

Using practical examples describe, green computing. List and explain the steps that you take to contribute to green computing.

#### Q1 What is green computing?

Green computing, also called green technology, is the environmentally responsible use of computers and related resources. Such practices include the implementation of energy-efficient central processing units (CPUs), servers and peripherals as well as reduced resource consumption and proper disposal of electronic waste (e-waste).

Green computing” is the name attached to this movement, which represents an environmentally responsible way to reduce power and environmental waste.

The goals of green computing are similar to green chemistry; reduce the use of hazardous materials, maximize energy efficiency during the product's lifetime, and promote the recyclability or biodegradability of defunct products and factory waste research continues into key areas such as making the use of computers as energy-efficient as possible, and designing algorithms and systems for efficiency-related computer technologies.

#### Simple Steps to Green Computing

1. Develop a sustainable green computing plan
2. Recycle
3. Make environmentally sound purchase decisions
4. Reduce Paper Consumption
5. Conserve energy

#### Q2 Why go green ?

##### **1.Climate Change**

First and foremost, conclusive research shows that CO<sub>2</sub> and other emissions are causing global climate and environmental damage. preserving the planet is a valid goal because it aims to preserve life.

##### **2. Saving**

Green computing can lead to serious cost saving overtime. Reduction in energy cost from server, cooling, and lighting are generating serious savings for many corporation.

### **3. Reliability of power**

As energy demands in the world go up, energy supply is declining or flat. Energy efficient systems help to ensure healthy power systems. Also, more companies are generating more of their own electricity, which further motivates them to keep power consumption low.

Q3 Steps that I would take to contribute to green computing are as follows

1. Recycle – discard used or unwanted electronic equipment in a convenient and environmentally responsible manner. computers have toxin metals and pollutants that can emit harmful emissions into the environment.
2. Develop a sustainable green computing plan – Discuss with your business leaders the element that should be factored into such a plan, including organizational policies and checklists. Such a plan should include recycling policies, recommendations for purchasing green computing equipment.
3. Make environmentally sound purchase decisions – Purchase Electronic Product Environment Assessment Tool registered products EPEAT is a procurement tool promoted by the non-profit Green Electronics council to:
  - Help institutional purchasers evaluate, compare and select desktop computers, notebooks and monitors based on environmental attributes
  - Provide a clear, consistent set of performance criteria for the design of products
4. Reduce paper consumption – There are many easy, obvious ways to reduce paper consumption e-mail, electronic archiving, use the “track changes” feature in electronic documents, rather than redline corrections on paper. When you do print out documents make sure to use both sides of the paper, recycle regularly, use smaller fonts and margins, and selectively print required pages.
5. Conserve energy – Turn off your computer when you know you won’t use it for an extended period of time. Turn on power management features during shorter periods of inactivity.

6. The recycling chain (process) for e-waste consists of three main subsequent steps:

- Collection – collection of e-waste is a crucial important part of recycling chain. This is a major responsibility of us to collect the e-waste and scrap material from every source such as individual, corporate, institution, government bodies, formal and informal sector to avoid landfill and to keep our environment clean and green.
- Sorting/Dismantling and pre-processing – The aim of dismantling and pre-processing is to liberate the materials and direct them to adequate subsequent final treatment processes. To separate ferrous, non-ferrous, hazardous and non-hazardous.
- E-waste processing generally involves first dismantling the equipment into these different components :
  1. Metal frames
  2. Power supplies
  3. Circuit boards
  4. Plastics