2.1 Protection and Safety

As you study this section, answer the following questions:

- Which specific computer components require special care that will protect your safety when handling them?
- What is the proper way to lift heavy objects?
- How can ESD be a hazard to electronic computer components?
- What is the difference between a static shielding bag and a static-resistant bag?
- What steps can you take to reduce ESD if you do not have the proper equipment handy?
- What is the MSDS? When would the information that it provides be important?

In this section, you will learn to:

- Use an anti-static mat and strap to protect yourself from ESD
- Implement appropriate grounding procedures

Key terms for this section include the following:

Term	Definition
Capacitor	A device that stores an electric charge.
Cathode Ray Tube (CRT)	A vacuum tube used to display images that is commonly used in computer monitors.
Electrostatic Discharge (ESD)	The flow of electricity from one electrically charged object to another.
Material Safety Data Sheet (MSDS)	A document that contains safe handling and disposal processes for dangerous materials.
Peripheral device	A device that connects to a computer, such as a monitor or printer.

This section helps you prepare for the following certification exam objectives:

Exam	Objective

CompTIA 220-1002	4.4 Explain common safety procedures.
	- Equipment grounding
	- Proper component handling and storage
	  - Antistatic bags
	  - ESD straps
	  - ESD mats
	  - Self-grounding
	- Toxic waste handling
	  - Batteries
	  - Toner
	  - CRT
	  - Cell phones

- Tablets
- Personal safety
  - Disconnect power before repairing PC
  - Remove jewelry
  - Lifting techniques
  - Weight limitations
  - Electrical fire safety
  - Cable management
  - Safety goggles
  - Air filter mask
- Compliance with government regulation

4.5 Explain environmental impacts and appropriate controls.

- MSDS documentation for handling and disposal
- Temperature, humidity level awareness, and proper ventilation
- Protection from airborne particles
  - Enclosures
  - Air filters/mask
- Dust and debris
- Compliance to government regulations