Unit :- 2 Payal

:- Input devices

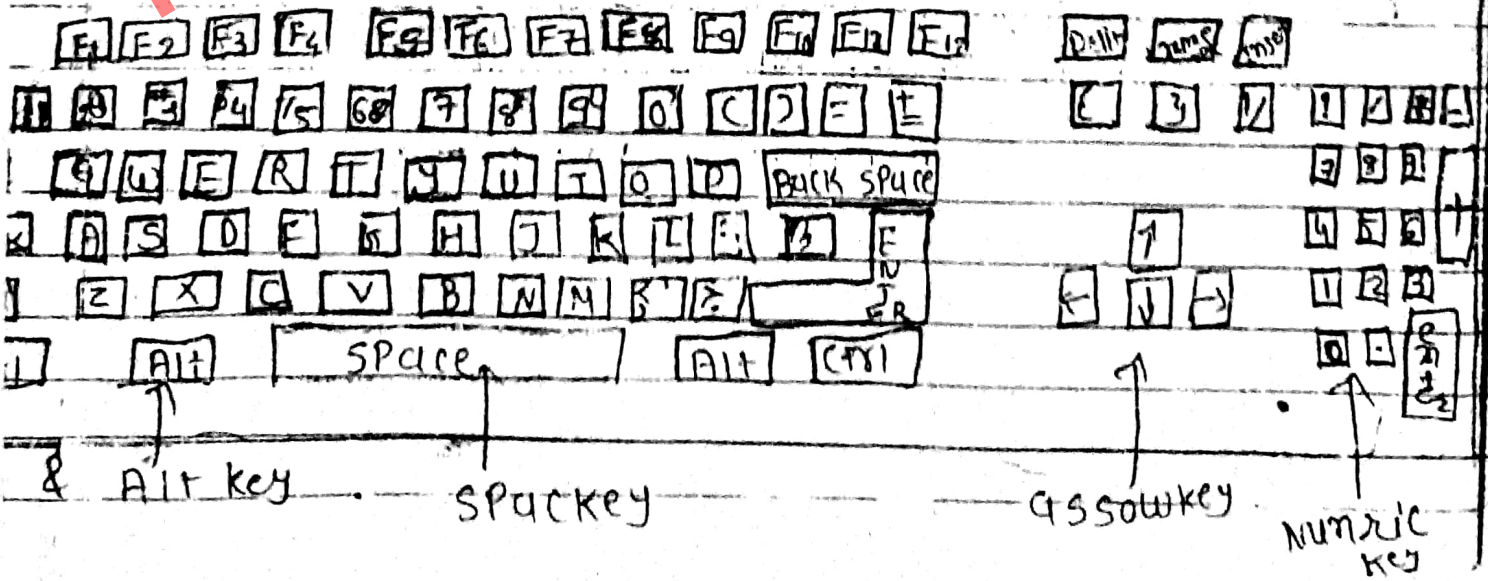
-> Key bord :-

Programme and data are entered into computer through the keybord which is cutteched to a computers

A keybord is a similcis to the keybord of type-writer.

It contain cufabet, digit, special character, function key and some control keys.

When a key is Press and electronic signal is Produced which is detected by an electronic circuit is called keybord encodes.



→ Function key :-

The key labelled as F1 carry out special function in the software running in the pc.

→ Curser movement key :-

This →, ←, ↑, ↓ arrow key are use to move a corser to right, up (top), down (bottom) respectively.

The cursor movement key also called navigation key.

→ Alphabet key :-

The alphabet key is represented Atoz and atoz

→ Numeric key :-

The numeric key is used the 0 to 9 digit

In the keyboard to press the num lock key For to on the numeric key.

→ Special Character

[Special Purpose key]

The call Special Purpose key is use For to special Function

Types of special Purpose key :-

- Print Screen
- Shift
- Caps lock
- Num lock
- Ctrl
- Alt
- Tab
- Enter
- Break
- Esc
- Back Space

→ Mouse

The mouse is one types of input device and using the mouse to enter the data by using clicking and dragging.

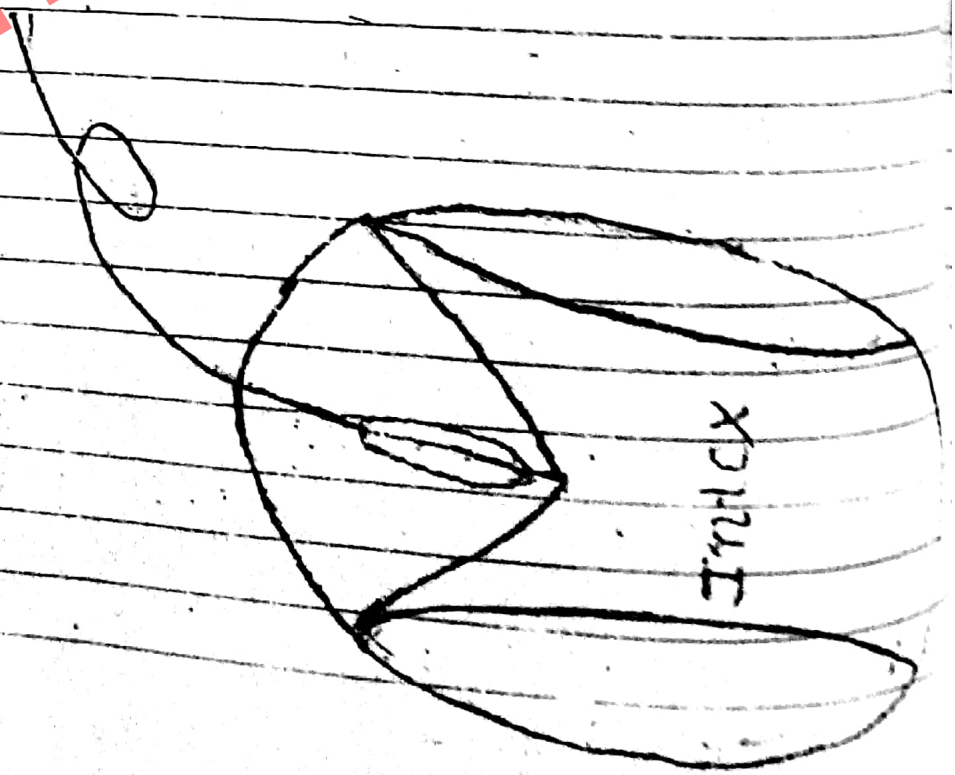
In the computer to ... the First mouse by apple co...

In the mouse to use ... three types of technology.

- mechinical
- opto - mechinical
- optical

In the mouse to connect mouse in computer by using ... types of connection

- Serial
- bus
- wireless



→ Types of mouse button :-

There are three types of mouse button

- Single button mouse
- Double button mouse
- Three button mouse

In single button mouse the mouse is called with only one main button.

In double button mouse the mouse is available with left and right button

In three button mouse is available with left, right, center button.

→ Touch Screen

The touch screen is a one types of input date.

Using the touch screen to enter the date by using touch

In the touch screen touch the object by using the that time to active the touching

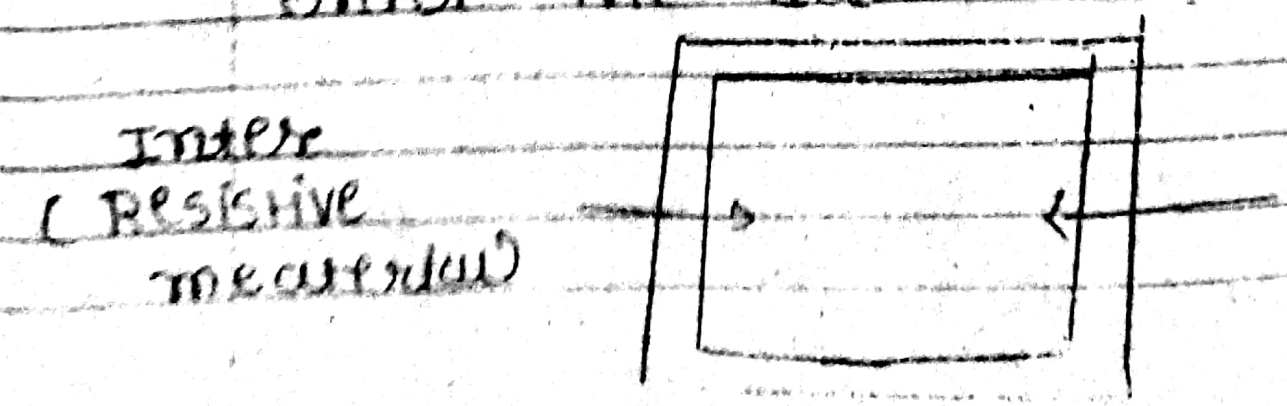
The touch screen is enter dated informs of graphical icons.

In the touch screen available two types of pallete.

The one of the pallete coated with conducting cmd second with Resistive

In the touch screen touch the outer plate that to automatically accept the by using resistive meterical.

The touch screen is for to display the dated cmd enter the dated.



Date :
Page :

Scanner :-

Scanner is a one types of input device.

By using the scanner to Fill up (enter) the graphical Photo, image or graphical data in the computer.

By using the scanner to easily any to fast the entering the graphical data in the computer

A scanner is also useFull For OCR - (Optical character reader)

The OCR Software is useFull For to enter the text and graphical document.

The cost of scanner is depend on size and capacity and the range of colours.

The Scanner is hemelle the three types of requirement

- To scan the image
- To enter the graphical as colour image.

- To define the best colour quality

→ The scanner is devided into catagory :-

- Black & white scanner
- Gray scale scanner
- colour scanner

→ The types of scanner :-

There are two types of sc

1) Hand - Held scanner
2) Flat - bed scanner

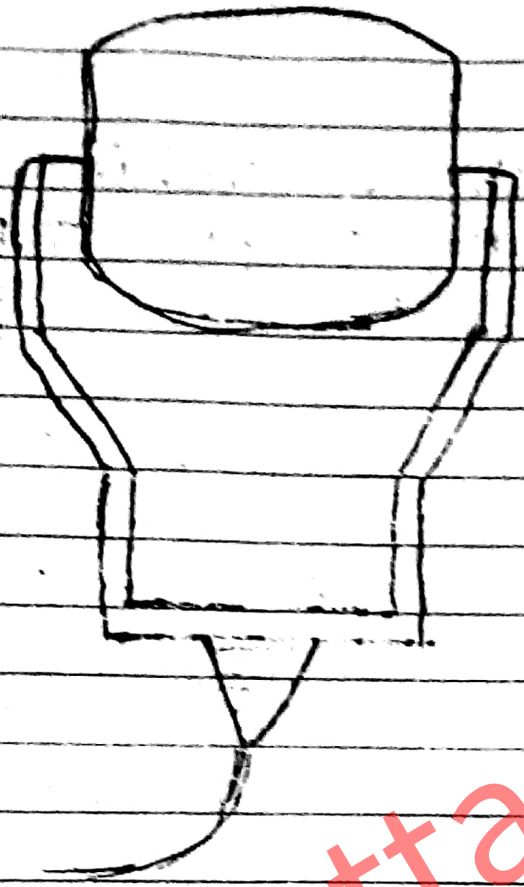
1) Hand - Held scanner :-

The hand - held scanner one types of scanner is use enter digital data in the comp

The hand had scanner a less expersive and less ca for to enter the digital data

using the hand - had sc by using

The capacity of scan is 4 to 6 inches at a time.



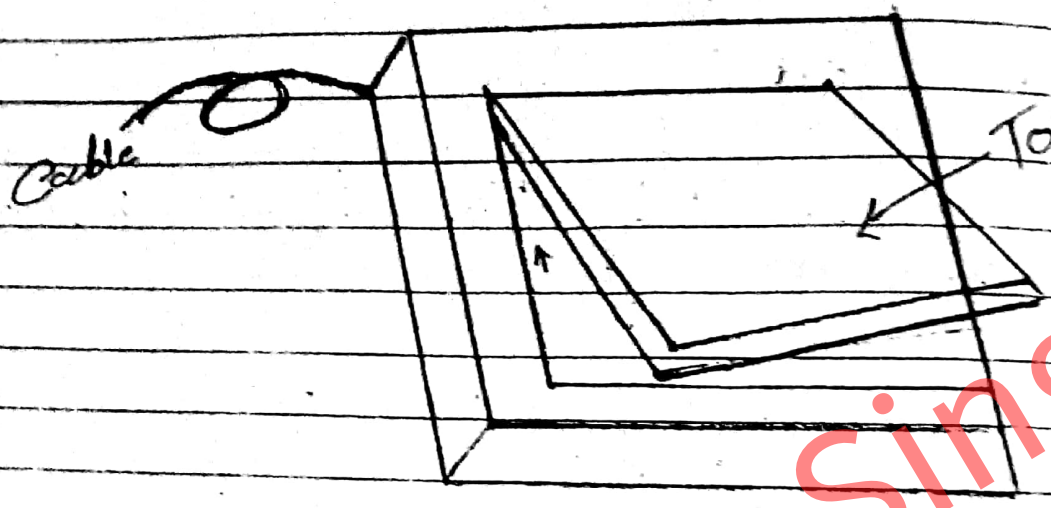
Flat - bed scanner :-

The Flat bed scanner is a use for to enter the graphical image or graphical picture.

The Flat - bed scanner is a costly but it is very easy computer is hand - held scanner

The Faeat - bud scanner is also called Page Scanner.

The size of scan is on the size of the scanner.



5)→ Joystick :-

Joystick is also a input device

It is used to move the cursor position on a monitor screen

Its Functions is similar to that of a mouse and it used for playing games.

A JOYSTICK is a stick which has a spherical ball at its lower end as well as at its upper end.

The lower spherical ball mouse in a socket

The joystick can be moused right to left, Forward to backword

→ Light Pen

A light pen is a pointing device.

It is used to select a displayed menu option on the monitor

It is a photosensitive penlike device.

It is capable of sending a position on the monitor screen when its tip touches the screen.

When its tip is moved over the screen surface, its photocell sending element detede the light coming from the screen and comes ponding signels are sent to the processor

Light Pen is also use
hand held PAD type small de
For writing small messages
sending them on e-mail.

7) → Voice input system

Voice input and reco
system is an input device
of a microphone or telephone
converts human speech into el
signals.

signals pattern obtain
this manner is sent to the
where it is matched against
per-stored patterns to identif
input.

When a close match
found, a card is recognized
the system.

The set of per-st
Patterns is known as the
vocabulary of the system

-> Used OF Voice System :-

The system are used where a Person wants to input data to a computerized system specially in situations where his hand are busy, or his eyes have to remain Fixed on a measuring instrument or some other object

They are also used by security system

Out Put devices :-

-> printer :-

Printer always to getting a hard copy From computer

There are three types of Printers

-> Character Printer
- Dot matrix Printer
- Ink Jet Printer

→ line Printer

- Drum Printers
- chain Printers

→ Page Printers

- laser Printer

→ Dot metrix Printer :-

The Dot matrix Printer one types of characters Printer

In dot matrix to print the characters by using number dot and in this dot is arr matrix

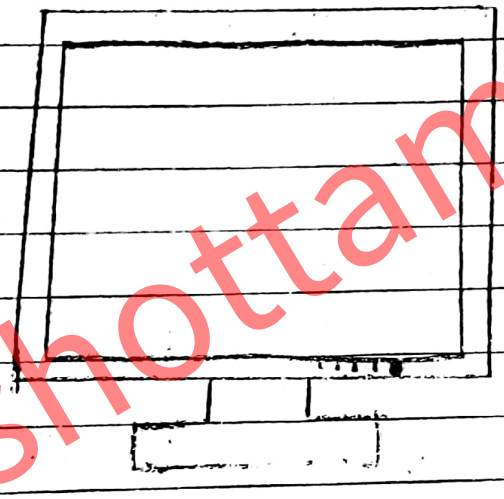
The speed of dot met Printer is between 30 and 600

[CPS :- character per seco

In 1997, hardware several manufacturers began offering full size LCD monitors as alternatives to CRT monitors.

The main advantage of LCD displays is that they take less desk space and are lighter.

hardware they are also much more expensive.



LCD is a Flat Panel display, electronic visual display, video, display that uses the light modulating properties of liquid crystals.

Currently 14", 15.1", 17", 18", 20", 29", 32", 39", and etc... size available in market of LCD.

3) → CRT NON

→ LCD :-

Liquid crystal displays are used to in flat-panel monitors and high-end flat-panel Televisio

Recently the market for LCD has exploded as flat screen monit and televisions have become popular consumer electronics devices.

The manufacturing and sale of LCD devies have been profitable For a number of companies such as LG, Filips, Samsung, Intex etc...

A monitor that uses LCD technologies rather then the conventional CRT technologies used by most ~~desktop~~ monitors untill recently desktop

LCD Panels were used exclusively on notebook computers and other portable devices.

How many times Refresh the screen per minites is called Refresh Rate.

→ Heating Fillement

When Power is on at that time heating Fillement Produce electron beam.

→ control grid

It control the speed of electron beam

→ vertical / Horizontal deflaction system

Vertical / Horizontal deflection system use For control the electron beam in straight line

→ Phosphor coating

The Phospor coating to display the output and to depend the output to the light of electronic beam.

In CRT display to define the number of advantage.

- It makes very little noise
- It's not to requirement of to change the Paper or ribbon change
- The CRT is forth on the base on Electron magnetic

Rar B-[illegible]

m.Imp. ** Refresh Rate :-

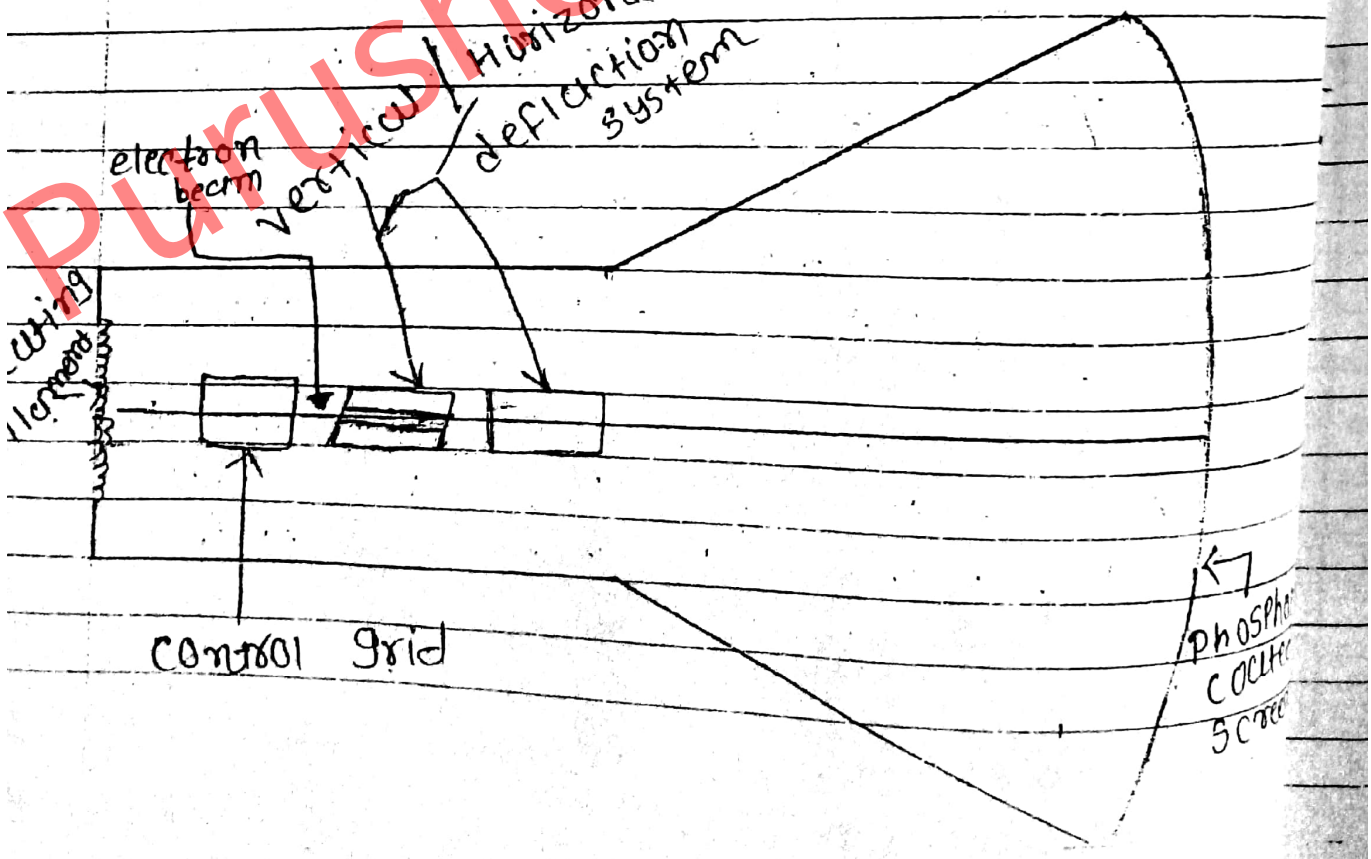
1 minit [illegible] [illegible] [illegible] picture (Screen) [illegible] [illegible] refresh rate [illegible] [illegible] / How many times picture Refresh (change) in 1 minits is called

2) → CRT monitor or (cathod ray tube) / VDU

The visual display unit is use for to display data in output Format

CRT stand for cathod ray tube this is one type of output or video display unit

CRT techonology has been use for more then 100 year and is found in most television and computer monitors.

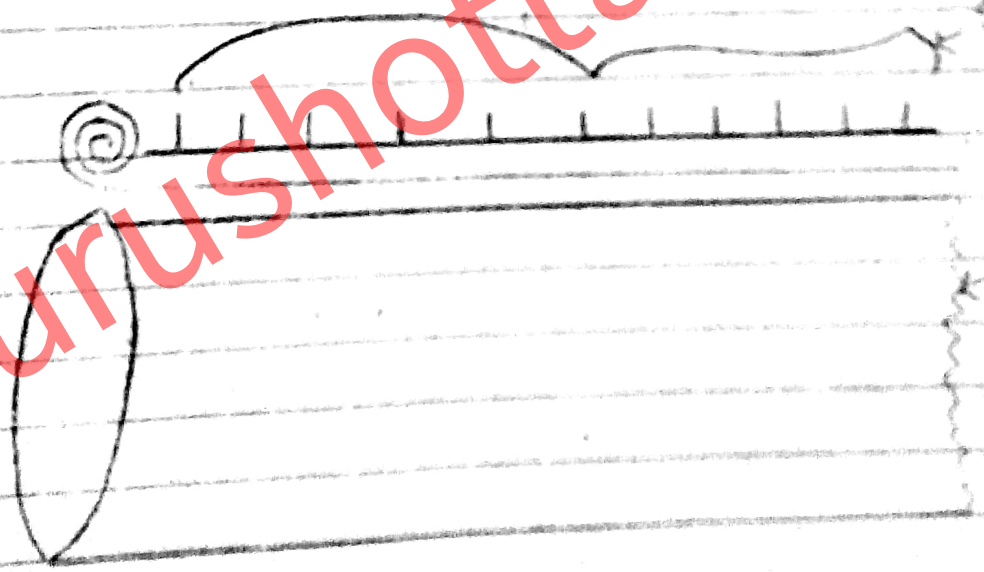


In the drum printer to Printer out the character are press on is surface.

The speed of drum printer is to Print out the line of ~~1000~~ 296 LPS [Line Per Second] at a times of using drum Printer to store the writing character in Printer buffer.

In the drum Printer is to Printer out the limited fonts.

The drum Printer is not Provi the facility for graphical.



These Printer give excellent output and can Printer a variety of fonts.

It is very costly

→ Page Printer :-

In the Page Printer is use for to Print out the Full Page at a time

Type of a Page Printer.

→ Line Printer :-

In the line Printer to Print out the document line by line

→ Drum Printer

A drum Printer is one type of the line Printer.

In the drum Printer to Print out the document line by line

A drum Printer is consist of Cylinder drum.

Purushottam Singh

→ Laser Printers :-

Laser Printer is one types of Page Printer.

Using the laser Printer to Print out the Full Page at a time

The laser Printer is use For to reduce the limitation of character or line Printer.

~~It is very Slowly work.~~

The laser Printer is to Print out the Page in high Speed compare to all character and line Printer

In laser Printer to Print out the Page and control the Page by using Electronic beam.

The Speed of Printing is 4 to 8 Page PPM [Page Per minute]

In the laser Printer to Provide the Facilities For to Print out the clear graphical image.

→ Ink Jet Printers :-

The ink jet Printers is cuso a one types of Characters Printers.

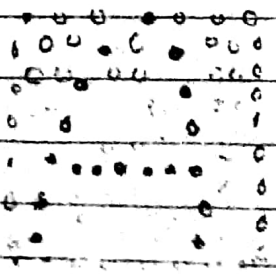
In the ink jet Printer to Print out the numbers of Character by using numbers of color ink.

The ink jet Printer is cuso called bubble jet Printer.

The ink jet Printers is high quality Printer in number of character Printer.

The speed of Printing is From 50 CPS to above 300 CPS

The ink jet Printer is Provide the Facility For to Print out the Graphical image.



=> Plasma display :-

A plasma display panel is a type of flat panel display common of large TV displays 30 inches or large.

They are called "plasma" displays because the technology lized-utilized small cells containing electrically charged ionized gases.

Plasma displays are bright have a wide colour and can be produced in fairly large sizes up to 150" diagonally.

Plasma display screens are made from glass which reflects more light then the material used to make an LCD screen.

-> advantage :-

1) Picture quality :-

capable of producing deeper blacks adding for

superior constant ratio

wider viewing angle
those of LCD image do no
suffer from degradation at
angles like LCDs.

It is very high refre
rates and a faster respons

2) Physical

- Slim Profile
- can be wall mounted

→ LED :-

light-emmitting diode.

It is a semiconductor
source

LED are used as indi
lamps in many devices an
indicator lamps in many
and are increasingly used
other lighting.

Introduced as a Practical electronic component in 1962

LED emitted low-intensity red-light, but modern versions are available across the visible ultra-violet and infrared ~~wave~~ wavelength with very high brightness.

[Particularly brake lemp turn signal as well as in a trafic signal]

The advantages of LED mentioned above have allowed next text and video displays and sensors to be developed.

While their high scaitching rate are also useful in advanced communications tecnology

infrared LED are also used in the remote control units of many commercial products including televisions, DVD Players, and other domestic appliances.

Que :- Storage devices :-

1) -> Magnetic memory :-

Magnetic storage device use for to store the datei by magnetic material

The magnetic storage is also called external memo

TYPES OF magnetic Stora device

- magnetic tape / disk
- Hard disk
- Floppy disk

-> Magnetic disk

Magnetic tape is a typ magnetic storage device

In a magnetic tape t store the datei by using magn material

Generally the magnetic is avceilable with 12.5 mm to plastic film pati

Magnetic tape is long 500 meters to 1200 meters

The magnetic tape is Provide the Sericu access data.

The magnetic tape Provide the speed is 15000 to 350000 Character per second

→ Advantages of the magnetic tape

- Unlimited Storage
- low cost
- easy to handling
- Portability
- It Provide the Facilities For to access the data in Sequence mode

→ disadvantage:-

- No direct access
- environment Problem
- To difficult recover the Phy error.
- In the magnetic tape to transfer the data slow co to hard disk.

→ Hard disk. (H.D)

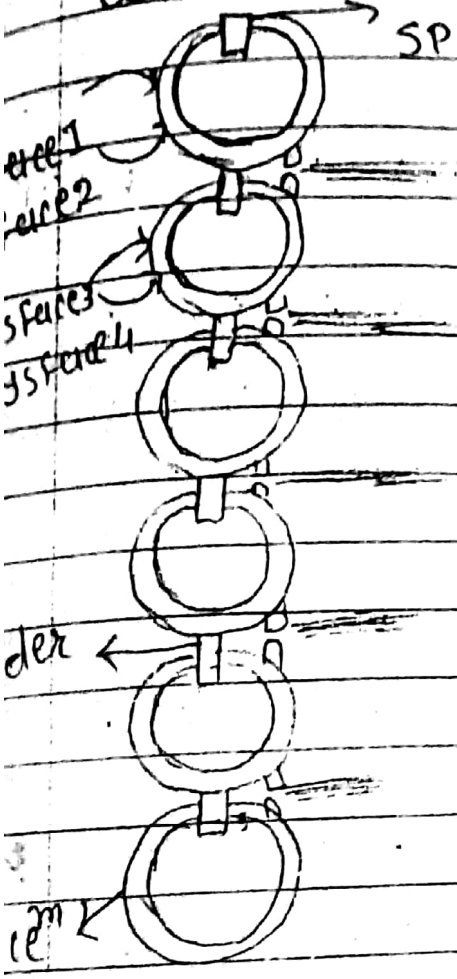
Hard disk is one types magnetic storage device

In the hard ware disk store the data by using mag material.

The hard disk is develo by IBM [International business management company in year of 1957 as Purpose of data store.

The IBM is First h disk with 5MB capacity

In this hard disk available with 50 Platt and 24 inch area



In The hard disk to rotate The numbers of disk by using motor

In The hard disk the rotate speed is 5400 RPM [Revolution Per minute]

In the hard disk the spinder is use for to stand the numbers of disk and the disk is available with two & surface.

Two Types of surface

- upper surface
- lower surface

In hurd disk to store date in both the surface

In The hurd disk to cmd write ~~date~~ head by using read date

In the hurd disk the c is provide the link between m of storage disk.

The hurd disk is use to read and write date

The main Function of h disk is to store the date.

The sector is the cu store the date

→ track :-

The track is a border sector area.

-> Floppy disk:

The floppy disk is a one types of magnetic storeage device.

In the floppy disk to store the data by using magnetic material.

Floppy disk is developed by IBM in years 1971.

The floppy disk is a one types of small and has to store capacity up to ~~1.~~ 5 MB.

The floppy disk is available with 2 size 3.5 inch, 5.25 inch.

The floppy disk is available with numbers of storeage capacity like 160 KB, 360KB and 1.2 MB, 1.44MB and 2.88 MB

The floppy disk is protect the data by using read and write look.

3.5" floppy

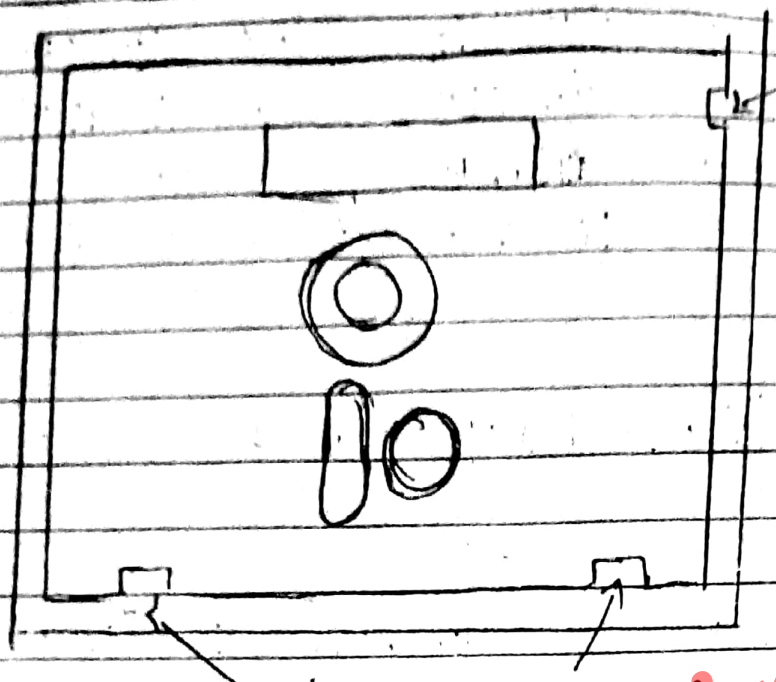
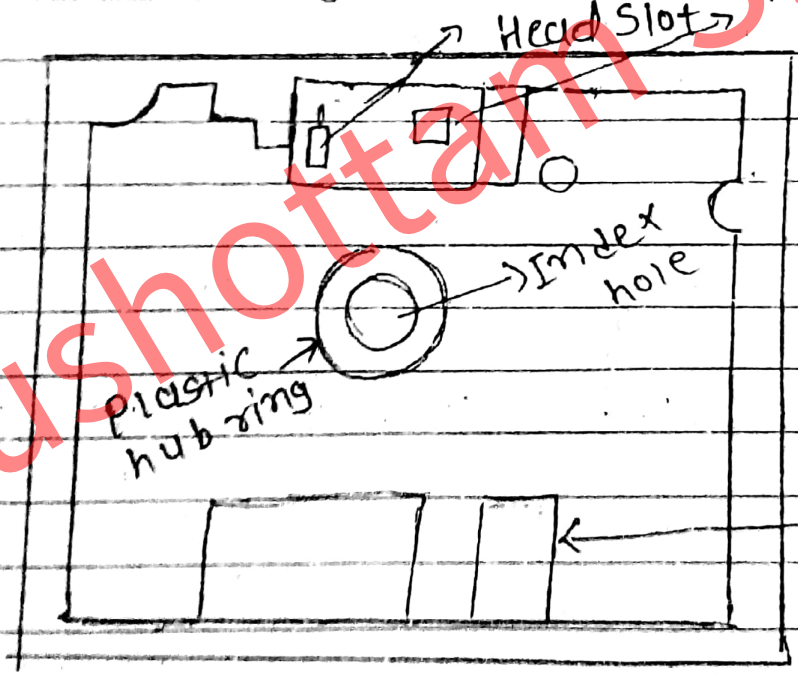


Fig ⇒ 5.25" Floppy



~~The Floppy disk had capa~~
~~of 1 megabyte.~~

There are basically four type of Floppy disk.

- Single side single density
- single side double density
- double side single density
- double side double density

Semiconductor memory :-

→ RAM :- [Random Access memory]

The kind of memory used for holding Programmes and data being executed called Random Access memory

Ram also called Ram [Read write memory]

The storage capacity of Ram is depend on the capacity of the Ram.

In the data in Ram the Power is off cut that time loss all internal memory.

It is also called volatile storage because the contents of Ram are lost when the Power is turned OFF

In The Ram to perfo
the speed by using BIOS
system
[Basic input output device

Ram can be two type.

- SRAM
- DRAM

→ SRAM :-

Static Ram
Static Ram is Easier th
dynamic Ram
Static Ram today has
access time of 80 n sec which
That it would take 80 n sec
read From or write into a
location

SRAM tend to be m
expensive then theis dynamic
counterparts and are not used
large memories

Static Ram is a t
OF RAM that holds its data
out external refresh for as
Power is supplied to the circ

Date :
Page :

-: Advantage

- Simplisity
- SRAM Faster them DRAM

-: Disadvantage:

- Cost -> SRAM is byte For byte several times more expensive them DRAM

- Size -> SRAM take up much more space.

-> DRAM :

Dynamic Ram

The DRAM is a types of RAM that store the continues access data by using logical circuit.

In the currently all PCs are using DRAM

The DRAM is more complicated compare to SRAM.

Today the DRAM come with 64MB, 128MB, 256 MB, 512MB, 1GB,

2 GB OF Ram.

Ram access time is in seconds, hard disk access tim milli second.

→ ROM :- [Read only memory]

The Rom is a one t computer memories

In the Rom is use o read and transfer the data memory use

The ROM is use For the data in Permanent ~~cases~~ cases

when the Power supp off that time the memory d is not loss.

—: Advantage OF the Rom.

There are main th advantage

- Performance
- Security
- Virus.

* TYPES OF ROMs:-

1) PRom → "Programmable Rom"
2) EP Rom → "Erasable Rom" Programmable Rom
3) EA Rom → "Electrically Alterable Rom"
4) EEPRom → "Electrically Erasable Programable Rom".

→ P ROM:-

Its Full From" Programmable Read only memory".

The Prom is stored and record the information by using data Programmer.

The PROM is also called non-volatile storage memory

In the PROM to write different Programmes For different data store.

→ EP Rom :-

Its Full From" Erasable programmable Read Only memory"

The EP ROM is similars types of ROM.

In the EP ROM to Provi
Facilities for two erase the Pro
code and to write down new
code for new stored data

The EP ROM is called U
[Ultraviolet P ROM]

In the EP ROM to era
the data by using ultravio

→ EA ROM :-

[Each From Electricall
Erusable Programa
Read only memor

In this ROM to erase
store the data under Softwa
Control.

This type ROM is More
flexible compare to all ROM.

This types OF ROM
Commonly use For to store
Bios Program

[Basic Input Output System]

Information loaded in this memory can be retained for many years without any power supplied

→ EEP ROM :-

Its Full Form " Electrically Erasable Programmable Read only memory"

The next of erasability is the EEP ROM which can be erased under soft ware control.

This is the Flexible type of ROM and is now commonly used for holding Bios Programme.

→ Optical memory

→ CD ROM :-

It is an optical read only memory

The disk is made up of resin such as poly casbonate

It is coated with a which will change its reflective property

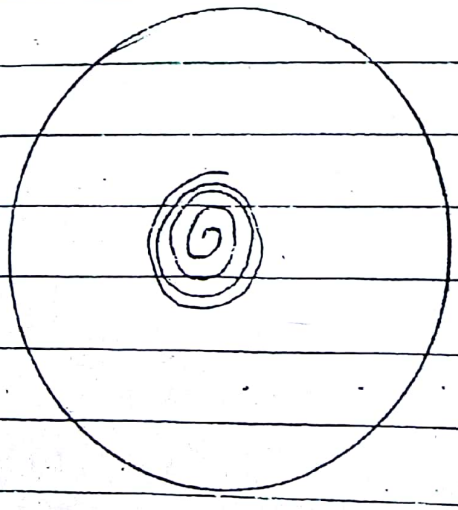
when high intensity laser beam is focused on it

The coating material is highly reflective usually aluminium

using the CD-ROM to or write a data FROM CD.

A CD-ROM means compact Read only memory

The only CD-ROM is optical read the data accordingly capable of reading a data



CD-ROMs use long spiral tracks to store data serially.

The track is devided into blocks of the same size

In the CD-ROM to read or write a data by using laser beam

The area of CD-ROM is 4.6 inch diameters

In the CD-ROM to read or write a data by using laser beam and to convert the data From CD to PC and computer to CD

The Disks have a ~~shelf~~ shelf life of more then 10 years

CD ROM can stored about 700 MB of data

using the CD-ROM to read out the random selection of data

→ DVD ROM :-

The DVD-ROM is one typ
OF OPTICAL device.

DVD - Stand for digital versatile disk and digital vide disk.

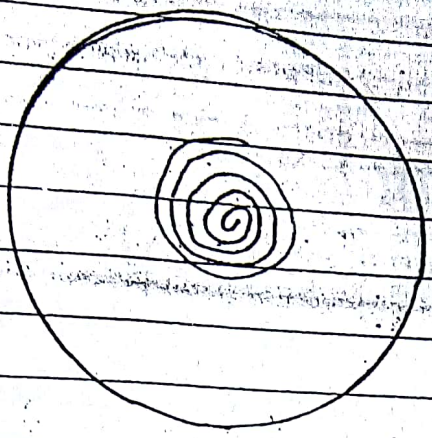
DVD Provide more storag capacity them CD-ROM disk.

The disk use with DVD are of same diameter and thi as traditional CDs like CDs.

The DVD disk tolerate dirt, and finger printers

DVD are used for au and video entertainment such movies and video games.

The Storage capacity DVD is 4.7 GB to 50 GB



In the DVD-ROM the Laser beam in the more capable to read a data from sector.

The size of DVD ROM is 4.6" diameters

DVD is very cheap and excellent storage device

to store a large amount of data DVD is use

DVD is keep in safe area to protect dust, dirt and bed enviernment.

4} -> cache memory

one element used Processing operations is a speed buffer (cache) memory both Faster and more expensive character stored them primary

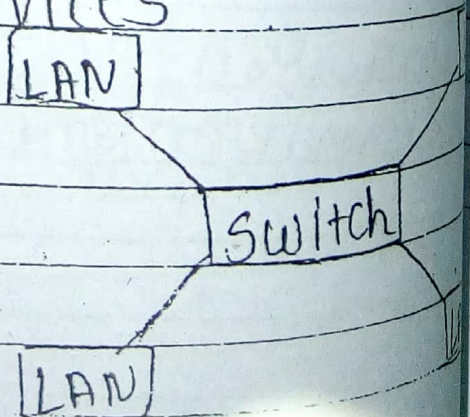
This high speed circuit used as a "Scratch Pad" to store data

chche memory is now in some of the cmy microprocessor chips used in personal com

5} -> communication devices :-

There are four communication devices

1} modem
2} NIC
3} Switch
4} Hub



LAN :- Local area net

→ Switch :-

A Switch is device that Provides bridging Functioncuity with higher effeciency.

A ~~swict~~ Switch may as multiPont bridge.

Switches cure used to comm a devices or segments in a LAN

The Switch has a buffer for each link which it is connecte

When Switch received a Packet, it stores the Packet in the buffer of the receiving link

Then checks the address to Find the out-going link.

If the out-going link is Free, the switch sends the Fram to that particular link.

Switch cure work on two basic Strategies

1) Store - and For ward
2) cut - through

A Store and For acard sw
Store the Frame in the inpu
buffer the whole Packet has
arrived.

A cut - through Switch
For wards the Packet to the ou
buffer as soon as the dest
address is found.

→ HUB :-

A hub is a small and s
device that Joins multiple comp
to gether.

hubs are operating in da
link layer of OSI model.

The hub can be Found in
many home and small busines
network.

Hub is centeral devies
a network and every comp
in a network is directly conne
with the Hub.

Hub broadcasts the data to its every Port

If the hub fails to work, ∴ the communication between the computers stops Fill the hub again starts works

Some years ago, hubs offered only 10 mbps speed

Newer types of hubs offer 100 Mbps speed.

* —— * —— * —— * —— * ——

plotter :-

The plotter is one types of output device.

The plotters are use for to display the good quality for graphical image.

→ Types of plotters

There are two types of plotters

→ Drum plotter

→ flat-bed plotter

-> Drum plotter :-

In the drum plotter to rotate the page (paper) in drum.

In the drum plotter to print the surface of paper by using pen.

In the drum plotter the drum rotate on clock-wise.

The pen can move left to right to left.

The pen can also move on drum.

In the drum plotter to can the d and pen by useing plotting programmer

-> flat-bed plotter :-

The flat bed plotter is a for to d the digital or graphical output in full s

The flat bed plotter to print o the image by useing pen.

The pen is rotate on left to righ or top to bottom.

In the flat bed plotter to contr the pen by useing computer programme output.