

What do you know about volcanoes?
Discuss the causes and effects of volcanic eruptions.

Volcano:

A volcano is a vent in the earth crust through which lava or steam is expelled. Lava is a mixture of molten and semimolten rocks on the surface of earth. Those lava which has more viscosity are disastrous as compared

to those which are non-viscous lava because heat is trapped in them.

There are three stages of volcano

- Active volcano: re-occurring volcanoes
- Dormant volcano temporarily inactive but not fully extinct
- Extinct volcano no chance of occurring

Causes of Volcanic Eruption

The temperature inside the earth is too high which ranges from 1000°C to 3000°C and the mantle of earth is too hot.

The rocks present inside melt due to high temperature and pressure

1-1-20

Temperature in earth is non-uniform. At one place the temperature is low with more density and rigidity. The other place will have more temperature, less density. The state that has more rigidity and more density will push the molten form with high temperature by force of buoyancy to the vent or opening of earth.

Effects of Volcanic Eruptions:

Volcanic activity in sea can trigger tsunamis.

Discharge of high amount of toxic gases in the atmosphere which become

the cause of atmospheric pollution.

Discharge of high quantity of toxic material, poison the source of water

like lakes, rivers etc which resultantly severely disrupts the water supply.

Lack of drinking water and breathable air causes people to migrate from

their existing place of living to other places, thereby causing situations of migration and refugees.

Differentiate between renewable and non-renewable sources of energy. Briefly explain wind energy, solar energy and biofuels.

Renewable sources of energy

→ Renewable energy sources are those which can be replenished.

→ They are not harmful or no harm is done to the environment

→ E.g. wind energy, solar energy, tidal energy etc.

Non-renewable sources of energy

→ Those sources of energy which can not be replenished.

→ They are harmful for the environment because of their harmful emissions

→ E.g. coal, gas, oil etc.

Wind Energy:

Wind energy is the process in which mechanical energy is converted into electrical energy. Areas where winds are stronger and more constant, such as offshore or high altitude sites are preferred for wind farms.

Solar Energy:

Solar energy is basically the conversion of sun's energy into electrical energy.

Solar cell is a device which converts sun energy into electricity. These solar cells are normally black because black colors absorb maximum energy.

Bio-fuels

Bio fuels are fuels produced from directly or indirectly from organic material including plants and animals. Most biofuel are used as transportation fuels but they can also be used for heating and electricity generation.