

### Types of environmental pollutions

- (i) ..... pollution                      (ii) ..... pollution      (iii) ..... pollution

### Different types of waste materials involve in environment pollution

- (i) ..... chemicals      (iv) industrial wastes      (iv) ..... gases  
 (ii) ..... metals      (v) domestic wastes      (vii) electronic wastes  
 (iii) Nuclear wastes

### Agro chemicals

- (i) Chemical .....      (ii) .....      (iii) .....      (iv) .....

- ....., ..... & ..... are commonly called pesticides
- Lethal dose (LD<sub>50</sub>) is the dose of ..... necessary ..... of a population of a particular species

### Government has banned the usage of

- (i) Glyphosate      (ii) carbaryl      (iii) carbofuran      (iv) chloropyrifos

### Hydrocarbons

- (i) Methane – due to bacterial activity on garbage, dead plants & animal matter
- (ii) LP, petrol, diesel, kerosene oil, greese, lubrication oil – obtained by ..... of .....

### Heavy metals

- metals having higher density and higher .....

- (i) .....      (ii) .....      (iii) Cr      (iv) Cd      (v) .....      (vi) Cu

**Heavy metals are released to the environment**

- (i) As - excessive usage of ..... chemicals
- (ii) Cr – released by paints
- (iii) Hg – excessive use of coal, damaged thermometers & barometers, CFC
- (iv) Pb – use of lead mixed .....
- (v) Cd – released during production of yellow coloured pigments, waste of Zn mines, electroplating

**Particular matter**

- Gets accumulated in air
- (i) Solid particles – C, heavy metals, ash, dust, asbestos
- (ii) Liquid particles – water vapour, Hg vapour

**Release of SO<sub>2</sub>**

- (i) Combustion of .....
- (ii) Eruption of .....
- (iii) Combustion of ..... rubber products
- (iv) Using coal as a fuel

**Release of oxides of oxides of nitrogen**

- (i) .....
- (ii) Combustion inside .....

**Acid rain**

- (i) Rain water is slightly ..... (pH=.....)
- (ii) This is due to ..... dissolved in rain water

- (iii) When the pH of rain water drops below ....., it is called acid rain
- (iv) Acid rain is due to ....., SO<sub>3</sub> & .....
- (v) H<sub>2</sub>O + SO<sub>2</sub> = H<sub>2</sub>SO<sub>3</sub> (..... acid)
- (vi) 2H<sub>2</sub>SO<sub>3</sub> + O<sub>2</sub> = 2H<sub>2</sub>SO<sub>4</sub> (..... acid)
- (vii) H<sub>2</sub>O + NO<sub>2</sub> → HNO<sub>3</sub> (..... acid)
- (viii) When rain water mixes with these ..... it becomes acid rain.

### III effects of acid rains

- (i) Destruction of forests and crops
- (ii) Destruction of ..... structures
- (iii) Dissolving lime stones
- (iv) Some poisonous heavy ..... become soluble and increase in reservoirs

### Greenhouse gases

- (i) ..... (ii) ..... vapour (iii) ..... (iv) ..... (v) O<sub>3</sub>
- (vi) SO<sub>2</sub> (vii) N<sub>2</sub>O (viii) NO (ix) NO<sub>2</sub>

- 1) The ..... in some countries is not sufficient enough to grow plants.
- 2) Therefore the plants are grown in closed houses which are made up of .....
- 3) ..... can come through .....
- 4) Plants do ..... during day and night.
- 5) Therefore plants release ..... during day and night.
- 6) This ..... cannot go out of the glass houses since they are closed.
- 7) Therefore ..... gets accumulated inside the glass houses.

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- 8) ..... absorbs ..... rays and does not allow to ..... back out of the glass house.
- 9) Therefore the ..... of the glass house will increase.
- 10) This is called ..... effect.
- 11) This will cause .....

**III effects of global warming due to the greenhouse effect**

- (i) Melting of ..... in ..... regions
- (ii) Rising of ..... level
- (iii) Change of ..... patterns

**Ozone layer depletion**

- 1. .... layer is found ..... km away from the earth.
- 2. It prevents ..... rays coming to .....
- 3. Ozone layer depletes due to ..... (.....) & ..... (.....).

**III effects of ozone layer depletion**

- (i) Eye .....
- (ii) Gene .....
- (iii) Reduce .....
- (iv) Reduction in ..... and reduced crop yield

**Persistent Organic Pollutants – POPs**

## 1. Features of POPs

- (i) Persist in the environment for a ..... time period
- (ii) ..... in the bodies of organisms through food chains and the concentration of POP increases in ..... trophic levels – this is called .....
- (iii) Highly .....

## 2. POPs causes

Inborn defects      (ii) cancers      (iii) mental defects

**SMOG**

1. A yellow coloured mist due to ..... and .....

**Ill effects of photochemical SMOG**

- (i) Causes respiratory tract disorders like cough, wheezing
- (ii) Toxic to plants
- (iii) Vision is affected

**Biomagnification**

1. The ..... chemical pollutants get ..... in the organisms and go to the next level trophic level.
2. The organisms in the lower trophic levels are ..... in number.
3. Therefore the ..... of toxic chemical pollutants will be ..... in lower trophic levels.
4. But the organisms in the ..... trophic levels are less in number.

5. Therefore the ..... of toxic chemical pollutants will be ..... in the higher trophic levels.
6. Increasing the ..... of ..... pollutants in the organisms of the ..... levels is called .....

**Features of bio-accumulated substances**

1. Do not degenerate fast. Therefore stays in the environment for a longer time.
2. Can pass from organisms in one trophic level to the organisms in the next trophic level.
3. Soluble in .....
4. Becomes active as bio-molecules