

PRINTERS

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INTRODUCTION TO PRINTERS

- Printers are one of the peripheral devices
- They are an output device.
- They are used to produce printouts.
- They are classified as:
 - Impact Printers
 - Non-Impact Printers

IMPACT PRINTERS

- They are so called because they print by hammering the pin on the ink ribbon
- The paper is hit .
- They are of two types :
 - Dot Matrix
 - Daisy Wheel

DOT MATRIX PRINTERS(DMP)

- They are Impact as well character printers
- Character is strike with an ink ribbon against paper
- They are mainly used with microcomputers
- Characters are produced by series of pins arranged vertically
- Speed-30 to 300 characters per second

Diagram :



ADVANTAGES OF DMP

- ⦿ They can print any shape of character
- ⦿ Cheap in cost
- ⦿ It can print multiple copies using carbon
- ⦿ They can print any size of characters
- ⦿ Ability to print graphics

DISADVANTAGES OF DMP

- ⦿ It is very noisy
- ⦿ Normally slow in speed
- ⦿ It cannot be use for more than one hour continiously

NON-IMPACT PRINTERS

- This type of printer uses another process other than hammers
- These type of printers are more versatile.
- Types of Non-Impact printers :
 - Inkjet Printers
 - Laser Printers

INKJET PRINTERS

- ◉ They are character printers
- ◉ They are also serial printers
- ◉ It sprays small droplets of ink at high speed onto the surface
- ◉ It not only produces better quality images but it can also permits variety of colors
- ◉ They are reliable
- ◉ They are expensive

DIAGRAM



WORKING OF INKJET PRINTERS

- Print head consists of 64 nozzles
- This nozzles can be heated in a few microseconds by resistor
- When resistor heats the ink near it vaporizes and is ejected through nozzles making a dot on paper

ADVANTAGES OF INKJET PRINTER

- ◉ They can print character of any speed
- ◉ Used for color printing
- ◉ It also support graphics

DISADVANTAGES OF INKJET PRINTER

- ⦿ Slow in speed
- ⦿ 42 to 300 characters are printed in a second
- ⦿ As it is non-impact they cannot produce multiple copies
- ⦿ If they are not used for long time than ink nozzles may block and become dry

LASER PRINTER

- LASER- Light Amplification by Stimulated emission of Radiation
- In this a laser beam is used to write character
- This printer is similar to photo copy machine

DIAGRAM



WORKING OF LASER PRINTER

- ◉ Laser light is used to produce an image on the paper
- ◉ Laser beam is focus on rotating drum
- ◉ A tonner(ink) is applied to the drum
- ◉ Tonner particles are attracted by electro static charge on drum
- ◉ when paper passes below drum the impression of ink is created on paper

ADVANTAGES OF LASER PRINTER

- ◉ Speed is very high
- ◉ Print 500 to 1000 ppm(pages per second)
- ◉ Produces very high quality output
- ◉ Salient in nature

DISADVANTAGES OF LASER PRINTER

- ⦿ Cannot produce multiple copy of document in single printing
- ⦿ They are more expensive