GREEN COMPUTING

AIM :- using practical examples, describe green computing. List and explain the steps that you take to contribute to green computing.

❖ WHAT IS GREEN COMPUTING????

- Green computing is the environmentally responsible and eco-friendly use of computers and their resources.
- Green computing is the practice of using computing resources efficiently.
- Designing , manufacturing and disposing computer, servers with no impact on the environment.
- To reduce the use of hazardous materials , maximize energy efficiency during product's lifetime.

❖ NEED OF GREEN COMPUTING WHY?????

- Computer energy is often wasteful
  Leaving the computer on when not in use
- Printing is often wasteful
  How many of you print out your emails or meeting agendas
- Pollution
  Due to manufacturing, packaging, disposal techniques
- Toxicity
  Due to toxic chemicals involved in the manufacturing.

❖ MANUFACTURING OF PC'S

- Lead: used in soldering of printed circuit boards lead can cause damage to the central and peripheral nervous system, blood systems and kidneys.
- Mercury: used in batteries, switches, mercury spreads out in water transforming into methylated mercury that can cause chronic brain damage.
- Cadmium: used in resistors for chips and in semiconductors. Cadmium is classified as toxic, these compounds accumulate in the human body, particularly the kidneys.

❖ GREEN MANUFACTURING

- Bamboo: is becoming increasingly popular for making casings for computers and peripherals.
- Recyclable plastics: computers are constructed from non-recyclable plastics i.e recyclable polycarbonate resin.
- Eco-friendly flame retardant: there are flame retardant silicone compounds available that are flame retardant and completely non-toxic.
- Inventory management: reducing the quantity of both hazardous materials used in process and the amount of excess raw materials.
- Volume reduction: removes hazardous portion of waste from non-hazardous portion.

- ENERGY USE OF PC
  - CPU uses 120 watts
  - CRT uses 150 watts

    8 hours of usage, 5 days a week= 562K watts
  - Energy use comes from Electrical current to run the CPU, motherboard, memory.
  - Running the fan and spinning the disk.

- GREEN PRODUCTS
- REDUCING ENERGY CONSUMPTION
  - Turn of the computer when not in use, even if just for an hour.
  - Turn off the monitor when not in use.
  - Use power saver mode.
  - Use hardware/software with the energy star label.
  - Don’t print unless necessary and you are ready.
  - Use LEDs instead of CRTs as they are more power efficient

- GREEN DISPOSAL
  - Reuse: donate your computer components to people who may not have or have lesser quality computers.
  - Refurbish: rather than discarding your computer upgrade it. Change its some of the parts in order to make it now.
  - Recycle: one of the major challenges is recycling the printed circuit boards for, the electronic wastes. The circuit boards contain such precious metals as gold, silver, platinum, etc. and such basr metals as copper,iron.