

# Pollution

## Exercises

### I. Short Answer Questions

#### Question 1.

What is environmental pollution ?

#### Answer:

Environmental pollution refers to any unfavourable alteration of our surroundings, wholly or largely as a by product of man's actions. These changes may affect man and other organisms.

#### Question 2.

Give the definition of a pollutant.

#### Answer:

A pollutant is a product released into the biosphere disturbing the normal functioning of ecosystem due to its adverse effect on plants, animals and man.

#### Question 3.

Give the difference between natural and man-made pollutants.

#### Answer:

Natural pollution takes place by increasing the quantity of Carbon dioxide and Nitrogen oxide in the atmosphere but man made pollution is done by using pesticides, chemical fertilizers.

#### Question 4.

What is air pollution ? Give a source of air pollution.

#### Answer:

Air pollution is the excessive concentration of foreign matter in the air which adversely affects the well-being of human beings, animals, plants and their environment. Air pollution is caused by addition of chemicals, carbon monoxide, sulphur dioxide, hydrogen sulphide by various factories, industrial plants.

#### Question 5.

Define water pollution.

#### Answer:

Water pollution is caused by contamination of water by alteration in physical, chemical, biological characteristics of water making it unsuitable for designated use in its natural state.

**Question 6.**

What is soil pollution ?

**Answer:**

Soil pollution is defined as the change in physical, chemical and biological conditions of the soil through man's intervention resulting in degradation in quality and productivity of soil.

**Question 7.**

Why should we avoid soil pollution.

**Answer:**

Soil is the basic need of agriculture. If the soil is polluted, the crops will be harmful for health and quality.

**Question 8.**

What is radioactive pollution ?

**Answer:**

Radioactive pollution is done by cosmic radiation from space, terrestrial radiation from radio-isotopes from earth's crust, nuclear fuels in atomic plants, atomic bombs etc.

**Question 9.**

What is noise pollution ? What harm does noise pollution do to human beings ?

**Answer:**

Noise pollution is done by extreme noise done by industrial sector, transport, loud speakers etc., which adversely affect human health causing severe headache, migraine, mental disbalance, nervous breakdown, heart diseases.

**Question 10.**

Give the difference between biodegradable and non- biodegradable pollutants.

**Answer:**

Biodegradable pollutants are degraded by microbial actions e.g. sewage, garbage etc, but non-biodegradable pollutants are not degraded e.g. glass, plastics etc.

**Question 11.**

**Distinguish between each of the following :**

**(i) Biodegradable and Non-biodegradable Pollutants**

**Answer:**

**Biodegradable Pollutants :**

1. These may be degraded "after sometime by biological or microbial actions.
2. These are sewage, domestic garbage of kitchen etc.

### **Non-biodegradable Pollutants :**

1. These are not degraded by any biological or microbial actions.
2. These include plastics, pesticides and radioactive materials.

### **(ii) Quantitative Pollutants and Qualitative Pollutants.**

#### **Answer:**

#### **Quantitative Pollutants :**

1. The excess of CO<sub>2</sub>, Nitrogen oxide etc. pollute the atmosphere.
2. These create unhealthy atmosphere due to the scarcity of oxygen.

#### **Qualitative Pollutants :**

1. Use of pesticides, chemical fertilizers pollute the composition of atmosphere.
2. These result in various diseases, e.g. skin cancer asthma etc.

### **(iii) Natural Pollution and Anthropogenic Pollution.**

#### **Answer:**

#### **Natural Pollution :**

- (a) Cosmic radiation from space and terrestrial radiation pollute the atmosphere.  
(b) It disturbs the natural atmosphere and harms human and animal life.

#### **Anthropogenic Pollution :**

- (a) Man-made pollution is done by radioactive plants, atomic bombs, nuclear fuel etc.  
(b) It creates various diseases cancer, heart problems, migraine etc, it also disturbs animal life.

## **II. Long Answer Questions**

### **Question 1.**

With reference to pollution, explain the following

- (a) Air pollution  
(b) Water pollution

#### **Answer:**

- (a) Air pollution is the excessive concentration of foreign matter in the air which adversely affects the well-being of human beings, animals, plants and their

environment. Air pollution is caused by addition of chemicals, carbon monoxide, sulphur dioxide, hydrogen sulphide by various factories, industrial plants.

**(b)** Water pollution is caused by contamination of water by alteration in physical, chemical, biological characteristics of water making it unsuitable for designated use in its natural state.

### **Question 2.**

Explain clearly what is radioactive pollution. Why is radioactive pollution more harmful than other types of pollutions ?

#### **Answer:**

Radioactive pollution is caused by cosmic radiation from space, use of radioactive materials which are used in radioactive weapons, nuclear fuel and electric power. Radioactive pollutants remain unperished for a long period, so these are more harmful to spoil natural environment. In the modern age, it has become very difficult to survive in natural state due to production of various radioactive materials for various purposes.

### **Question 3.**

How is noise a source of pollution ? Why do we need to look at the problem of noise pollution seriously ?

#### **Answer:**

Noise is a source of pollution because noise pollution is done by extreme noise of industrial sector, transport, loud speakers etc., which adversely affect human health causing severe headache, migraine, mental disbalance, nervous breakdown, heart diseases.

Noise is a health hazard. Exposure to prolonged noise has many physical, physiological and psychological effects on human beings in the following ways:

1. repeated exposure to noise reduces the sleeping hours
2. productivity or efficiency of a human being
3. it affects the peace of mind and invades the privacy of a human being.

### **Question 4.**

How are the pollutants categorised on the basis of their existence in nature. Give two examples of each category?

#### **Answer:**

Pollutants are categorised in mainly i.e. degradable and non- degradable pollutants, out of them non-degradable pollutants create problem of pollution, e.g. glass, plastics, pesticides etc.

On the basis of existence in nature, pollutants are divided into two categories:

- **Quantitative pollutants :** These substances exist in nature but they act as pollutants when their concentration or quantity increases up to a critical level in the atmosphere, e.g., Carbon- dioxide, Nitrogen oxide, etc.

- **Qualitative pollutants** : These pollutants do not exist in environment They are introduced into the environment through man's activities, e.g., pesticides (DDT), chemical fertilizers, herbicides etc.

**Question 5.**

Explain with examples the difference between the primary and secondary pollutants.

**Answer:**

Primary pollutants are directly mixed with atmosphere e.g. smoke, ash, fumes, dust, CO<sub>2</sub> Sulphur dioxide Methane, Benzene etc. Secondary pollutants are created by automobiles e.g. Nitrogen oxides, hydrocarbons etc, which are more toxic than their original elements.

**Question 6.**

What is noise pollution ? How is it caused ?

**Answer:**

Noise pollution is defined as an unwanted sound that is an irritant and a source of stress.

Most of the noise originates from modern industrialised urban life. The main sources of noise pollution are :

1. Industrial Sector
2. Transport Sector
3. Household sector
4. Defence Sector
5. Loud Speakers
6. Miscellaneous Sources.