

CIT-15 Chapter 2 Study Guide

Multiple Choice

Identify the choice that best completes the statement or answers the question.

- ___ 1. Eight bits grouped together are collectively referred to as a ____.
- a. kilobit
 - b. byte
 - c. pixel
 - d. binary
- ___ 2. The numbering system we commonly use is called the decimal numbering system because it uses ____ symbols to represent all possible numbers.
- a. 2
 - b. 5
 - c. 10
 - d. 16
- ___ 3. A ____ is the smallest unit of data that a binary computer can recognize.
- a. byte
 - b. datum
 - c. pixel
 - d. bit
- ___ 4. A ____ is equal to 1,024 bytes.
- a. kilobyte (KB)
 - b. megabyte (MB)
 - c. gigabyte (GB)
 - d. terabyte (TB)
- ___ 5. Each place value in a binary number represents ____ taken to the appropriate power.
- a. 0
 - b. 1
 - c. 2
 - d. 10
- ___ 6. With bitmapped images, the color of each ____ is represented by bits; the more bits used, the better the image quality.
- a. pixel
 - b. vector
 - c. map
 - d. byte
- ___ 7. In a 16.8-million-color (called photographic quality or ____) image, three bytes (24 bits) are used to store the color data for each pixel in the image.
- a. mega color
 - b. true color
 - c. real color
 - d. full color
- ___ 8. Like graphics data, ____—such as a song or the sound of someone speaking—must be in digital form in order to be stored on a storage medium or processed by a PC.
- a. pixel data
 - b. giga data
 - c. audio data
 - d. audio programs
- ___ 9. Video data—such as home movies, feature films, and television shows—is displayed using a collection of ____.
- a. slides
 - b. pixels
 - c. vectors
 - d. frames
- ___ 10. A(n) ____ instruction might look like a meaningless string of 0s and 1s, but it actually represents specific operations and storage locations.
- a. COBOL language
 - b. ASCII
 - c. programming language
 - d. machine language
- ___ 11. ____ are very small pieces of silicon or other semiconducting material onto which integrated circuits are embedded.
- a. Pixels
 - b. Pentiums
 - c. Chips
 - d. Motherboards
- ___ 12. One measurement of the speed of a CPU is the ____, which is rated in megahertz (MHz) or gigahertz (GHz).
- a. system speed
 - b. CPU clock speed
 - c. system rpm
 - d. CPU rpm

- ___ 13. A computer ___ is the amount of data (measured in bits or bytes) that a CPU can manipulate at one time.
- a. word
 - b. character
 - c. statement
 - d. unit
- ___ 14. A ___ is an electronic path over which data can travel.
- a. bus
 - b. lane
 - c. word
 - d. cache memory
- ___ 15. The bus width and bus speed together determine the bus's ___ or bandwidth; that is, the amount of data that can be transferred via the bus in a given period of time.
- a. clock speed
 - b. throughput
 - c. machine cycle
 - d. memory
- ___ 16. The term ___ refers to chip-based storage used by the computer.
- a. storage media
 - b. memory
 - c. hard drive
 - d. Zip drive
- ___ 17. An emerging type of RAM is magnetic (or more precisely, ___) (MRAM).
- a. magnetoselective
 - b. magnetobalanced
 - c. magnetoresistive
 - d. magnetocharged
- ___ 18. ___ are small components typically made out of aluminum with fins that help to dissipate heat.
- a. ACs
 - b. Fans
 - c. Heat buses
 - d. Heat sinks
- ___ 19. ___ consists of nonvolatile memory chips that can be used for storage by the computer or the user.
- a. RAM
 - b. Register
 - c. SDRAM
 - d. Flash memory
- ___ 20. ___ have begun to replace ROM for storing system information, such as a PC's BIOS.
- a. Motherboards
 - b. Microprocessors
 - c. Adapter cards
 - d. Flash memory chips
- ___ 21. The ___ enables up to 127 devices to be connected to a computer's PCI bus through a single port on the computer's system unit.
- a. HyperTransport bus
 - b. USB standard
 - c. AGP (Accelerated Graphics Port) bus
 - d. PCI Express Bus
- ___ 22. Most network cards contain a port that accepts a(n) ___, which looks similar to a telephone connector but is larger.
- a. RJ-11 connector
 - b. RJ-12 connector
 - c. RJ-14 connector
 - d. RJ-45 connector
- ___ 23. A USB ___ is a device that plugs into your PC's USB port to convert one port into several USB ports.
- a. hub
 - b. module
 - c. bus
 - d. connector
- ___ 24. Most computers today support the ___ standard, in which the computer automatically configures new devices as soon as they are installed and the PC is powered up.
- a. Plug and Play
 - b. Match
 - c. Serial port
 - d. Parallel port
- ___ 25. The key element of the microprocessor is the ___—a device made of semiconductor material that acts like a switch controlling the flow of electrons inside a chip.
- a. processor
 - b. transistor
 - c. chipbus
 - d. S-card
- ___ 26. The ___ takes instructions from the prefetch unit and translates them into a form that the control unit can understand.
- a. register
 - b. decode unit
 - c. ALU
 - d. internal cache

- ___ 27. The ___ is the section of the CPU that performs arithmetic involving integers and logical operations.
- FPU
 - control unit
 - decode unit
 - ALU
- ___ 28. The ___ orders data and instructions from cache or RAM based on the task at hand.
- ALU
 - prefetch unit
 - control unit
 - decode unit
- ___ 29. The ___ tries to predict what data and instructions will be needed and retrieves them ahead of time, in order to help avoid delays in processing.
- control unit
 - floating point unit
 - arithmetic/logic unit
 - prefetch unit
- ___ 30. Instructions and data flow in and out of the CPU via the ___.
- control unit
 - prefetch unit
 - decode unit
 - bus interface unit
- ___ 31. In order to synchronize all of a computer's operations, a ___—a quartz crystal located on the motherboard—is used.
- cycle chip
 - fetch unit
 - system clock
 - microprocessor
- ___ 32. Some ___ must be added in pairs.
- interfaces
 - memory modules
 - USB ports
 - hard drives
- ___ 33. Today's CPUs are formed using a process called ___ that imprints patterns on semiconductor materials.
- vectoring
 - lithography
 - serigraphy
 - imprintment
- ___ 34. One nanometer (nm) is ___ of a meter.
- one-billionth
 - one-millionth
 - one-thousandth
 - one-tenth
- ___ 35. Terascale computing is the ability of computers to process one ___ floating-point operations per second (teraflops).
- million
 - billion
 - trillion
 - quadrillion

Case-Based Critical Thinking Questions

Case 2-1

Jess is a musician who has just bought a new computer. Now she has to determine how to connect this computer to the devices that were connected to her old computer.

- ___ 36. To connect her external hard drive where her music files are stored to the computer, Jess needs to use the ___ port.
- serial
 - USB
 - network
 - modem
- ___ 37. Jess has a music keyboard that she uses to compose music that will be stored electronically. To connect the keyboard to the computer, she would use the ___ port.
- SCSI
 - FireWire
 - modem
 - MIDI

Case-Based Critical Thinking Questions

Case 2-2

Jack has a computer at home that he uses to access the Internet, store and edit personal photos, and create and edit documents. Recently, he has come to realize that in order to keep the computer performing at its best, he needs to carry out regular system maintenance on the computer.

- ___ 38. Jack has many large files such as digital photos and movies stored on his computer. Since he only occasionally uses these files, he should consider moving them to a removable storage medium, such as a CD disc, DVD disc, or ____.
- | | |
|----------------------|--------------------|
| a. RAM memory module | c. USB flash drive |
| b. USB hub | d. FireWire disk |
- ___ 39. Jack can use the ____ program to locate and delete temporary files, such as installation files, Web browsing history, and files in the Recycle Bin.
- | | |
|----------------------|-------------------------|
| a. Windows Registry | c. Temporary Files |
| b. Disk Defragmenter | d. Windows Disk Cleanup |
- ___ 40. Since Jack has a Windows system, he can right-click a hard drive icon in Windows Explorer, select Properties, and then select the ____ option on the Tools tab to check that hard drive for errors.
- | | |
|----------------------|-------------------------|
| a. Check Now | c. Defragment Now |
| b. Disk Defragmenter | d. Windows Disk Cleanup |