DSB International Public School
Rishikesh
Class VII
Computer Science
L1 - More Peripherals

A **computer peripheral** is a device that is connected to a computer but is not part of the core computer architecture. The core elements of a computer are the central processing unit, power supply, motherboard and the computer case that contains those three components. Technically speaking, everything else is considered a peripheral device. Examples are mouse, keyboard, monitor, printer and scanner. However, this is a somewhat narrow view, since various other elements are required for a computer to actually function, such as a hard drive and random-access memory (or RAM).

You connect the device to the computer to expand the functionality of the system. For example, consider a printer. Once the printer is connected to a computer, you can print out documents. Another way to look at peripheral devices is that they are dependent on the computer system. For example, most printers can't do much on their own, and they only become functional when connected to a computer system.

Types of Peripheral Devices

There are many different peripheral devices, but they fall into three general categories:

1. **Input devices**, such as a mouse and a keyboard
2. **Output devices**, such as a monitor and a printer
3. **Storage devices**, such as a hard drive or flash drive

Biometric Devices

A biometric device is a security identification and authentication device. Such devices use automated methods of verifying or recognising the identity of a living person based on a physiological or behavioral characteristic. These characteristics include fingerprints, facial images, iris and voice recognition.

Optical Mark Reader(OMR)

Optical mark recognition (also called optical mark reading and OMR) is the process of capturing human-marked data from document forms such as surveys and tests. They are used to read questionnaires, multiple choice examination paper in the form of lines or shady areas.

he prime function of the OMR machine is to scan and capture the optical marks on the multiple choice scoring sheets, and save the data into an output file which you can use to perform further analysis.

Magnetic Ink Character Recognition (MICR)

Magnetic Ink Character Recognition is a character recognition system that uses special ink and characters. When a document that contains this ink needs to be read, it passes through a machine, which magnetizes the ink and then translates the magnetic information into characters. MICR technology is used by banks.

Magnetic Ink Character Recognition is used for the printing of bank checks on blank stock. Unlike toner (ink) used for general text printing, MICR toner has a high iron oxide content so that it can be read by electronic bank processing equipment.
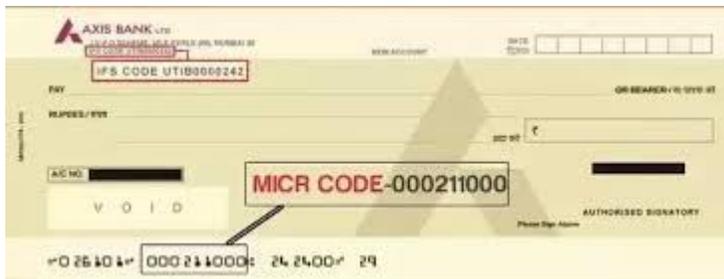
Magnetic Stripe card

A magnetic stripe card is a type of card capable of storing data by modifying the magnetism of tiny iron-based magnetic particles on a band of magnetic material on the card. The magnetic stripe, sometimes called swipe card or magstripe, is read by swiping past a magnetic reading head.

On magnetic stripe cards, the data is permanently stored on a magnetic stripe. The card often includes name and signature or any other details for added security.

Smart card readers

Smart card readers are used with smart cards which are a type of plastic technology card with a built-in chip used for electronic processes including personal identification, access control, authentication, and financial transactions. Smart card readers obtain or "read" this type of data. Smart cards are known as intelligent cards in which data can be stored and updated on the RAM chip. Hackers can not get details easily from smart cards.

Radio Frequency Identification (RFID)

RFID (radio frequency identification) is a form of wireless communication that incorporates the use of electromagnetic or electrostatic coupling in the radio frequency portion of the electromagnetic spectrum to uniquely identify an object, animal or person.
A radio-frequency identification system uses tags, or labels attached to the objects to be identified. Two-way radio transmitter-receivers called interrogators or readers send a signal to the tag and read its response. RFID tags can be either passive, active or battery-assisted passive.
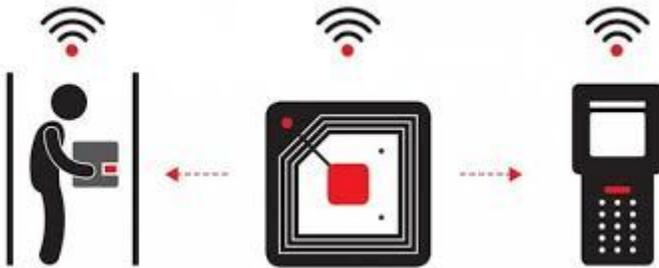
LCD Projector

An LCD projector is a type of projector based on liquid crystal displays which can display images, data or video. It works on transmission technology. LCD projectors are more popular than many alternatives due to the fact that they are cheaper to produce and have excellent color reproduction. They are commonly used in business meetings, presentations and seminars.

Voice Recognition

Voice or speaker recognition is the ability of a machine or program to receive and interpret dictation or to understand and carry out spoken commands. It allows a user to use his/ her voice as input.

Voice recognition systems enable consumers to interact with technology simply by speaking to it, enabling hands-free requests, reminders and other simple tasks.

Exercise:

Multiple Choice Questions.

1. A device which when attached to a computer enhances it's capabilities is called:
   a. External device   b. Peripheral device   c. Extra device   d. Unknown device
2. These devices refer to the identity verification of a living person using their physical characteristics.
   a. RFID   b. MICR   c. Biometric   d. OMR
3. This device is used to detect the presence or absence of a marks in a specific position.
   a. RFID   b. MICR   c. Biometric   d. OMR
4. These are intelligent cards with a chip inside it.
   a. Magnetic stripe cardsb. Dumb card   c. Intelligent card   d. Smart card
5. It is an ID system that uses small radio frequency identification devices.
   a. RFID   b. MICR   c. Biometric   d. OMR
6. This output device is used when the output is required in big screen.
   a. RFID   b. MICR   c. LCD projectors   d. OMR
7. This allows a user to use his/her voice as input.
   a. RFID   b. MICR   c. LCD projectors   d. Voice recognition system

Write (T) for True and (F) for False, for the following statements.

1. Biometric system depends on physical characteristics of a person.   ……………………
2. Peripheral devices are attached to the CPU.   ……………………
3. The term OMR stands for Original Mark Reader.   ……………………
4. The MICR machine reads the special characters printed (like on a cheque) in a standard font using an ink that contain iron oxide.
   ……………………
5. Magnetic cards are intelligent cards which have inbuilt electronics and memory storage.
   ……………………
6. Lots of data like name, address, blood group type etc. can be stored on smart cards.
   ……………………
7. The voice recognition system accepts a voice as the input.   ……………………
8. The RFID tag can be used in the identity cards of students.   ……………………
9. RFID and Bar code reader system are the same.
   ……………………

Fill in the blanks.

(Biometrics, Smart, Bar code, Magnetic, LCD Projectors, Voice recognition, OMR, RFID)

1. On ………….………………………….. stripe cards, the data is permanently stored on a magnetic stripe.
2. ……………………………. Refers to the identity verification of living persons, using their physical characteristics.
3. An …………………………….………… detect the presence or absence of a mark in a specific position.
4. …………………………………………… Cards are intelligent cards which have inbuilt electronics and memory storage.
5. …………………………………….…... are used when output is required on a big screen instead of a monitor.
6. The …………………………………………system allows a used to use his/her voice as input.
7. An ………………………………….……… tag has a chip, inbuilt memory and an antenna.
8. In a …………………………………system, the objects need to pass through the reader system.

Answer the following questions.
1. Write about Biometric device and Smart cards.
2. Write about MICR.
3. What is a Voice Recognition System?
4. What is the advantage of RFID over the Bar Code Reader?