

Chapter: 8

Q.1 State True or False

2

- 1 Water does not get polluted by washing the clothes in running water of river.

Ans True

- 2 More the use of electrical appliances, more will be the pollution.

Ans True - (depends on the type of appliance used)

Q.2 Answer in one sentence

2

- 1 What is pollution ?

Ans Contamination of natural environment that will be harmful to the ecosystems is called as pollution.

- 2 What are pollutants ?

Ans Pollutants are the factors affecting natural functions of ecosystem and causing harmful effects on abiotic and biotic factors.

Q.3 Answer the following

2

- 1 Classify the following pollutants into natural and manmade categories.
(Sewage, dust, pollen grains, chemical fertilizers, vehicular smoke, algae, pesticides, waste of animals and birds)

Ans

| Natural Pollutants | Manmade pollutants |
|----------------------------|----------------------|
| Dust (volcanic eruption) | Sewage |
| Pollen grains | Dust |
| Algae | Chemical fertilizers |
| Waste of animals and birds | Vehicular smoke |
| | Pesticides |

Q.4 Give scientific reasons

8

- 1 Which are the visible pollutants known to you?

Ans

- Smog is the most severe visible pollutant, which is formed by the mixture of smoke and fog.
- Smog consists of gases such as nitrogen oxide, sulphur dioxide, ozone and other particulate matter.
- Fly ash produced from burning of coal is other visible air pollutants.
- Also chemicals released from industries into the water bodies, that change the color of water are also visible pollutant.
- Plastics floating in the oceans are also visible pollutants.

- 2 What is green- house effect ?

Ans

- The proportion of CO₂ has increased over last many years due to industrialization.
- Effect of this carbon dioxide, on the earth's temperature is nothing but green-

house effect.

iii. Global temperature is gradually increasing due to green-house effect.

3 What is acid rain ?

- Ans**
- Oxides of sulphur and nitrogen are released into atmosphere through burning of coal, timber and fuel oils.
 - These oxides mix with rain water and form acids like sulphuric acid, nitric acid, nitrous acid, etc.
 - These acids mix with rain drops and snowflakes and come down as rain, called as acid rain.

4 Which are invisible pollutants ?

- Ans**
- Carbon monoxide is an invisible pollutant released by burning of fossil fuels.
 - Nitrogen dioxide released by cars and trucks is an invisible pollutant.
 - Ultrafine aerosols are tiny particles released from cars, trucks and power plants.
 - Sulphur dioxide and nitrogen dioxide are invisible pollutants, which combine with water to form acid rain.

Q.5 **Activity based question (3 mks)**

3

1 Construct two slogans each on (1) air (2) water and (3) soil pollution.

Ans **1. Air Pollution**

- Start A Revolution Against Air Pollution.
- Don't Let Our Future Go Up in SMOKE

2. Water Pollution

- Clean Water is very less, Try to keep it Fresh.
- Wait, Stop and Think. Save water to drink.

3. Soil Pollution

- NO FOOD WITHOUT SOIL- STOP POLLUTING SOIL
- Stop Littering, Earth is not your Garbage Can.

Q.6 **Write answers based on given diagram/paragraph**

3

1 Identify the sentences expressing types of pollution.

Nilesh is a student of std VIII and lives in urban area. It takes about an hour to go to the school by bus. He faces the heavy traffic of two wheelers, four wheelers, rickshaws, buses while going to school. He is facing the problem of asthma since last few days. Doctors recommended him to stay away from urban area. Since then, his mother sent him to the village of his maternal uncle. Nilesh saw the heaps of garbage at many places in village. Foul smell of human and animal wastes was present at many places. Blackish water with foul smell was flowing in a stream. He developed some abdominal disease within few days.

Ans Following are the sentences that describes the different types of pollution in urban as well as in the village area.

- He faces the heavy traffic of two wheelers, four wheelers, rickshaws, buses while going to school. -**This sentence indicates Air Pollution in the urban area.**
- Nilesh saw the heaps of garbage at many places in village. Foul smell of human and animal wastes was present at many places. - **This sentence indicates Soil Pollution in the village.**
- Blackish water with foul smell was flowing in a stream. He developed some abdominal disease within few days. -**This sentence indicates Water Pollution in the village.**

Q.7 **Answer the following**

15

1 How does the pollution occur due to vehicles? Give the names of vehicles causing least pollution.

- Ans**
- Vehicles are one of the major contributors to air pollution.
 - Vehicular smoke contains carbon monoxide, nitrogen oxides and other pollutants that combine with fog to produce smog.
 - These cause several health related problems like respiratory disorders, asthma, irritation of eyes, etc.
 - Eco-friendly means of transportation like the use of bicycle is the best way to control air pollution. Also eco-friendly cars that run on electricity and solar

energy are the alternative to the present cars that run on fuels.

2 Explain the relation between green-house effect and global warming.

- Ans**
- Though Carbon dioxide is present in very less quantity in atmosphere, it plays very important role of absorption of solar heat.
 - Over the last 100 years, proportion of CO₂ has been increased due to industrialization.
 - Effect of this CO₂ on the earth's temperature is nothing but green-house effect.
 - Similar to CO₂, nitrous oxide, methane and CFC also trap the heat and are collectively called as green-house gases.
 - Global temperature is gradually increasing due to green-house effect.
 - Due to this, atmosphere is changing, causing disturbances in agricultural yield, distribution of wild animals.
 - Icebergs and glaciers are melting causing increase in sea level.

3 Give two examples of each of water, soil and air pollution from your residential area.

Ans i. Water pollution:

- Effluent from small scale industries directly released in water bodies changes its the chemical properties and colour.
- Dumping of garbage into streams results in pollution by plastic, waste food, etc.

ii. Soil pollution:

- Landfilling or improper dumping (illegal dumping) of domestic garbage leads of pollution of soil.
- Leakage of sewer pipeline or sewage tanks pollute soil.

iii. Air pollution:

- Heavy vehicular traffic causes release of pollutants in air.
- Burning of waste contaminates the air with particulate matter, fly ash and other toxic pollutants.

4 What are the natural reasons for water pollution ?

Ans The natural reasons for water pollution are

- Pollution by aquatic weeds leads to depletion in oxygen level and change in natural qualities of water.
- Water gets polluted due to the decomposition of bodies of plant and animals.
- Soil erosion is another reason for water pollution as many biotic and abiotic factors are added to water due to it.
- Microbes like fungi and bacteria grow on organic matter decaying in water leading to water pollution.
- Excessive algal growth pollutes water while soil nematodes flow in with rain water leading to water pollution.

5 Suggest four preventive measures for air pollution.

- Ans**
- Smoke emerging from factories contains harmful particles. Hence, pollution controlling machinery should be used. Ex. Arresters, filters.
 - Proper disposal of stinking waste generated in cities.
 - Control on atomic tests, chemical weapons, etc.
 - Control/ ban over CFC production.

Q.8 Answer the following in detail

10

1 Following are some statements about pollution. Which type of pollution do these express ?

- Fog seems to be appearing in Delhi during day hours.
- Many times, vomiting and dysentery occurs after eating 'pani puri'.
- Problems of sneezing occur sometimes during visit to garden.
- Crops do not grow up in some areas.
- People living in the busy squares face the problems like short breathing and other respiratory problems.

- Ans**
- It is Air Pollution- (Smog caused due to combination of smoke and fog).
 - It is Water pollution- Caused due to pathogens entering the water.
 - It is Air pollution- Caused due to presence of pollens in the air.
 - It is Soil pollution- Caused due to decrease in fertility of the soil.

v. It is Air pollution- Caused due to lack of fresh air(oxygen).

2 Match the pairs from 'A' and 'B' columns and explain the effect of pollution on human health.

| Column - A | Column - B |
|----------------------------|--------------------------|
| i. Water containing cobalt | a. Mental retardedness |
| ii. Methane gas | b. Paralysis |
| iii. Water containing lead | c. Inflammation of lungs |
| iv. Sulphur dioxide | d. Skin cancer |
| v. Nitrogen dioxide | e. Irritation of eyes |

Ans

| | |
|----------------------------|-----------------------|
| i. Water containing cobalt | Mental retardedness |
| ii. Methane gas | Skin cancer |
| iii. Water containing lead | Paralysis |
| iv. Sulphur dioxide | Irritation of eyes |
| v. Nitrogen dioxide | Inflammation of lungs |

Effect of pollution on human health.

- Water containing cobalt - Mental retardedness, **Drinking water containing significantly higher amount of cobalt can lead to mental retardedness.**
- Methane gas - Skin cancer, **Methane gas released due to industrial leakage can cause skin cancer.**
- Water containing lead - Paralysis, **Drinking water containing lead as a pollutant can lead to paralysis.**
- Sulphur dioxide - Irritation of eyes, **Factories where coal and mineral oil is used as fuel release sulphur dioxide that leads to irritation of the eyes.**
- Nitrogen dioxide – Inflammation of lungs, **Vehicular smoke contain oxides of nitrogen that causes inflammation of lungs.**

Prism
Colours of your Dreams