

## **AIR POLLUTION**

One of the formal definitions of air pollution is as follows – ‘The presence in the atmosphere of one or more contaminants in such quality and for such duration as is injurious, or tends to be injurious, to human health or welfare, animal or plant life.’ It is the contamination of air by the discharge of harmful substances. Air pollution can cause health problems and it can also damage the environment and property. It has caused thinning of the protective ozone layer of the atmosphere, which is leading to climate change.

Modernization and progress have led to air getting more and more polluted over the years. Industries, vehicles, increase in the population, and urbanization are some of the major factors responsible for air pollution. The following industries are among those that emit a great deal of pollutants into the air: thermal power plants, cement, steel, refineries, petro chemicals, and mines.

Air pollution results from a variety of causes, not all of which are within human control. Dust storms in desert areas and smoke from forest fires and grass fires contribute to chemical and particulate pollution of the air. The source of pollution may be in one country but the impact of pollution may be felt elsewhere. The discovery of pesticides in Antarctica, where they have never been used, suggests the extent to which aerial transport can carry pollutants from one place to another. Probably the most important natural source of air pollution is volcanic activity, which at times pours great amounts of ash and toxic fumes into the atmosphere.

**Listed below are the major air pollutants and their sources.**

**Carbon monoxide (CO)** is a colourless, odourless gas that is produced by the incomplete burning of carbon-based fuels including petrol, diesel, and wood. It is also produced from the combustion of natural and synthetic products such as cigarettes. It lowers the amount of oxygen that enters our blood. It can slow our reflexes and make us confused and sleepy.

**Carbon dioxide (CO<sub>2</sub>)** is the principle greenhouse gas emitted as a result of human activities such as the burning of coal, oil, and natural gases.

**Chloroflurocarbons (CFC)** are gases that are released mainly from air-conditioning systems and refrigeration. When released into the air, CFCs rise to the stratosphere, where they come in contact with few other gases, which lead to a reduction of the ozone layer that protects the earth from the harmful ultraviolet rays of the sun.

**Lead** is present in petrol, diesel, lead batteries, paints, hair dye products, etc. Lead affects children in particular. It can cause nervous system damage and digestive problems and, in some cases, cause cancer.

**Ozone** occurs naturally in the upper layers of the atmosphere. This important gas shields the earth from the harmful ultraviolet rays of the sun. However, at the ground level, it is a pollutant with highly toxic effects. Vehicles and industries are the major source of ground-level ozone emissions. Ozone makes our eyes itch, burn, and water. It lowers our resistance to colds and pneumonia.

**Nitrogen oxide (Nox)** causes smog and acid rain. It is produced from burning fuels including petrol, diesel, and coal. Nitrogen oxides can make children susceptible to respiratory diseases in winters.

**Questions:**

**01. De acordo com o contexto, indique o significado que mais apropriado para a palavra destacada a seguir:**

Air pollution can cause health problems and it can also **damage** the environment and property.

- a. ☐ Beneficiar
- b. ☐ Contribuir
- c. ☐ Prejudicar
- d. ☐ Melhorar
- e. ☐ Preservar

**02- Segundo o texto, Qual das situações abaixo foi citada no texto sobre o monóxido de carbono?**

- a. ☐ Afeta o sistema nervoso
- b. ☐ Prejudica o sistema respiratório
- c. ☐ Provoca câncer
- d. ☐ Desregula o sistema hormonal
- e. ☐ Diminui a quantidade de oxigênio do sangue

**03- Segundo o contexto, a melhor interpretação para "Carbon dioxide" é:**

- a. ☐ Gás natural
- b. ☐ Fumaça proveniente de queimadas
- c. ☐ Poluição industrial
- d. ☐ Gás carbônico
- e. ☐ Gás emitido por veículos automotores

### Global Warming

Global warming is the increase in the average temperature of the Earth's near-surface air and oceans in recent decades and its projected continuation.

The Intergovernmental Panel on Climate Change (IPCC) concludes, "most of the observed increase in globally averaged temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations," which leads to warming of the surface and lower atmosphere by increasing the greenhouse effect. Natural phenomena such as solar variation combined with volcanoes have probably had a small warming effect from pre-industrial times to 1950, but a cooling effect since 1950. The basic conclusions have been endorsed by at least 30 scientific societies and academies of science, including all of the national academies of science of the major industrialized countries. The American Association of Petroleum Geologists is the only scientific society that rejects these conclusions, and a few individual scientists also disagree with parts of them.

Remaining scientific uncertainties include the exact degree of climate change expected in the future, and how changes will vary from region to region around the globe. There is ongoing political and public debate regarding what, if any, action should be taken to reduce or reverse future warming or to adapt to its expected consequences. Most national governments have signed and ratified the Kyoto Protocol aimed at combating greenhouse gas emissions.

#### 04- De acordo com o contexto, indique o significado que mais apropriado para a palavra destacada na frase a seguir:

A few individual scientists also **disagree** with parts of them.

- a. ☐ Debatem
- b. ☐ Rejeitam
- c. ☐ Discordam
- d. ☐ Definem
- e. ☐ Discutem

#### 05 - Leia as afirmações abaixo e assinale a alternativa correta:

- I- Toda a comunidade científica concorda com o relatório apresentado.
  - II- Pelo menos 30 comunidades científicas chegaram a essas conclusões.
  - III- Todos os chefes de estado assinaram o acordo, para reduzir os efeitos do aquecimento global.
  - IV- As variações de temperatura de região para região no futuro ainda é uma incerteza.
- a. ☐ Somente II está correta.
  - b. ☐ II e IV estão corretas.
  - c. ☐ III e IV estão corretas.
  - d. ☐ I e III estão corretas
  - e. ☐ Todas estão corretas.

| Questões | Alternativa Correta |
|----------|---------------------|
| 01       | C                   |
| 02       | E                   |
| 03       | D                   |
| 04       | C                   |
| 05       | B                   |