**ITM-301 Homework #4 (Chapter 6)**

Reviewing the Basics

1. What are the two types of technologies used inside hard drives?

A: Solid state and magnetic.

1. What are four speeds in revolutions per minute that the spindle inside a hard drive might rotate?

A: 5400, 7200, 10000 and 15000 RPM.

1. When the OS addresses the sectors on a hard drive as one long list of sequential sectors, what is this technology called?

A: Logical Block Addressing (LBA)

1. How many pins does an 80-conductor IDE cable have? What is the maximum recommended length of an IDE cable?

A: An 80-conductor IDE cable has 40 pins. The maximum recommended length of an IDE cable is 18 inches.

1. What is the transfer speed for SATA I? SATA II? SATA III?

A: SATA I: 1.5 Gb/s, SATA II: 3.0 Gb/s, SATA III: 6.0 Gb/s

1. What term describes the technology that allows you to exchange a hard drive without powering down the system?

A: Hot swapping or hot plugging

1. What are the four possible configurations for a PATA drive installed in a system?

A: Primary IDE channel, master device

Primary IDE channel, slave device

Secondary IDE channel, master device

Secondary IDE channel, slave device

1. Which two SCSI connectors might be used with narrow SCSI?

A: 50-pin SCSI connectors and 25-pin SCSI connectors

1. Which RAID level mirrors one hard drive with a second drive so that the same data is written to both drives?

A: RAID 1

1. Which RAID level stripes data across multiple drives to improve performance and also provides fault tolerance?

A: RAID 5

1. How many pins does a floppy drive cable have? What is the storage capacity of a 3½" high-density floppy disk?

A: a floppy drive cable has 34 pins. the storage capacity of a 3½" high-density floppy disk is 1.44 MB.

1. When implementing RAID on a motherboard, where do you enable the feature?

A: BIOS setup

1. Thinking Critically
2. Mark each statement as true or false:
   1. SATA 1 is about ten times faster than IDE ATA/133. TRUE
   2. SATA 1 is about 100 times faster than IDE ATA/133. FALSE
   3. RAID 0 can be implemented using only a single hard drive. FALSE
   4. RAID 5 requires five hard drives working together at the same speed and capacity. FALSE
   5. You can use an internal SATA data cable with an eSATA port. FALSE
   6. A SATA data cable has 7 pins. TRUE