What are the ways that printer can connect to PC’s?

**Parallel, Serial, USB, wireless connection using an infrared port.** PC’s can then share printers with others on a network.

What are the types of printer available?

**Laser, ink-jet, dot-matrix**

Laser printers range from small desktop printers to large network printers capable of handling large volumes continuously.

**How a laser printer works** - laser printers work by placing toner on an electrically charged rotating drum and then depositing the toner on paper as the paper moves through the system at the same speed the drum is turning.

There are six steps of laser printing:

**Cleaning** - the drum is cleaned of any residual toner and electrical charge.

**Conditioning** – the drum is conditioned to contain a high electrical charge.

**Writing** – a laser beam discharges the high charge down to a lower charge, only in those places where toner is to go.

**Developing** - toner is placed onto the drum where the charge has been reduced.

**Transferring** – a strong electrical charge draws the toner off the drum onto the paper. This is the first step that takes place outside the cartridge.

**Fusing** - Heat and pressure fuse the toner to the paper.

**Supporting laser printers** - all of the major mechanical printer components that normally create problems are conveniently contained within the replaceable toner cartridge. In most cases, the solution to poor quality printing is to replace this cartridge.

Exercise – using the Internet, find a user guide for a laser printer and write down the maintenance guidelines. This URL is one source of information. There are many more for you to peruse.


Also using the Internet, see if you can find out how ink-jet and dot-matrix printers work. Note the advantages and disadvantages of ink-jet and dot-matrix as opposed to laser printers.
Questions:

1. What does dpi mean?
   Explain how it works in relation to ink-jet and dot-matrix printers.

2. You are thinking of buying an ink-jet printer. What should you consider in relation to the type of ink cartridge the printer takes?

3. Using the user documentation of an ink-jet printer of your choice, explain how the nozzles of the ink cartridge can be cleaned. ie. Can they be cleaned automatically or do they have to be cleaned manually?

4. Give one reason why you might keep a dot-matrix printer around.

5. What is a PostScript Printer.

6. For non PostScript printers, Window 9x converts the print job data in EMF format. What is EMF format?

7. Explain what bi-directional communication between a printer and an operating system is.

8. You are trying to print a word document without success.
   a. What can you do to troubleshoot the problem?
   b. What might you do if the problem is with the printer?

Competency Assessment

For the following task, you need to provide evidence of having completed it. This evidence should include at least two of the following:
- Photos of you performing the task;
- Screen dumps of software used in the task;
- Written description of steps followed.

Task:

Demonstrate that you are able to maintain an inkjet printer. Do the following
   a. Insert a new ink cartridge
   b. Clean the printer
   c. Clean the print heads
   d. Align the print heads

Write the document as a user document.