**Chapter-11: Understanding Operational Procedures.**

Identifying Potential Safety Hazards

Electrostatic Discharge

ESD Antistatic Mats

Electromagnetic Interference

Natural Elements

Creating a Safe Workplace

Using Appropriate Repair Tools

Creating a Safe Work Environment

Implementing Safety Policies and Procedures

Maintaining Power

Cleaning Systems

Using Appropriate Behavior

**Q-1. Which computer components are particularly dangerous to technicians?**

Ans: The most dangerous are the power supply and the monitor. Both are capable of storing lethal charges of electricity, even when unplugged. You also need to be aware of parts that get incredibly

hot, such as the processor, which can cause severe burns if touched.

Understand where to find safety information regarding chemicals.

You can find this

information on a Material Safety Data Sheet (MSDS). An MSDS might not have come with

your purchase, but most suppliers will gladly supply one if requested.

Know which tool to use for which job.

The majority of computer repair jobs can be handled with nothing more than a Phillips-head screwdriver. However, you might need cutters,

extra light, or a mirror for some jobs. Avoid using magnetically tipped tools.

Understand methods to help prevent ESD.

One of the biggest and most common dangers

to electronic components is electrostatic discharge (ESD). There are several methods you

can employ to help avoid ESD problems, such as grounding yourself; using an antistatic

wrist strap, bag, or mat; and controlling the humidity levels.

Know proper disposal procedures for used computer parts, batteries, and chemical solvents.

The specific disposal procedure depends on what you are trying to dispose of. However, the

safe answer is to always recycle the component and not throw it in the trash bin.

Use good communication skills. Listen to your customers. Let them tell you what they

understand the problem to be, and then interpret the problem and see if you can get them

to agree to what you are hearing them say. Treat your customers, whether they be end users

or colleagues, with respect, and take their issues and problems seriously.

Use job-related professional behavior. The Golden Rule should govern your professional

behavior. Five key elements to this, from a business perspective, are punctuality, accountability, flexibility, confidentiality, and privacy.

Understand how to handle prohibited content or activity. First, always have policies and

procedures in place to deal with prohibited content or activity. When an incident happens,

follow the procedures, report through proper channels, preserve the data or device, and

follow the chain of custody.

**Q-1. Write types of printer technology.**

**Ans:** Types of printer technology are:

1. Laser printer
2. Inkjet printer
3. Thermal printer
4. Impact printer

**Q-2. Write the differences between types of printer technologies.**

Ans: Laser printers use a laser and toner to create the page. Inkjet printers spray ink on to the page. Thermal printers use heat to form the characters on the page. Impact printers use a mechanical device to strike a ribbon, thus forming an image on the page.

**Q-3: Write the parts of a typical Bubble-Jet printer.**

Ans: The parts of a typical Bubble-Jet printer can be divided into the following categories:

1. Print head/ink cartridge
2. Head carriage, belt, and stepper motor
3. Paper-feed mechanism
4. Control, interface, and power circuitry.

**Q-4: Write the basic components of the EP laser printers.**

Ans: Most printers that use the EP process contain nine standard assembles:

1. The toner cartridge
2. Laser scanner
3. High-voltage power supply
4. DC power supply
5. Paper transport assembly
6. Transfer corona
7. Fusing assembly
8. Printer controller circuitry
9. And ozone filter.

**Q-5: Write down Electrophotographic (EP) Print process steps.**

**Or Write the six steps in the laser printing print sequence.**

Ans: The EP print process is the process by which an EP laser printer forms images on paper. It consists of six major steps:

1. Cleaning
2. Charging
3. Writing (exposing)
4. Developing
5. Transferring
6. Fusing.

**Q-6: Write down Electrophotographic (EP) Print process. (468page)**

Ans: First, the printer uses a rubber scraper to clean the photosensitive drum. Then the printer places a uniform –600VDC charge on the photosensitive drum by means of a charging corona.

The laser paints an image onto the photosensitive drum, discharging the image areas to a much lower voltage (–100VDC). The developing roller in the toner cartridge has charged (–600VDC) toner stuck to it. As it rolls the toner toward the photosensitive drum, the toner is attracted to the areas of the photosensitive drum that the laser has discharged. The image is then transferred from the drum to the paper at its line of contact by means of the transfer corona wire (or corona roller) with a +600VDC charge. The static-eliminator strip removes the high, positive charge from the paper, and the paper, now holding the image, moves on. The paper then enters the fuser, where a fuser roller and the pressure roller make the image permanent. The paper exits the printer, and the printer begins printing the next page or returns to its ready state.

**Q-7: What do you mean understanding the importance of using recommended supplies?**

Ans: Using consumables (paper, ink, toner) that are recommended for your printer is important. Using bad supplies could ruin your printer and void your warranty.

**Q-8: How can you to install and configure printers?**

Ans: The basic procedure is as follows:

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 setting.
4. Print a test page.
5. Verify compatibility with the operating system and applications.
6. Educate users about basic functionality.

**Q-9. What are environmental issues that hazard to watch out for around printers?**

**Or, What are things to watch out for in your printer’s environment?**

Ans: Heat, excessive light, ozone, and ammonia are all bad things for printers to be around.

**Q-10. What do you mean by printer interface?**

Ans: A printer’s interface is the collection of hardware and software that allows the printer to communicate with a computer. The hardware interface is commonly called a port. Each printer has at least one interface, but some printers have several to make them more flexible in a multiplatform environment.

**Q-11. Write down printer Interface Types.**

**Q-12. How do you handle prohibited content or activity?**

**Ans:** First, always have policies and procedures in place to deal with prohibited content or activity. When an incident happens, follow the procedures, report through proper channels, preserve the data or device, and follow the chain of custody.

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