.      |  |  | | --- | --- | | A. | AC adapters |  |  |  | | --- | --- | | B. | batteries |  |  |  | | --- | --- | | C. | power supply units |  |  |  | | --- | --- | | D. | MiniDc | |

**True / False Questions**

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| 31. | The system unit, also known as the system chassis, is a container that houses most of the electronic components that make up a computer system.    True    False |

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| 32. | ASCII supports Chinese and Japanese.    True    False |

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| 33. | The ALU tells the rest of the computer system how to carry out a program's instructions.    True    False |

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| 34. | The control unit directs the movement of electronic signals between the memory and the ALU.    True    False |

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| 35. | 64-bit-word computer can access 8 bytes at a time.    True    False |

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| 36. | Parallel processing requires a computer to perform one complete task before beginning the next task.    True    False |

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| 37. | RAM is considered temporary, or volatile, storage.    True    False |

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| 38. | Virtual memory is stored on a RAM chip.    True    False |

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| 39. | Read-only memory (ROM) chips have information stored in them by the manufacturer.    True    False |

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| 40. | Graphics cards connect the system board to secondary storage.    True    False |

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| 41. | Plug and Play has become a generic term that is associated with the ability to plug any device into a computer and have it play or work immediately.    True    False |

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| 42. | The number of bits that can travel simultaneously down a bus is known as the word size.    True    False |

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| 43. | A bus is a pathway for bits representing data and instructions.    True    False |

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| 44. | VGA and DVI ports provide connections to monitors.    True    False |

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| 45. | USB ports are used to connect keyboards, mice, printers, storage devices, and a variety of specialty devices.    True    False |

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| 46. | Firewire ports are used to connect keyboards, mice, printers, and storage devices.    True    False |

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| 47. | eSATA ports provide high-speed connections for external hard disk drives, optical disks, and other large secondary storage devices.    True    False |

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| 48. | MiniDP ports are an audiovisual port typically used to connect large monitors.    True    False |

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| 49. | HDMI ports make it possible to use a computer as a video jukebox or an HD video recorder.    True    False |

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| 50. | Computers require direct current (DC) to power their electronic components and to represent data and instructions.    True    False |

**Fill in the Blank Questions**

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| 51. | The \_\_\_\_\_\_\_, also known as the system chassis, is a container that houses most of the electronic components that make up a computer system.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 52. | \_\_\_\_\_\_\_ are effectively a thin slab that is almost all monitor with the system unit located behind the monitor.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 53. | The most widely used character encoding standard today is \_\_\_\_\_\_\_.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 54. | The \_\_\_\_\_\_\_ system consists of only two digits—0 and 1.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 55. | The system board is also known as the \_\_\_\_\_\_\_.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 56. | A(n) \_\_\_\_\_\_\_ is the number of bits that can be accessed at one time by the CPU.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 57. | \_\_\_\_\_\_\_ operations consist of making comparisons.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 58. | A(n) \_\_\_\_\_\_\_-bit-word computer can access eight bytes of information at a time.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 59. | \_\_\_\_\_\_\_ processors allow a single computer to run two or more operations at the same time.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 60. | \_\_\_\_\_\_\_ memory improves processing by acting as a temporary high-speed holding area between the memory and the CPU.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 61. | \_\_\_\_\_\_\_ memory uses the hard drive to substitute for RAM.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 62. | The processing speed of a microprocessor is typically represented by its \_\_\_\_\_\_\_ speed.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 63. | \_\_\_\_\_\_\_ cards accept audio input from a microphone and convert it into a form that can be processed by the computer.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 64. | \_\_\_\_\_\_\_ network cards allow computers to be connected without cables.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 65. | Network interface cards (NIC) are connected through \_\_\_\_\_\_\_ slots on the motherboard.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 66. | \_\_\_\_\_\_\_ buses connect the CPU to memory on the system board.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 67. | The number of bits that can travel simultaneously down a bus is known as the bus \_\_\_\_\_\_\_.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 68. | \_\_\_\_\_\_\_ ports are the standard high-speed networking ports for many of today's computers.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 69. | \_\_\_\_\_\_\_ ports are a special type of port for connecting musical instruments to a sound card.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 70. | \_\_\_\_\_\_\_ ports provide high-speed connections for external disk drives, optical disks, and other large secondary storage devices.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 71. | \_\_\_\_\_\_\_ ports provide high-speed connections can connect up to seven separate devices connected one to another.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 72. | \_\_\_\_\_\_\_ ports are an audiovisual port typically used to connect large monitors.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 73. | Desktop computers have a(n) \_\_\_\_\_\_\_, located within the system unit, that plugs into a standard wall outlet, converts AC to DC, and provides the power to drive all of the system unit components.    \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

**Essay Questions**

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| 74. | Compare and contrast the four most common types of system units. |

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| 75. | Describe the character encoding schemes. |

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| 76. | How is the multicore chip useful for personal computers? |

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| 77. | Explain expansion slots and cards. |

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| 78. | Explain Plug and Play. |

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| 79. | Describe the three principal types of expansion buses. |

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| 80. | Describe specialty ports including eSATA, HDMI, MIDI, MiniDP, and Thunderbolt. |

Chapter 05 The System Unit Answer Key

**Multiple Choice Questions**

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| 1. *(p. 114)* | With these systems, input and output devices are located outside the system unit.      |  |  | | --- | --- | | **A.** | Desktop systems |  |  |  | | --- | --- | | B. | Personal digital assistants |  |  |  | | --- | --- | | C. | Smartphones |  |  |  | | --- | --- | | D. | Laptop computers | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-01 Differentiate between the four basic types of system units Topic: System Unit* |

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| 2. *(p. 115)* | This type of computer is a thin slab that is almost all monitor with the system unit located behind the monitor.      |  |  | | --- | --- | | A. | Laptop |  |  |  | | --- | --- | | **B.** | Tablet |  |  |  | | --- | --- | | C. | Desktop |  |  |  | | --- | --- | | D. | Smartphone | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-01 Differentiate between the four basic types of system units Topic: System Unit* |

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| 3. *(p. 119)* | A byte is formed by a group of \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | 4 bits |  |  |  | | --- | --- | | **B.** | 8 bits |  |  |  | | --- | --- | | C. | 12 bits |  |  |  | | --- | --- | | D. | 16 bits | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 4. *(p. 127-128)* | Which of the following is not a character encoding standard?      |  |  | | --- | --- | | A. | EBCDIC |  |  |  | | --- | --- | | B. | ASCII |  |  |  | | --- | --- | | **C.** | CISC |  |  |  | | --- | --- | | D. | Unicode | |

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| *AACSB: Analytic AACSB: Technology Accessibility: Keyboard Navigation Blooms: Analyze Difficulty: 2 Medium Learning Outcome: 05-09 Explain how a computer can represent numbers and encode characters electronically Topic: Electronic Data and Instructions* |

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| 5. *(p. 128)* | This character encoding scheme allows non-English characters and special characters to be represented.      |  |  | | --- | --- | | A. | ASCII |  |  |  | | --- | --- | | **B.** | Unicode |  |  |  | | --- | --- | | C. | EBCDIC |  |  |  | | --- | --- | | D. | ANSIC | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-09 Explain how a computer can represent numbers and encode characters electronically Topic: Electronic Data and Instructions* |

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| 6. *(p. 117)* | The system board is also known as the \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | expansion slot |  |  |  | | --- | --- | | **B.** | motherboard |  |  |  | | --- | --- | | C. | expansion card |  |  |  | | --- | --- | | D. | bus | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-02 Describe system boards, including sockets, slots, and bus lines Topic: System Board* |

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| 7. *(p. 117)* | On the motherboard, the connection points for chips are referred to as \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | slots |  |  |  | | --- | --- | | **B.** | sockets |  |  |  | | --- | --- | | C. | ports |  |  |  | | --- | --- | | D. | lines | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-02 Describe system boards, including sockets, slots, and bus lines Topic: System Board* |

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| 8. *(p. 117)* | Tiny circuit-boards etched onto squares of sand-like material, called silicon, are called \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | buses |  |  |  | | --- | --- | | B. | slots |  |  |  | | --- | --- | | C. | sockets |  |  |  | | --- | --- | | **D.** | chips | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-02 Describe system boards, including sockets, slots, and bus lines Topic: System Board* |

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| 9. *(p. 117)* | Integrated circuits must be mounted on \_\_\_\_\_\_\_, which are then plugged into the motherboard.      |  |  | | --- | --- | | A. | slots |  |  |  | | --- | --- | | B. | pins |  |  |  | | --- | --- | | C. | ports |  |  |  | | --- | --- | | **D.** | chip carriers | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Understand Difficulty: 2 Medium Learning Outcome: 05-02 Describe system boards, including sockets, slots, and bus lines Topic: System Board* |

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| 10. *(p. 118)* | Which of the following is a function of the control unit?      |  |  | | --- | --- | | A. | It provides pathways that support communication among the various electronic components. |  |  |  | | --- | --- | | **B.** | It directs the movement of electronic signals between memory and the arithmetic-logic unit. |  |  |  | | --- | --- | | C. | It performs fundamental math operations like addition, subtraction, and so on. |  |  |  | | --- | --- | | D. | It uses the logic to compare two pieces of data. | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Understand Difficulty: 2 Medium Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 11. *(p. 118)* | Pathways that support communication among the various electronic components on the system board are called \_\_\_\_\_\_\_.      |  |  | | --- | --- | | **A.** | bus lines |  |  |  | | --- | --- | | B. | network lines |  |  |  | | --- | --- | | C. | logic paths |  |  |  | | --- | --- | | D. | gate ways | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-02 Describe system boards, including sockets, slots, and bus lines Topic: System Board* |

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| 12. *(p. 118)* | In most personal computer systems, the CPU is contained on a single chip called the \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | semiconductor |  |  |  | | --- | --- | | B. | ALU |  |  |  | | --- | --- | | **C.** | microprocessor |  |  |  | | --- | --- | | D. | control unit | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 13. *(p. 119)* | Term used to describe the number of bits that a CPU can access at one time.      |  |  | | --- | --- | | A. | Bitrate |  |  |  | | --- | --- | | **B.** | Word |  |  |  | | --- | --- | | C. | Pulse width |  |  |  | | --- | --- | | D. | Character | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 14. *(p. 119)* | A 32-bit-word computer can access \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | 2 bytes at a time |  |  |  | | --- | --- | | B. | 16 bytes at a time |  |  |  | | --- | --- | | **C.** | 4 bytes at a time |  |  |  | | --- | --- | | D. | 8 bytes at a time | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 15. *(p. 119)* | The processing speed of a microprocessor is typically represented by its \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | bus line |  |  |  | | --- | --- | | B. | control unit |  |  |  | | --- | --- | | **C.** | clock speed |  |  |  | | --- | --- | | D. | ALU | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 16. *(p. 119)* | Which of the following allows a computer to run two or more operations simultaneously?      |  |  | | --- | --- | | A. | Coprocessors |  |  |  | | --- | --- | | B. | Multiplexing |  |  |  | | --- | --- | | **C.** | Multicore chip |  |  |  | | --- | --- | | D. | Binary system | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Understand Difficulty: 1 Easy Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 17. *(p. 119)* | For multicore processors to be used effectively, computers must understand how to divide tasks into parts that can be distributed across each core—an operation called \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | arithmetic-logic processing |  |  |  | | --- | --- | | B. | multiplexer processing |  |  |  | | --- | --- | | **C.** | parallel processing |  |  |  | | --- | --- | | D. | graphics coprocessing | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 18. *(p. 119)* | A type of specialty processor devoted exclusively to protecting your privacy.      |  |  | | --- | --- | | A. | Data cards |  |  |  | | --- | --- | | B. | Micro cards |  |  |  | | --- | --- | | **C.** | Cryptoprocessor |  |  |  | | --- | --- | | D. | Embedded cards | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 2 Medium Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 19. *(p. 119)* | These specialty processors are designed to improve specific computing operations such as displaying 3-D images and encrypting data.      |  |  | | --- | --- | | A. | Smartcards |  |  |  | | --- | --- | | B. | CPUs |  |  |  | | --- | --- | | **C.** | Coprocessors |  |  |  | | --- | --- | | D. | NIC cards | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Understand Difficulty: 2 Medium Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 20. *(p. 120)* | Frequently-accessed information is held in \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | hard drive |  |  |  | | --- | --- | | **B.** | cache memory |  |  |  | | --- | --- | | C. | flash memory |  |  |  | | --- | --- | | D. | read only memory | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Understand Difficulty: 2 Medium Learning Outcome: 05-04 Compare different types of computer memory, including RAM, ROM, and flash memory Topic: Memory* |

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| 21. *(p. 120)* | With this type of memory, large programs are divided into parts and the parts are stored on a secondary device, usually a hard disk.      |  |  | | --- | --- | | A. | Flash |  |  |  | | --- | --- | | B. | Cache |  |  |  | | --- | --- | | **C.** | Virtual |  |  |  | | --- | --- | | D. | Extended | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-04 Compare different types of computer memory, including RAM, ROM, and flash memory Topic: Memory* |

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| 22. *(p. 121)* | Which of the following offers a combination of the features of RAM and ROM?      |  |  | | --- | --- | | A. | DRAM |  |  |  | | --- | --- | | B. | DDR |  |  |  | | --- | --- | | **C.** | Flash Memory |  |  |  | | --- | --- | | D. | Cache Memory | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-04 Compare different types of computer memory, including RAM, ROM, and flash memory Topic: Memory* |

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| 23. *(p. 120)* | All of the following are commonly used units of measurement to describe memory capacity, except \_\_\_\_\_\_\_.      |  |  | | --- | --- | | A. | Megabyte (MB) |  |  |  | | --- | --- | | B. | Gigabyte (GB) |  |  |  | | --- | --- | | C. | Terabyte (TB) |  |  |  | | --- | --- | | **D.** | Nanobyte (NB) | |

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| *AACSB: Analytic AACSB: Technology Accessibility: Keyboard Navigation Blooms: Analyze Difficulty: 3 Hard Learning Outcome: 05-04 Compare different types of computer memory, including RAM, ROM, and flash memory Topic: Memory* |

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| 24. *(p. 121)* | When you reboot your system, the computer follows startup instructions stored in this type of memory.      |  |  | | --- | --- | | A. | DRAM |  |  |  | | --- | --- | | B. | SDRAM |  |  |  | | --- | --- | | C. | Cache |  |  |  | | --- | --- | | **D.** | Flash | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-04 Compare different types of computer memory, including RAM, ROM, and flash memory Topic: Memory* |

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| 25. *(p. 121)* | Most personal computers allow users to expand their systems by providing these on the system board.      |  |  | | --- | --- | | **A.** | Expansion slots |  |  |  | | --- | --- | | B. | Ports |  |  |  | | --- | --- | | C. | Sound cards |  |  |  | | --- | --- | | D. | Network cards | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-05 Explain expansion slots and cards Topic: Expansion Slots and Cards* |

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| 26. *(p. 123)* | Which of the following can be used to connect several devices to the system unit and are widely used to connect keyboards, mice, printers, storage devices, and a variety of specialty devices?      |  |  | | --- | --- | | **A.** | USB port |  |  |  | | --- | --- | | B. | SATA |  |  |  | | --- | --- | | C. | Parallel port |  |  |  | | --- | --- | | D. | Firewire bus | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-07 Describe ports, including standard and specialized ports Topic: Ports* |

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| 27. *(p. 123)* | These types of ports typically provide connections to specialized devices such as camcorders and storage devices.      |  |  | | --- | --- | | **A.** | FireWire |  |  |  | | --- | --- | | B. | Serial |  |  |  | | --- | --- | | C. | Parallel |  |  |  | | --- | --- | | D. | AGP | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-07 Describe ports, including standard and specialized ports Topic: Ports* |

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| 28. *(p. 124)* | Which of the following ports is used for connecting musical instruments to a sound card?      |  |  | | --- | --- | | A. | MiniDP |  |  |  | | --- | --- | | B. | S/PDIF |  |  |  | | --- | --- | | **C.** | MIDI |  |  |  | | --- | --- | | D. | eSATA | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-07 Describe ports, including standard and specialized ports Topic: Ports* |

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| 29. *(p. 124)* | Which of the following ports provide high-speed connections for external hard disk drives, optical disks, and other large secondary storage devices?      |  |  | | --- | --- | | **A.** | eSATA |  |  |  | | --- | --- | | B. | S/PDIF |  |  |  | | --- | --- | | C. | HDMI |  |  |  | | --- | --- | | D. | MiniDP | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-07 Describe ports, including standard and specialized ports Topic: Ports* |

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| 30. *(p. 126)* | Laptops and tablets use \_\_\_\_\_\_\_ that are typically located outside the system unit.      |  |  | | --- | --- | | **A.** | AC adapters |  |  |  | | --- | --- | | B. | batteries |  |  |  | | --- | --- | | C. | power supply units |  |  |  | | --- | --- | | D. | MiniDc | |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-08 Identify power supplies for desktop, laptop, tablet, and mobile devices Topic: Power Supply* |

**True / False Questions**

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| 31. *(p. 114)* | The system unit, also known as the system chassis, is a container that houses most of the electronic components that make up a computer system.    **TRUE** |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-01 Differentiate between the four basic types of system units Topic: System Unit* |

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| 32. *(p. 127-128)* | ASCII supports Chinese and Japanese.    **FALSE** |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Understand Difficulty: 2 Medium Learning Outcome: 05-09 Explain how a computer can represent numbers and encode characters electronically Topic: Electronic Data and Instructions* |

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| 33. *(p. 118)* | The ALU tells the rest of the computer system how to carry out a program's instructions.    **FALSE** |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Understand Difficulty: 1 Easy Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 34. *(p. 118)* | The control unit directs the movement of electronic signals between the memory and the ALU.    **TRUE** |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 35. *(p. 119)* | 64-bit-word computer can access 8 bytes at a time.    **TRUE** |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 36. *(p. 119)* | Parallel processing requires a computer to perform one complete task before beginning the next task.    **FALSE** |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Apply Difficulty: 3 Hard Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 37. *(p. 120)* | RAM is considered temporary, or volatile, storage.    **TRUE** |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-04 Compare different types of computer memory, including RAM, ROM, and flash memory Topic: Memory* |

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| 38. *(p. 120)* | Virtual memory is stored on a RAM chip.    **FALSE** |

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| *AACSB: Analytic AACSB: Technology Accessibility: Keyboard Navigation Blooms: Analyze Difficulty: 3 Hard Learning Outcome: 05-04 Compare different types of computer memory, including RAM, ROM, and flash memory Topic: Memory* |

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| 39. *(p. 120)* | Read-only memory (ROM) chips have information stored in them by the manufacturer.    **TRUE** |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-04 Compare different types of computer memory, including RAM, ROM, and flash memory Topic: Memory* |

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| 40. *(p. 121)* | Graphics cards connect the system board to secondary storage.    **FALSE** |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Understand Difficulty: 2 Medium Learning Outcome: 05-05 Explain expansion slots and cards Topic: Expansion Slots and Cards* |

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| 41. *(p. 121-122)* | Plug and Play has become a generic term that is associated with the ability to plug any device into a computer and have it play or work immediately.    **TRUE** |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-05 Explain expansion slots and cards Topic: Expansion Slots and Cards* |

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| 42. *(p. 122)* | The number of bits that can travel simultaneously down a bus is known as the word size.    **FALSE** |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 2 Medium Learning Outcome: 05-06 Describe bus lines, bus widths, and expansion buses Topic: Bus Lines* |

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| 43. *(p. 122)* | A bus is a pathway for bits representing data and instructions.    **TRUE** |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-06 Describe bus lines, bus widths, and expansion buses Topic: Bus Lines* |

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| 44. *(p. 123)* | VGA and DVI ports provide connections to monitors.    **TRUE** |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-07 Describe ports, including standard and specialized ports Topic: Ports* |

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| 45. *(p. 123)* | USB ports are used to connect keyboards, mice, printers, storage devices, and a variety of specialty devices.    **TRUE** |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-07 Describe ports, including standard and specialized ports Topic: Ports* |

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| 46. *(p. 123)* | Firewire ports are used to connect keyboards, mice, printers, and storage devices.    **FALSE** |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 2 Medium Learning Outcome: 05-07 Describe ports, including standard and specialized ports Topic: Ports* |

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| 47. *(p. 124)* | eSATA ports provide high-speed connections for external hard disk drives, optical disks, and other large secondary storage devices.    **TRUE** |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-07 Describe ports, including standard and specialized ports Topic: Ports* |

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| 48. *(p. 124)* | MiniDP ports are an audiovisual port typically used to connect large monitors.    **TRUE** |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-07 Describe ports, including standard and specialized ports Topic: Ports* |

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| 49. *(p. 124)* | HDMI ports make it possible to use a computer as a video jukebox or an HD video recorder.    **TRUE** |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-07 Describe ports, including standard and specialized ports Topic: Ports* |

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| 50. *(p. 126)* | Computers require direct current (DC) to power their electronic components and to represent data and instructions.    **TRUE** |

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| *AACSB: Technology Accessibility: Keyboard Navigation Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-08 Identify power supplies for desktop, laptop, tablet, and mobile devices Topic: Power Supply* |

**Fill in the Blank Questions**

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| 51. *(p. 114)* | The \_\_\_\_\_\_\_, also known as the system chassis, is a container that houses most of the electronic components that make up a computer system.    **system unit** |

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| *AACSB: Technology Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-01 Differentiate between the four basic types of system units Topic: System Unit* |

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| 52. *(p. 115)* | \_\_\_\_\_\_\_ are effectively a thin slab that is almost all monitor with the system unit located behind the monitor.    **Tablets** |

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| *AACSB: Technology Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-01 Differentiate between the four basic types of system units Topic: System Unit* |

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| 53. *(p. 128)* | The most widely used character encoding standard today is \_\_\_\_\_\_\_.    **Unicode** |

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| *AACSB: Technology Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-09 Explain how a computer can represent numbers and encode characters electronically Topic: Electronic Data and Instructions* |

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| 54. *(p. 127)* | The \_\_\_\_\_\_\_ system consists of only two digits—0 and 1.    **binary** |

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| *AACSB: Technology Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-09 Explain how a computer can represent numbers and encode characters electronically Topic: Electronic Data and Instructions* |

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| 55. *(p. 117)* | The system board is also known as the \_\_\_\_\_\_\_.    **motherboard** |

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| *AACSB: Technology Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-02 Describe system boards, including sockets, slots, and bus lines Topic: System Board* |

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| 56. *(p. 119)* | A(n) \_\_\_\_\_\_\_ is the number of bits that can be accessed at one time by the CPU.    **word** |

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| *AACSB: Technology Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 57. *(p. 118)* | \_\_\_\_\_\_\_ operations consist of making comparisons.    **Logical** |

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| *AACSB: Technology Blooms: Understand Difficulty: 2 Medium Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 58. *(p. 119)* | A(n) \_\_\_\_\_\_\_-bit-word computer can access eight bytes of information at a time.    **64** |

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| *AACSB: Technology Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 59. *(p. 119)* | \_\_\_\_\_\_\_ processors allow a single computer to run two or more operations at the same time.    **Multicore** |

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| *AACSB: Technology Blooms: Understand Difficulty: 2 Medium Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 60. *(p. 120)* | \_\_\_\_\_\_\_ memory improves processing by acting as a temporary high-speed holding area between the memory and the CPU.    **Cache** |

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| *AACSB: Technology Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-04 Compare different types of computer memory, including RAM, ROM, and flash memory Topic: Memory* |

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| 61. *(p. 120)* | \_\_\_\_\_\_\_ memory uses the hard drive to substitute for RAM.    **Virtual** |

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| *AACSB: Technology Blooms: Apply Difficulty: 2 Medium Learning Outcome: 05-04 Compare different types of computer memory, including RAM, ROM, and flash memory Topic: Memory* |

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| 62. *(p. 119)* | The processing speed of a microprocessor is typically represented by its \_\_\_\_\_\_\_ speed.    **clock** |

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| *AACSB: Technology Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 63. *(p. 121)* | \_\_\_\_\_\_\_ cards accept audio input from a microphone and convert it into a form that can be processed by the computer.    **Sound** |

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| *AACSB: Technology Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-05 Explain expansion slots and cards Topic: Expansion Slots and Cards* |

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| 64. *(p. 121)* | \_\_\_\_\_\_\_ network cards allow computers to be connected without cables.    **Wireless** |

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| *AACSB: Technology Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-05 Explain expansion slots and cards Topic: Expansion Slots and Cards* |

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| 65. *(p. 121)* | Network interface cards (NIC) are connected through \_\_\_\_\_\_\_ slots on the motherboard.    **expansion** |

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| *AACSB: Technology Blooms: Apply Difficulty: 3 Hard Learning Outcome: 05-05 Explain expansion slots and cards Topic: Expansion Slots and Cards* |

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| 66. *(p. 123)* | \_\_\_\_\_\_\_ buses connect the CPU to memory on the system board.    **System** |

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| *AACSB: Technology Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-06 Describe bus lines, bus widths, and expansion buses Topic: Bus Lines* |

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| 67. *(p. 122)* | The number of bits that can travel simultaneously down a bus is known as the bus \_\_\_\_\_\_\_.    **width** |

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| *AACSB: Technology Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-06 Describe bus lines, bus widths, and expansion buses Topic: Bus Lines* |

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| 68. *(p. 124)* | \_\_\_\_\_\_\_ ports are the standard high-speed networking ports for many of today's computers.    **Ethernet** |

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| *AACSB: Technology Blooms: Understand Difficulty: 2 Medium Learning Outcome: 05-07 Describe ports, including standard and specialized ports Topic: Ports* |

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| 69. *(p. 124)* | \_\_\_\_\_\_\_ ports are a special type of port for connecting musical instruments to a sound card.    **MIDI(musical instrument digital interface)** |

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| *AACSB: Technology Blooms: Remember Difficulty: 2 Medium Learning Outcome: 05-07 Describe ports, including standard and specialized ports Topic: Ports* |

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| 70. *(p. 124)* | \_\_\_\_\_\_\_ ports provide high-speed connections for external disk drives, optical disks, and other large secondary storage devices.    **eSATA(external serial advanced technology attachment)** |

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| *AACSB: Technology Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-07 Describe ports, including standard and specialized ports Topic: Ports* |

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| 71. *(p. 124)* | \_\_\_\_\_\_\_ ports provide high-speed connections can connect up to seven separate devices connected one to another.    **Thunderbolt** |

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| *AACSB: Technology Blooms: Understand Difficulty: 1 Easy Learning Outcome: 05-07 Describe ports, including standard and specialized ports Topic: Ports* |

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| 72. *(p. 124)* | \_\_\_\_\_\_\_ ports are an audiovisual port typically used to connect large monitors.    **mDP(Mini DisplayPort)** |

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| *AACSB: Technology Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-07 Describe ports, including standard and specialized ports Topic: Ports* |

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| 73. *(p. 126)* | Desktop computers have a(n) \_\_\_\_\_\_\_, located within the system unit, that plugs into a standard wall outlet, converts AC to DC, and provides the power to drive all of the system unit components.    **power supply unit** |

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| *AACSB: Technology Blooms: Remember Difficulty: 1 Easy Learning Outcome: 05-08 Identify power supplies for desktop, laptop, tablet, and mobile devices Topic: Power Supply* |

**Essay Questions**

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| 74. *(p. 115-116)* | Compare and contrast the four most common types of system units.     The four most common types of system units are: desktop, laptop, tablet, and mobile devices. The desktop system unit can be placed horizontally (desktop) or vertically (tower). All input and output devices are located outside the system unit. Laptops are portable and much smaller. Their system units are housed with selected secondary storage devices and input devices. Located outside the system unit, the monitor is attached by hinges. Laptops are often called notebooks. Tablets, also known as tablet computers, are the newest and one of the most popular types of computer. They are effectively a thin slab that is all monitor with the system unit located behind the monitor. Tablets are smaller, lighter, and generally less powerful than laptop computers. Like a laptop, tablets have a flat screen but typically do not have a standard keyboard. Instead tablets typically use a virtual keyboard that appears on the screen and is touch-sensitive. Mobile devices, also known as handheld computers, are the smallest and are designed to comfortably fit into the palm of one hand. These systems contain an entire computer system, including the electronic components, secondary storage, and input and output devices. By far the most popular mobile device is the smartphone. It greatly extends the capabilities of a cell phone by providing computing power. In addition to capturing and sending audio and video, smartphones run apps, connect to the Internet, and more. |

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| *AACSB: Analytic AACSB: Reflective Thinking AACSB: Technology Blooms: Analyze Difficulty: 3 Hard Learning Outcome: 05-01 Differentiate between the four basic types of system units Topic: System Unit* |

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| 75. *(p. 127-128)* | Describe the character encoding schemes.     The three character encoding schemes are ASCII, EBCDIC, and Unicode. Historically, personal computers used the ASCII to represent characters, while mainframe computers used EBCDIC. These schemes were quite effective; however, they are limited. ASCII, for example, only uses 7 bits to represent each character, which means that only 128 total characters could be represented. This was fine for most characters in the English language but was not large enough to support other languages such as Chinese and Japanese. These languages have too many characters to be represented by the 7-bit ASCII code. |

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| *AACSB: Analytic AACSB: Reflective Thinking AACSB: Technology Blooms: Analyze Difficulty: 3 Hard Learning Outcome: 05-09 Explain how a computer can represent numbers and encode characters electronically Topic: Electronic Data and Instructions* |

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| 76. *(p. 119)* | How is the multicore chip useful for personal computers?     At one time, personal computers were limited by microprocessors that could support a single CPU that controlled operations. These computers were limited to processing one program at a time. Now, many personal computers have multicore processors that can provide two or more separate and independent CPUs. More significantly, however, is the potential for personal computers to run very large, complex programs that previously required expensive and specialized hardware. |

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| *AACSB: Reflective Thinking AACSB: Technology Blooms: Apply Difficulty: 2 Medium Learning Outcome: 05-03 Recognize different microprocessors, including microprocessor chips and specialty processors Topic: Microprocessor* |

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| 77. *(p. 121)* | Explain expansion slots and cards.     Many personal computers allow users to expand their systems by providing expansion slots on the system board. Users can insert optional devices known as expansion cards into these slots. Ports on the cards allow cables to be connected from the expansion cards to devices outside the system unit. Some of the most commonly used expansion cards include graphics cards, sound cards, network interface cards, and wireless network cards. |

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| *AACSB: Reflective Thinking AACSB: Technology Blooms: Apply Difficulty: 2 Medium Learning Outcome: 05-05 Explain expansion slots and cards Topic: Expansion Slots and Cards* |

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| 78. *(p. 121-122)* | Explain Plug and Play.     Plug and Play was originally a set of specific hardware and software standards developed by Intel, Microsoft, and others. As hardware and software has evolved, however, Plug and Play has become a generic term that is associated with the ability to plug any device into a computer and have it play or work immediately. |

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| *AACSB: Reflective Thinking AACSB: Technology Blooms: Understand Difficulty: 2 Medium Learning Outcome: 05-05 Explain expansion slots and cards Topic: Expansion Slots and Cards* |

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| 79. *(p. 123)* | Describe the three principal types of expansion buses.     The principal types of expansion buses are: USB, FireWire, and PCIe. Universal Serial Bus (USB) is widely used today. External USB devices are connected from one to another or to a common point or hub and then onto the USB bus. The USB bus then connects to the PCI bus on the system board. The current USB standard is USB 3.0. The FireWire bus is similar to USB buses and is used primarily to connect audio and video equipment to the system board. PCI Express (PCIe) is widely used in many of today's most powerful computers. Unlike most other buses that share a single bus line or path with several devices, the PCIe bus provides a single dedicated path for each connected device. |

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| *AACSB: Reflective Thinking AACSB: Technology Blooms: Understand Difficulty: 2 Medium Learning Outcome: 05-06 Describe bus lines, bus widths, and expansion buses Topic: Bus Lines* |

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| 80. *(p. 124)* | Describe specialty ports including eSATA, HDMI, MIDI, MiniDP, and Thunderbolt.     External Serial Advanced Technology Attachment (eSATA) ports provide high-speed connections for external hard disk drives, optical disks, and other large secondary storage devices. High Definition Multimedia Interface (HDMI) ports provide high-definition video and audio, making it possible to use a computer as a video jukebox or an HD video recorder. Musical instrument digital interface (MIDI) ports are a special type of serial port for connecting musical instruments like an electronic keyboard to a sound card. The sound card converts the music into a series of digital instructions. These instructions can be processed immediately to reproduce the music or saved to a file for later processing. Mini DisplayPort (MiniDP or mDP) ports are an audiovisual port typically used to connect large monitors. These ports are used with many Apple Macintosh computers. Thunderbolt ports, first introduced in Apple's MacBook Pro computer, provide high-speed connections. A single port can connect up to seven separate devices connected one to another. Thunderbolt ports promise to replace a number of different types of ports including Mini DisplayPorts. |

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| *AACSB: Reflective Thinking AACSB: Technology Blooms: Apply Difficulty: 2 Medium Learning Outcome: 05-07 Describe ports, including standard and specialized ports Topic: Ports* |