CSIS 3720 Quiz 3

True/False
Indicate whether the statement is true or false.

____ 1. The 2.5” size hard drive is typically used in devices such as MP3 players.
____ 2. The read/write head on a magnetic hard drive is at both the top and bottom of each disk.
____ 3. The 80-conductor IDE cable has 80 pins and 40 wires.
____ 4. Each IDE header on a motherboard can support up to two IDE devices.
____ 5. If you connect the floppy cable in the wrong direction, the floppy drive light stays on continuously.

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

____ 1. Which of the following is NOT true about hard disk drives?
   a. the 3.5” size is typically used in desktops
   b. a solid state drive has no moving parts
   c. solid state drives are less expensive than magnetic hard drives
   d. tracks on a hard drive are divided into sectors

____ 2. Which process writes sector markings to a hard drive?
   a. partitioning
   b. low-level formatting
   c. high-level formatting
   d. sector provisioning

____ 3. Which hard drive technology is used to predict when a drive is likely to fail?
   a. S.S.D.
   b. S.M.A.R.T.
   c. N.A.N.D.
   d. E.E.P.R.O.M.

____ 4. Which of the following is true about disk drive interfaces?
   a. PATA allows for two connectors on a motherboard
   b. SATA is the older and slower technology
   c. four IDE drives can be connected to a single 80-pin data cable
   d. the ATAPI standard was developed for optical SATA drives

____ 5. Which type of cable is required by ATA/66 and above?
   a. 40 pins, 66 wires
   b. 80 pins, 40 wires
   c. 66 pins, 40 wires
   d. 40 pins, 80 wires

____ 6. Why would you use a round PATA ribbon cable instead of traditional flat cable?
   a. round cables cost a lot less
   b. round cables obstruct air flow less inside the case
   c. round cables provide a better connection than flat cables
   d. round cables are more resistant to interference
7. Why is DMA a better transfer mode than PIO for PATA drives?
   a. DMA has direct access to the CPU  
   b. The DMA bus is faster than the PIO bus  
   c. DMA data transfers don’t involve the CPU  
   d. DMA drives cost less than PIO drives

8. Which SATA standard provides a transfer rate of 3 Gb/sec?
   a. SATA1  
   b. SATA2  
   c. SATA3  
   d. SATA4

9. Which of the following is true about SCSI drives?
   a. SCSI ID 7 has a higher priority than SCSI ID 10  
   b. each logical device requires a unique SCSI ID  
   c. one end of the SCSI chain needs a terminator  
   d. SCSI devices are typically found in SOHO servers and desktops

10. Which of the following is true about selecting a hard drive?
    a. a faster spindle speed keeps the drive cooler but doesn’t improve performance  
    b. PATA drives are backward compatible with SATA drives  
    c. FireWire 800 drives are a good choice for fast internal drives  
    d. magnetic drives have larger capacity for the money than solid state drives

11. What should you keep in mind when installing hard drives?
    a. PATA and SATA won’t be found on the same motherboard  
    b. jumpers on SATA drives determine the primary and secondary drive  
    c. a PATA drive has master and slave settings  
    d. you need to connect power to both connectors on SATA drives

12. If you are adding a hard drive to a system that already has a drive with Windows installed on it, which of the following is true?
    a. you should boot from the Windows setup DVD to prepare the new drive  
    b. boot Windows and use Disk Management to prepare the new drive  
    c. use the BIOS setup screen to partition and format the new drive  
    d. the new hard drive must use the same standard as the Windows drive

13. Which is true about installing a PATA drive?
    a. each IDE channel supports a single drive  
    b. a motherboard can support up to four EIDE devices  
    c. each IDE cable has four connectors for drives  
    d. you need to set the jumpers to Master when you have only one drive

14. Why might you want to use a RAID 0 disk configuration?
    a. to improve overall disk performance  
    b. RAID 0 drives are less expensive than other RAID drives  
    c. to prevent data loss in case of a drive failure  
    d. because RAID 0 provides an automatic disk backup

15. Which of the following best describes RAID 5?
    a. data from one drive is mirrored to another  
    b. it improves performance but not fault tolerance  
    c. it requires 3 or more drives and uses parity checking  
    d. it takes at least four disks and data is striped and mirrored
16. Which of the following is true about hardware RAID?
   a. Microsoft recommends only using software RAID for the Windows volume
   b. it’s best to install Windows first and then create the RAID array
   c. you can only create a RAID 0 or a RAID 5 with hardware RAID
   d. RAID controllers have their own BIOS

17. Which interface is not typically used for an internal tape drive?
   a. SATA
   b. FireWire
   c. PATA
   d. SCSI

18. How is data stored on magnetic tape?
   a. in parallel
   b. in random access form
   c. sequentially
   d. as optical bits

19. How much data does a 3.5” floppy disk drive hold?
   a. 144 KB
   b. 1.44 MB
   c. 14.4 GB
   d. 1440 MB

20. What does a twist in a 34-pin data cable mean?
   a. it indicates drive A:
   b. the cable has been damaged
   c. it should be connected to the primary IDE drive
   d. it is used for USB floppy

Matching

a. autodetection    f. ReadyDrive
b. fault tolerance  g. SCSI
c. host adapter      h. spanning
d. mirrored volume  i. striped volume
e. NAND flash memory j. terminating resistor

1. a chip that contains grids of rows and columns with two transistors at each intersection that hold a zero or one bit
2. a hybrid drive technology supported by Windows 7/Vista
3. a RAID 0 volume
4. a feature in startup BIOS that detects a new drive and selects the correct drive configuration
5. a computer’s ability to respond to a hardware failure