

# Pollution of Air and Water

## Q.1 What are the different ways in which water gets contaminated?

**Sol:** The different ways in which water gets contaminated are:

- (i) Disposal of garbage in the water
- (ii) Agricultural chemicals like- fertilizers and pesticides etc. are used in crop production which get dissolved in water.
- (iii) Discharge of Industrial wastes into the rivers and streams.
- (iv) Sewage wastes is discharge in to water.

## Q.2 At an individual level, how can you help reduce air pollution?

**Sol:** An individual can help to reduce air pollution by doing the following things:

- (i) By usage of public transport as far as possible.
- (ii) By walking instead of using vehicles for short distances.
- (iii) By using clean fuels like- LPG and CNG instead of petrol and diesel.
- (iv) By Generating the awareness among people to reduce are pollution.
- (v) By controlling the emissions of smokes from vehicles.

## Q.3 Clear, transparent water is always fit for drinking. Comment.

**Sol:** No, clear or transparent water is not always fit for drinking because of the presence of diseases causing microorganisms. Hence, it is good to purify water before drinking.

## Q.4 You are a member of the municipal body of your town. Make a list of measures that would help your town to ensure the supply of clean water to all its residents.

**Sol:** To ensure the supply of clean water to all residents the following point must be added in the list:

- (i) The main water source must be maintained properly and clean it time to time.
- (ii) Chemical methods like chlorination should be used for purifying water.
- (iii) Water pipes should not in contact with sewage pipes.

## Q.5 Explain the differences between pure air and polluted air.

**Sol:** Pure air is a mixture of nitrogen, oxygen and carbon dioxide with other gases like argon, ozone, methane, neon and water vapor etc. When this composition of air is changed by addition of harmful gases like- Sulphur dioxide, carbon monoxide, nitrogen dioxide and CFC's, then is is said to be polluted.

## Q.6 Explain circumstances leading to acid rain. How does acid rain affect us?

**Sol:** Due to burning of fossil fuels, some pollutant gases like- sulphur dioxide and nitrogen dioxide release. Which react with water vapor presence in atmosphere and forms sulphurous acid and nitric acid. These acids come down with rain.

Effects of acid rain:

- (i) Acid rains damage plants and crops in fields.
- (ii) Acid rains corrode buildings and sculptural materials. Example: Taj Mahal and Eiffel Tower.
- (iii) It causes skin disease in humans and animals.

**Q.7 Which of the following is not a greenhouse gas?**

- (a) Carbon dioxide
- (b) Sulphur dioxide
- (c) Methane
- (d) Nitrogen

**Sol:** (d) Nitrogen.

**Q.8 Describe the 'Greenhouse Effect' in your own words.**

**Sol:** It is caused by greenhouse gases like carbon dioxide, methane, CFC's which are released into environment. These gases trap radiation coming from the sun and do not allow the dissipation of heat in to the space. Which result in increased the temperature of the atmosphere. It causes global warming.

**Q.9 Prepare a brief speech on global warming. You have to deliver the speech in your class.**

**Sol:** Hello Everyone,

Respected principle, teachers and all my dear friends,

The meaning of global warming is continuous increase in temperature of the earth's Atmosphere due to human activities. The main cause of global warming is the pollution from industries, houses and automobiles. Pollutants substance like methane, carbon dioxide,  $\text{SO}_2$ ,  $\text{NO}_2$  and CFC's etc. These pollutants trap the radiation from the sun and send back to the earth's surface and increases the temperature of the atmosphere. This global warming is a threat to life as it causes a lot of health problems and natural disasters.

**Q.10 Describe the threat to the beauty of the Taj Mahal.**

**Sol:** The major threat to the beauty of the Taj Mahal is acid rain. Acid rain is a mixture of acids and water vapor which reacts with marble and corrode it. The color of Taj Mahal has become yellowish due to acid rain.

**Q.11 Why does the increased level of nutrients in the water affect the survival of aquatic organisms?**

**Sol:** An increase in the level of nutrients in water increases the growth of algae. When these algae die, decomposers decompose these algae by using a huge amount of oxygen. Due to this, the oxygen level in water body decreases. Which might result in the death of living organisms.