T F 881. Data and programs on storage devices are lost when the power is turned off.

T F 882. The process of storing data is called reading data.

T F 883. The process of retrieving data is called writing data.

T F 884. Storage devices also can be used as input devices.

T F 885. When a storage device transfers some of its stored data to the computer for processing, it is being used as an output device.

T F 886. Magnetic disk offers fast access to stored data.

T F 887. Floppy disks rarely are used with personal computers because they are inconvenient, immobile, and expensive.

T F 888. Before a floppy disk can be used for storage, it must be formatted.

T F 889. A track sector is a section of track within a sector.

T F 890. Each cluster on a floppy disk can hold data from many files.

T F 891. One file always is stored in one cluster.

T F 892. The formatting process establishes a directory that will be used to record information about files stored on the floppy disk.

T F 893. If the write-protect window on a 3½-inch floppy disk is open, the drive can write on the floppy disk.

T F 894. An open hole identifies a disk as a high-density floppy disk.

T F 895. Most floppy disk drives store the same amount of data on the longer outside tracks as they do on the shorter inside tracks.

T F 896. The number of tracks on a disk depends on the size of the floppy disk, the drive used for formatting, and how the floppy disk was formatted.

T F 897. The process of storing data on a floppy disk varies widely depending on the type of floppy disk and the way it is formatted.

T F 898. Data is stored on tracks of a disk using a different code from that used to store data in memory.

T F 899. The time required to locate data on a floppy disk and transfer it to memory is called drive speed.

T F 900. The access time for floppy disks is approximately 150 milliseconds — that is,

data stored in a single sector on a floppy disk can be retrieved in about 1/6 of one second.

T F 901. Floppy disks should not be exposed to magnetic fields.

T F 902. A floppy disks' rigid plastic cover provides the data stored on the plastic disk inside with adequate protection from contaminants.

T F 903. Hard disks provide faster access times and larger storage capacities than floppy disks.

T F 904. The platters, the read/write heads, and the mechanism for moving the heads across the surface of a hard disk are enclosed in an airtight, sealed case.

T F 905. Most hard disks are mounted permanently inside the computer and are not removable.

T F 906. Minicomputers and mainframes use hard disks called fixed disks or direct-access storage devices (DASD).

T F 907. Fixed disks used with minicomputers and mainframes often are larger versions of the hard disks used with personal computers.

T F 908. Fixed disks can be mounted in the same cabinet as the computer or enclosed in their own stand-alone cabinet.

T F 909. Data is stored on both sides of a hard disk platter.

T F 910. If one platter is used in a hard disk drive, one surface is available for data.

T F 911. Unlike a floppy disk, hard disks do not have to be formatted before they can be used to store data.

T F 912. On personal computers, hard disk partitions usually are identified by different letters, starting with the letter A.

T F 913. The storage capacity of hard drives is measured in megabytes, gigabytes, or terabytes.

T F 914. Hard disks rotate at a slow rate of speed, usually 300 revolutions per minute.

T F 915. Hard disk read/write heads are attached to access arms that remain stationary over one track on the disk surface.

T F 916. The distance between the hard disk read/write head and the surface of the disk is approximately one-quarter of an inch.

T F 917. A head crash usually results in a loss of data.

T F 918. Access time for a hard disk is between ten and twenty milliseconds.

T F 919. A hard disk only starts spinning when a read or write command is received.

T F 920. A disk cache is used to improve the apparent speed at which data is written to and read from.

T F 921. Disk cache memory is updated every time a disk read takes place.

T F 922. Disk cache software makes disk write operations more efficient by temporarily holding data to be written until the CPU is not busy.

T F 923. The flow of data to and from the hard disk is managed by a collection of electronic circuits called the hard disk controller.

T F 924. Most motherboards have built-in Integrated Drive Electronics (IDE) connectors that use a cable to attach directly to the disk drive.

T F 925. SCSI is the abbreviation for small computer system interface.

T F 926. SCSI controllers usually consist of a disk mounted in a separate cabinet.

T F 927. SCSI controllers are slower than IDE controllers.

T F 928. SCSI controllers can provide up to 100 MB per second transfer rates.

T F 929. Hard disk drives called disk cartridges cannot be removed.

T F 930. Disk cartridges can be used when data security is an issue.

T F 931. To prevent the loss of data, two procedures that should be performed regularly are formatting and data compression.

T F 932. Backup should be performed sporadically for all data but never for important files.

T F 933. Fragmentation causes the computer to run faster because reading data from the disk takes less time than if the data were all in one location.

T F 934. Data compression increases data storage requirements by substituting codes for repeating patterns of data.

T F 935. Lossy compression works best for text and numeric data that cannot afford to lose any data.

T F 936. It takes less time to transfer a decompressed file than a compressed file.

T F 937. Optical disks use electronic impulses to change the magnetic polarity of areas along a track on the disk.

T F 938. A full-size, 14-inch optical disk can store 6.8 billion bytes of information.

T F 939. Up to 150 optical disks can be installed in automated library systems called jukeboxes that provide more than one trillion bytes of storage.

T F 940. A CD-ROM is a small optical disk, just under four inches in diameter.

T F 941. Computer CD-ROM disks use a different laser technology from that used for the CD-ROM disks that have become popular for recorded music.

T F 942. A CD-ROM can store about 450 times the data that can be stored on a high-density 3½-inch floppy disk.

T F 943. Recordable CD-ROM drives typically are used by organizations that only store small volumes of data.

T F 944. CD-E, a type of erasable CD-ROM drive, is an old technology that is widely used.

T F 945. Magneto-optical (MO) drives record data by using magnetic fields to change the polarity of a spot on a disk that has been heated by a laser.

T F 946. A floptical disk drive uses a high-powered laser to read data in widely spaced tracks.

T F 947. A floptical drive is capable of reading standard 3½-inch floppy disks.

T F 948. During the 1950s and early 1960s, magnetic tape was the primary method of storing large amounts of data.

T F 949. Magnetic tape still is used as a primary method of storage.

T F 950. Magnetic tape is a cost-effective way to store data that does not have to be accessed immediately.

T F 951. Cartridge tape rarely is used for personal computer backup.

T F 952. The more common types of magnetic tape devices use reel-to-reel tape that is either one-quarter- or one-half-inch wide.

T F 953. Tape cartridges containing one-quarter-inch wide tape are much larger than audio cassette tapes and rarely are used for personal computer backup.

T F 954. For personal computers, cartridge tape units are designed to be internally

mounted in a bay or in an external cabinet.

T F 955. Cartridge tape devices have been replaced almost completely by reel-to-reel tape devices but still may be found on large computer systems.

T F 956. Quarter-inch–cartridge (QIC) tape devices, often used with PCs, record data across the width of the tape.

T F 957. QIC cartridges have between nine and 144 tracks and can store from several hundred megabytes to more than 10 GB of data on a single tape.

T F 958. DAT tape drives use a rotating head similar to a video cassette recorder.

T F 959. Tape density is the number of rows that run the length of the tape.

T F 960. The lower the density, the more data that can be stored on a magnetic tape.

T F 961. Different types and sizes of PC cards are used for storage, communication, and additional memory.

T F 962. PC Cards most often are used on supercomputers.

T F 963. PC Cards used for storage contain small rotating disk drives.

T F 964. A group of integrated small disks is called a mass storage system.

T F 965. RAID storage system stands for redundant array of inexpensive disks.

T F 966. RAID technology can be implemented in several ways, called *RAID levels*.

T F 967. RAID level 1 is the simplest RAID method.

T F 968. Because each disk contains different information, RAID level 1 sometimes is called disk diversity.

T F 969. All RAID levels store parity information directly on the data disk.

T F 970. Data must be read from or written to RAID disks more slowly than to SLED systems, because only one read or write operation can take place at the same time.

T F 971. The biggest advantage RAID disks offer over single large disks is the reduced risk of losing data.

T F 972. Mass storage systems provide automated retrieval of data from a library of storage media.

T F 973. Mass storage is ideal for extremely large databases that must allow fast access to

all data.

T F 974. Special devices have been developed for special-purpose storage applications.

T F 975. Memory buttons currently can hold 800 characters of data and storage capacities are decreasing rapidly.

T F 976. To read or update information in a memory button, the button is touched with a small, pen-like probe, which is attached to a hand-held terminal.

T F 977. A prepaid telephone calling card is one example of an optical memory card.

T F 978. Rather than use time cards, employers use smart cards for employee time and attendance tracking.

T F 979. Optical memory cards can store up to 4.1 MB of digitized text or images on a device the size of a credit card.

T F 980. Personal medical information for diagnostic use can be stored on an optical memory card.