1.2 Carbon Footprint

What is Carbon Footprint?

- ❖ The total amount of Greenhouse Gases produced to directly and indirectly support human activities, usually expressed in equivalent tons of carbon dioxide (CO_2).

- ❖ Sum of all emission of carbon dioxide for a given time frame is referred as Carbon footprint.

- ❖ Carbon foot print is also referred as total set of Green House Gas emission caused by an organization, event, product or person.

- ❖ It is an extension of "Ecological Footprints".

- ❖ The carbon footprint is a very powerful tool to understand the impact of personal behaviour on global warming. Since Carbon dioxide is called greenhouse gas causing global warming.

Figure 1.6 – Relation between carbon emission and green computing

❖ Every time a computer is powered it draws electricity from the power source which is powered by coal, oil or natural gas which releases carbon dioxide.

Energy	Leaving Computers on when not in use
Printing	Unnecessary printing of emails, agendas, drafts etc.
Pollution	Manufacturing techniques, packing etc
Toxicity	Chemical Usage like mercury, lead and cadmium

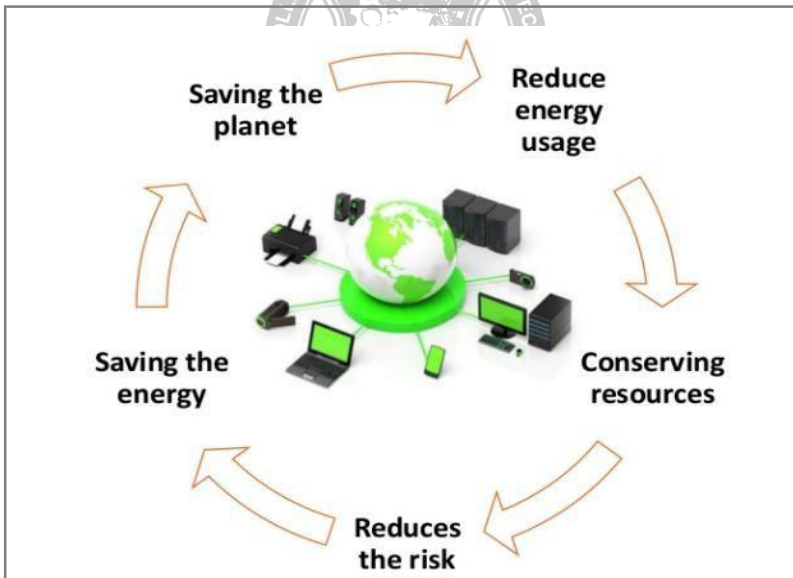Table 1 – shows different forms of natural resources wasted

Figure 1.7 –Depicts the relationship between conversing energy and health of planet
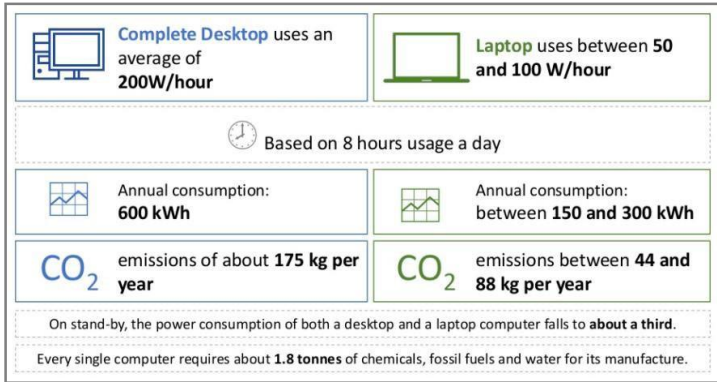
❖ Energy Consumption

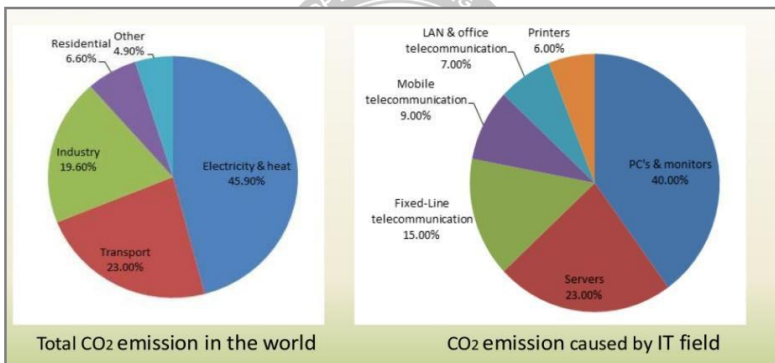**Figure 1.8 – Energy consumption comaprison between desktop and laptop**

Figure 1.9 – CO_2 emission – world and IT field

Green Manufacturing

Bamboo is becoming increasingly popular in manufacturing casings for computers and peripherals.

Reusable plastic is used in place of non – recyclable plastic.

Flame retardant compounds that are eco-friendly and non-toxic materials are widely used to support implementationof Green IT.

Process of monitoring reduction in the quality of raw material and hazardous materials used in manufacturing consumables.

Segregation of hazardous and non-hazardous materials from disposed components will improve the environment to great extent.

Figure 1.10 – Bamboo Products

Figure 1.11 – Bamboo based computer components