SOURCES OF ENERGY

IMPORTANT FACTS:

- A source of energy provides energy in a convenient form over a long period of time.

- Sources of energy can be classified as renewable and non-renewable sources.

- Solar energy is the main source of energy on the earth.

- Solar cookers, solar water heaters and solar concentrators are some devices used for harnessing solar energy.

- Solar cells are devices that convert solar energy directly into electricity.

- Solar energy also manifests itself in nature as the energy of winds, water flowing through rivers, ocean waves, besides ocean thermal energy.

- Energy harnessed through wind energy devices is utilized either to do mechanical work, or to produce electricity.

- Energy derived from the hot spots beneath the earth is called geothermal energy.

- Green plants convert solar energy into chemical energy through the process of photosynthesis. This energy is known as bio-energy.

- Biomass is utilized to produce heat by burning it or to produce biogas through its anaerobic decomposition in a biogas plant.

- Hydrogen and alcohol could be a source of energy in future.

- Fossil fuels like coal, petroleum and natural gas are a mixture of hydrocarbons. These are fossil remains produced by the decay of plants and marine animals that were buried in the earth millions of years ago.

- Fuels like coal, petroleum and natural gas are being utilized at very high rates, resulting in fast depletion of their known reserves. Fossil fuels may not be available in future, as these are not being formed now.

- Fuels are characterized by their calorific value and ignition temperature, besides the nature of product produced by their combustion.

- The three conditions essential for combustion are attainment of ignition temperature, presence of oxygen and a combustible material.

- The factors that help to choose a good fuel for a given purpose are its availability, cost, its characteristic and physical properties, besides considerations of the effects of its by-products on environment.