Quizzes: Chapter 05

1. The _____ is a computer subsystem that performs operations on data.
   a. CPU
   b. memory
   c. I/O hardware
   d. bus subsystem
   Correct Answer: (a)

2. _____ is a stand-alone storage location that holds data temporarily.
   a. An ALU
   b. A register
   c. A control unit
   d. A tape drive
   Correct Answer: (b)

3. _____ is a unit that can add two inputs.
   a. An ALU
   b. A register
   c. A control unit
   d. A tape drive
   Correct Answer: (a)

4. A register in a CPU can hold _____.
   a. only data
   b. only instructions
   c. only program counter values
   d. data, instruction, or program counter values

Correct Answer: (d)

5. A control unit with five wires can define up to _____ operations.
   a. 5
   b. 10
   c. 16
   d. 32
   Correct Answer: (d)

6. A word can be _____ bits.
   a. only 8
   b. only 16
   c. only 32
   d. 8, or 16, or 32
   Correct Answer: (d)

7. If the memory address space is 16 MB and the word size is 8 bits, then _____ bits are needed to access each word.
   a. 8
   b. 16
   c. 24
   d. 32
   Correct Answer: (c)

8. The data in _____ is erased if the computer is powered down.
   a. RAM
   b. ROM
   c. a tape drive
   d. a CD-ROM
   Correct Answer: (a)

9. _____ is a memory type with capacitors that need to be refreshed periodically.
   a. SRAM
   b. DRAM
   c. ROM

d. CROM
Correct Answer: (b)

10. _____ is a memory type with traditional flip-flop gates to hold data.
a. SRAM
b. DRAM
c. ROM
d. CROM
Correct Answer: (a)

11. There are _____ bytes in 16 Terabytes.
a. 2^{16}
b. 2^{40}
c. 2^{44}
d. 2^{56}
Correct Answer: (a)

12. _____ can be programmed and erased using electronic impulses but can remain in a computer during erasure.
a. ROM
b. PROM
c. EPROM
d. EEPROM
Correct Answer: (d)

13. _____ is a type of memory in which the user, not the manufacturer, stores programs that cannot be overwritten.
a. ROM
b. PROM
c. EPROM
d. EEPROM
Correct Answer: (b)

14. Main memory in a computer usually consists of large amounts of _____ speed memory.

a. high
b. medium
c. low
d. very high speed
Correct Answer: (c)

15. A _____ is a storage device to which the user can write information only once.
a. CD-ROM
b. CD-R
c. CD-RW
d. CD-RR
Correct Answer: (b)

16. A _____ is a storage device that can undergo multiple writes and erasures.
a. CD-ROM
b. CD-R
c. CD-RW
d. CD-RR
Correct Answer: (c)

17. The smallest storage area on a magnetic disk that can be accessed at one time is a _____.
a. track
b. sector
c. frame
d. head
Correct Answer: (b)

18. If the memory has 2^{32} words, the address bus needs to have _____ wires.
a. 8
b. 16
c. 32
d. 64

Correct Answer: (c)

19. A control bus with eight wires can define _____ operations.
    a. 8
    b. 16
    c. 256
    d. 512
    Correct Answer: (c)

20. A _____ controller is a high-speed serial interface that transfers data in packets.
    a. SCSI
    b. USB
    c. FireWire
    d. USB and FireWire
    Correct Answer: (d)

21. The three steps in the running of a program on a computer are performed in the specific order _____.
    a. fetch, execute, and decode
    b. decode, execute, and fetch
    c. fetch, decode, and execute
    d. decode, fetch, and execute
    Correct Answer: (c)

22. In the _____ method for synchronizing the operation of the CPU with an I/O device, the I/O device informs the CPU when it is ready for data transfer.
    a. programmed I/O
    b. interrupt-driven I/O
    c. DMA
    d. isolated I/O
    Correct Answer: (b)

23. In the _____ method for synchronizing the operation of the CPU with an I/O device, the CPU is idle until the I/O operation is finished.

a. programmed I/O
b. interrupt-driven I/O
c. DMA
d. isolated I/O
Correct Answer: (a)

24. In the _____ method for synchronizing the operation of the CPU with an I/O device, a large block of data can be passed from an I/O device to memory directly.
a. programmed I/O
b. interrupt-driven I/O
c. DMA
d. isolated I/O
Correct Answer: (c)