

## **INTRODUCTION**

Green technology, also known as sustainable technology, is one that has a "green" purpose.

Green is a reference to nature, of course, but green technology, in general, is one that takes into account the long and short-term impact an invention has on the environment.

Green products are environmentally friendly inventions that often involve energy efficiency, recycling, safety, health concerns and renewable resources.

## **MEANING**

One of the best-known examples of green technology is the solar cell. A solar cell directly converts the energy in light into electrical energy through the process of photovoltaics. Generating electricity from solar energy means less consumption of fossil fuels, reducing pollution and greenhouse gas emissions.

## **Branches of Green Technology**

- 1) Green Chemistry
- 2) Green Nano technology
- 3) Green Building
- 4) Green Technology
- 5) Green Energy
- 6) Green Computing
- 7) Green Banking

## **IMPORTANCE OF GREEN TECHNOLOGY**

- Saving the environment and make the earth free from any danger.
- It will help reduce the use of fossil fuel.
- It encourages the concept of cleanliness, freshness as well as promotes new dimensions
- The sooner we realize the importance of using green technology, the better it will be for our planet and its environment.

## **GREEN CHEMISTRY**

The term was 'Green Chemistry' coined by Paul Anastas in 1991.

It is also called as sustainable chemistry, is a philosophy of chemical research and engineering that encourages the design of products and processes that minimize the use and generation of hazardous substances

## **PRINCIPLES**

- ❖ Prevent waste.
- ❖ Less hazardous chemical synthesis.
- ❖ Safer chemicals and products.
- ❖ Safer solvents and reaction conditions.
- ❖ Increase energy efficiency.

## **GREEN NANO-TECHNOLOGY**

It produces nano materials and products without harming the environment or human health. It is used to make nano materials and nano-products without toxic ingredients, at low temperatures using less energy and renewable inputs. manufacturing processes for non-nano materials and products more environmentally friendly .

Light-emitting diodes (LEDs)

## **GREEN BUILDING**

It refers to a structure and using process that is environmentally responsible and eco friendly too. It involves building's life cycle: from design, construction, maintenance, renovation and demolition.

- ▶ MATERIALS USED
- ✓ Low volatile organic compounds Paint.
- ✓ Bamboo Flooring.
- ✓ Woven wool for carpeting.
- ✓ Ecological Concrete
- ✓ Paper Insulation Panels

## **GREEN TECHNOLOGY**

The green IT aims to reduce the carbon footprint generated by the information systems business. Green information technology and communication designs or uses products which can reduce the negative effects of human activity on the environment.

Eg:L.C.D. monitors by samsung and Dell

## **GREEN ENERGY**

Green energy comes from natural sources such as sunlight, wind, rain, tides, plants, algae and geothermal heat.

These energy resources are renewable.

## ▶ TYPES OF GREEN ENERGY

- Solar power
- Wind power
- Biogas
- Water power
- Geothermal energy
- Biofuel

### **SOLAR POWER**

Solar power is the conversion of sunlight into electricity, either directly using photovoltaics (PV), or indirectly using concentrated solar power (CSP).

It can be used for pumping water, refrigeration, communication, and charging batteries .

### **SOLARROAD**

Netherlands on 12/11/2014 unveiled the world's first solar bike path, a revolutionary project to harvest the sun's energy that could eventually also be used on roads.

The so-called "Solar Road" bike path is made of concrete modules each measuring 2.5 -3.5 meters embedded with solar panels covered in tempered glass.

To help prevent accidents, the glass has been given a special non-slip surface.

### **WIND POWER**

Wind turbines converts the kinetic energy in the wind into mechanical power that runs a generator to produce clean electricity. Wind energy contributes only 1% of global electricity generation.

### **HYDROELECTRICITY**

Hydroelectricity uses the energy of running water to make Electrical energy.

Hydro-electric stations are built where there is Running water is stored.

The amount of electricity generated is determined by the volume of water and the amount of "head" (the height from the turbines in the power plant to the water surface) created by the dam. The greater the flow and head, the more electricity is produced.

### **WAVE POWER**

Waves are generated by the wind as it blows across the sea surface. Energy is transferred from the wind to the waves.

Wave energy has the potential to be one of the most eco friendly forms of electricity generation.

The first tidal power station was the Rance tidal power plant built over a period of 6 years from 1960 to 1966 at La Rance, France.

## **GEOHERMAL ENERGY**

The term Geothermal originates from two Greek words 'GEO' and 'THERM'.

The Greek word 'geo' means the earth and 'therm' means heat from the earth.

Geothermal energy is energy derived from the heat of the earth.

## **BIOFUEL**

Fuel made from biological sources like Straw, Wood, Wood waste, Sugarcane and by products from agriculture industry.

## **GREEN COMPUTING**

The term " Green Computing" was probably coined shortly after the ' Energy Star' program began way back in 1992.

One of the first results of green computing was the

" Sleep mode" function of computer monitors.

As the concept developed, green computing began to encompass thin client solutions, energy cost, accounting, virtualization practices, e-Waste etc

## **GREEN MANUFACTURING**

1) Bamboo: its used to make cases for computers

2) Recyclable plastics: computers are constructed from non-recyclable plastics i.e polycarbonate resin.

3) Eco- Friendly flame retardant: flame retardant silicone compounds are available which is non-toxic.

4) Inventory management: reduces the quantity of both hazardous materials used in the process and amount of excess raw materials.

5) Volume reduction: removes hazardous portion of waste from non hazardous portion.

## **GREEN CHANNEL**

SBI has launched paperless banking system called 'The Green Channel' counter at all its branches across the city.

Here, customers of the bank can transact without using any pay in-slip, withdrawal forms, cheque books or remittance forms. This initiative saves paper, and contributes to 'green banking'.

## **GREEN CARD**

Green Remit Card facilitates non-home cash deposit transactions routed through Green Channel Counter (GCC) or Cash Deposit Machine (CDM).

It is a simple magstripe based card without PIN.

## **ADVANTGES**

- ▶ Basically Ethical banking avoids as much paper work as possible and rely on online/electronic transactions for processing so that you get green credit cards and green mortgages. Less paperwork means less cutting of trees.
- ▶ Creating awareness to business people about environmental and social responsibility enabling them to do a environmental friendly business practice.
- ▶ Use of online banking instead of branch banking saves time.

## **DISADVANTAGES**

- ▶ Difficult to operate
- ▶ Customer Care
- ▶ Security Concern
- ▶ Technical breakdowns

References:

1. <https://www.green-technology.org/what.htm>
2. <https://www.thoughtco.com/introduction-to-green-technology-1991836>