

I. it disrupts the  
ecological balance by  
killing



**ASSIGN  
BUSTER**

i. It badly affects human's respiratory, digestive and nervous system. ii. Acidification of drinking water reservoirs cause injurious affects.

(b) On Aquatic Biota i. It affects the productivity of fish plankton and amphibians causing skeleton deformities increasing fish mortality. ii. It disrupts the ecological balance by killing many bacteria and blue green algae.

iii. Acidic water leaches aluminium from the soil. The leached aluminium reaches to lakes, rivers and streams which cause death of fish by clogging their gills, preventing the reach of  $O_2$ . iv. Food web is disturbed due to the death of fungi and bacteria in the water due to acidification. v. In cold climate acid rain accumulates as acid snow and then it melts, it gives a jolt of acid water to, lakes damaging young fishes, algae and other insects.

(c) On Terrestrial Ecosystem i. Organic compounds such as amino acids and hormones leach from leaves through rain water. ii. The capacity of notifying bacteria to fix nitrogen dismisses rapidly below pH 6.

Forest productivity reduces flora and fauna is affected due to acidification of soil. iii. Growth of root plants retards due to acid rain. iv. Acid deposition affects the trees like pine, spruce etc. They in this way are victim and are attacked by pathogens and droughts. (d) Injury to Vegetation i.

$SO_2$  injures the vegetation by destruction of cellular integrity which usually appears in the spongy parenchymal cells and affecting palisade layer. ii. Diffused chlorosis on the leaves of plants becomes visible due to continuous exposures to low level of acidic water.

iii. Acidic water containing  $\text{SO}_2$  affects the functional cells near the stomata.

(e) Affects on Building i. Acid rain affects the building and structural material like lime stone and slates etc. by causing stone leprosy in them (Attack of acid on marble) e.

g. Taj Mahal  $\text{CaCO}_3 + \text{H}_2\text{SO}_4 \longrightarrow \text{CaSO}_4 + \text{H}_2\text{O} + \text{CO}_2$  ii.  $\text{H}_2\text{S}$  tarnishes silver and blackens leaded house, paints. Traces of radioactive element in rain severely damage the buildings. iii. It causes damage to steel oil based paints and automobiles.

It disintegrates textiles and papers etc. Controlling Acid Rain It is very expensive to practice the remedial measures. Thus it becomes necessary to control the pollutants that actually cause the acid rain. Following general options are worth considering for the purpose- (a) Energy Conversion i. Energy conversion can be done through improved thermal insulation and more efficient fuel use. ii.

Desulphurization and Denitrification helps to introduce new technology that reduces the  $\text{SO}_2$  and  $\text{NO}_x$  emission. iii. Substitution for fossil fuels by other alternative energy form.