**1. What are the difference between laser, dot matrix, bubble–jet printer.**

A **Laser Printer** is a printer that uses a focused beam or light to transfer text and images onto paper. Though contrary to popular belief, the laser does not actually burn the images onto the paper. Instead, as paper passes through the printer, the laser beam fires at the surface of a cylindrical drum called a photoreceptor. This drum has an electrical charge (typically positive), that is reversed in areas where the laser beam hits it. By reversing the charge in certain areas of the drum, the laser beam can print patterns (such as text and pictures) onto the photoreceptor.

**Dot Matrix** printers work in a manner similar to daisy-wheel printers, but instead of a spinning, character imprinted wheel, the printhead contains a row of pins (short, sturdy stalks of hard wire). These pins are triggered in patterns that form letters and numbers as the printhead moves across the paper.

The image quality of dot-matrix printers is quite poor and these printers are noisy.

In a **bubble-jet printer**, bubbles of ink are sprayed onto a page and form patterns that resemble the items being printed. Bubble-jet printers work much more efficiently and are much cheaper.

**2. Why printers print garbage?**

### In Inkjet printers and Dot matrix printers, this usually happens because the wrong printer driver is installed or is corrupted. Reinstall driver.

### In Laser printers, this is usually the result of a wrong or corrupt printer driver, such as a PostScript driver on a non-PostScript printer.

**3. Describe LED page printers.**

The LED page printer uses the same process as a laser printer, with one major exception. It uses a row of small light-emitting diodes held very close to the photosensitive drum to expose it. Each LED is about the same size as the diameter of the laser beam used in laser printers. These printers are basically the same as EP process printers, except that in the writing step, they use LEDs instead of a laser.

**4. What are the basic components of a laser printer write their name?**

Most printers that use the EP process contain nine standard assemblies. They are:

The toner cartridge, laser scanner, high-voltage power supply, DC power supply, paper transport assembly (including paper-pickup rollers and paper-registration rollers), transfer corona, fusing assembly, printer controller circuitry, and ozone filter.

**5. Describe toner cartridge and fusing.**

The EP **toner cartridge**, as its name suggests, holds the toner. Toner is a black carbon substance mixed with polyester resins (to make it flow better) and iron oxide particles (to make the toner sensitive to electrical charges). These two components make the toner capable of being attracted to the photosensitive drum and of melting into the paper. Toner contains a medium called the developer (also called the carrier), which carries the toner until it is used by the EP process. The toner cartridge also contains the EP print drum. This drum is coated with a photosensitive material that can hold a static charge when not exposed to light. Finally, the drum contains a cleaning blade that continuously scrapes the used toner off the photosensitive drum to keep it clean.

**Fusing** is the sixth and final step in the EP printing process, when the toner image on the paper is fused to the paper using heat and pressure. The heat melts the toner, and the pressure helps fuse the image permanently to the paper.

**6. Write the name of EP printing process. / Write 6 steps in the EP print process.**

**EP printing process** consists of six major steps. They are:

**1.** Cleaning

**2.** Charging

**3.** Writing

**4.** Developing

**5.** Transferring

**6.** Fusing

**7. Write 8 communication type of a printer.**

There are eight major types: serial, parallel, SCSI, Universal Serial Bus (USB), network, IEEE 1394b, infrared, and wireless.

**8. Write 6 steps name of installing a printer.**

There are six steps name of installing a printer:

**1.** Attach the device using a local or network port and connect the power.

**2.** Install and update the device driver and calibrate the device.

**3.** Configure options and default settings.

**4.** Print a test page.

**5.** Verify compatibility with the operating system and applications.

**6.** Educate users about basic functionality.

**9. What is impact printer & write the names of them.**

The most basic type of printer is the category known as impact printers. Impact printers, as their name suggests, use some form of impact and an inked ribbon to make an imprint on the paper.

There are two major types of impact printers: **daisy wheel** and **dot matrix**.

**10. Write about bubble–jet printers.**

In a **bubble-jet printer**, bubbles of ink are sprayed onto a page and form patterns that resemble the items being printed. Bubble-jet printers work much more efficiently and are much cheaper.

**11. Which are called page printer and what are they?**

**Laser printers** and **inkjet printers** are referred to as page printers because they receive their print job instructions one page at a time (rather than receiving instructions one line at a time).

There are two major types of page printers: those that use the **electrophotographic (EP)** print process and those that use the **light-emitting diode (LED)** print process. Each works in basically the same way, with slight differences.