Practical 5

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. In broader terms, it is also defined as the study of designing, engineering, manufacturing, using and disposing of computing devices in a way that reduces their environmental impact.

Many IT manufacturers and vendors are continuously investing in designing energy-efficient computing devices, reducing the use of dangerous materials and encouraging the recyclability of digital devices. Green computing practices came into prominence in 1992, when the Environmental Protection Agency (EPA) launched the Energy Star program.

Green computing is also known as green information technology (green IT).

Steps to contribute to green computing:

1. Using Energy Star Labelled Products

It is very natural for offices to go for cheap products, without giving much heed to their energy efficiency. However, in the long run, the energy-efficient products not only save costs but also help in achieving a sustainable environment.

To choose the best appliances for your office, you can always see for the Energy Star rating in them. Energy star rating is given to the electronic devices according to energy efficiency, be it computers or servers.

A company, when choosing the IT infrastructure for their office, should keep in mind to check for the Energy Star rating.

2. E-waste Recycling

Recycling is the need of the hour. It helps in mitigating the damage to the environment by reusing non-biodegradable materials like plastic.

However, when green computing is concerned, recycling the e-waste from your offices becomes a necessity. E-waste is the non-functional electronic devices that are of no use. It can be a small item like a mouse or large appliances like monitors and printers.

The electronic devices are made up of various materials, including plastic and metals like iron, lead, and copper. Every electronic device, no matter how advanced, has a lifecycle. When these devices get damaged or outdated, they are thrown away.

However, the material of which these devices are made of can be recycled, saving the existing natural resources and reducing the production of plastic.

Hence, you should look for an e-waste recycler that will take care of all your electronic devices.

3. Remote Working

One would think how remote working fits into the scheme of things when green computing is concerned. But when you consider millions of vehicles on the road daily that spews large volumes of poisonous gases in the environment, it does not seem farfetched.

Green computing can be achieved when you work from home as the office space can then utilize fewer energy resources. You can make the argument that energy is utilized in the house as well. But consider this, with remote working policies, the offices need less space, thus minimizing construction and fuel emissions by large power generators.

Green computing is all about utilizing the energy to perform operations in the most efficient way possible. Remote working helps you in doing your office work sitting comfortably at your home using minimum energy resources.

4. Cloud Computing

Green computing comes as an aid to the environment as it helps in using the least amount of computing resources for doing the most amount of work. Let us go back to the general way of functioning before the introduction of cloud technology.

You had a computer at your office desk with certain specifications like RAM, storage, and processing power. As you turned on your computer to complete your daily tasks, power was consumed by it, whether you used the entire resources or not.

However, with new-age technologies like cloud computing and virtualization, multiple users can be accommodated on a single physical server. Since the server resource utilization is optimized, more work can be done on less number of servers.

Moreover, as all the hardware is at a remote data center, the users can access their work on their smartphones, laptops, and tablets. Hence, the need for bulky computer systems gets eliminated, reducing power consumption significantly.

5. Buy the new "Smart Strip" power strip.

The Smart Strip actually senses how much power your computer peripherals use. And when the Smart Strip senses that you've turned your computer off, it automatically shuts off your peripherals, too, preventing them from drawing an idle current, which is the current drawn even after equipment is shut off.

6. Put laptops in "sleep" mode when not in use.

The EPA has estimated that this reduces their energy use by 60 to 70 percent – and ultimately could save enough electricity each year to power Vermont, New Hampshire, and Maine, cut electric bills by $2 billion, and reduce carbon dioxide emissions by the equivalent of 5 million cars.