**Acid Rain**

**pH value------------7.00**

**< 7.0-----------------Acidic water**

**>7.0----------------- Basic water**

**Rain Water----- 5.0**

**Acid Rain--- “fallout of acids with rains”-------during precipitation**

**pH ----- elevated levels of hydrogen ions**

**pH----------------<4.0 ----------- Danger for biotic factor**

**D.B. Botkin and E.A. Keller, 1982------**

**“Rain made artificially acid by pollutants, particularly oxides of sulphur and nitrogen is called acid rain.”**

**Source of Sulphur and nitrogen:**

**Human activity: Industrial units, Vehicular emission**

**So2, No2----------- Suspension----during cloud formation**

**So2 -----+-----4H2O------------ H2SO4---Sulphuric Acid**

**NO2 -----+-----H2O------------ HNO3---Nitric Acid**

**History of Acid Rain :**

**Industrial revolution:---1852---Robert Angus Smith ----Acid+ So2 +No2----------- Atmospheric Pollution -------Manchester(England).**

**1853----Acid rain naming**

**1960----**

**Effect of Acid Rain:**

**Human Impact of Acid rain:**

* **Impact on Human health**
* **Impact on Economic Activity –Agriculture: Land quality**
* **Reduce visibility**

**Impact on Ecosystem:**

* **<5.0 ---Most of Fish eggs cannot hatch**
* **At lower pH level some adult fish die. (India-PM in atmosphere---absorb---- no suspension-**
* **Dead/dying trees are a common sight in areas affected by acid rain.**
* **Land- Acid rain leaches aluminum from the soil**
* **It also remove some important minerals and nutrients from the soil**
* **At high elevation--- acidic fog and acidic cloud---trees---reduce sunlight absorption---**

**Impact on infrastructure-**