

Chapter- 13

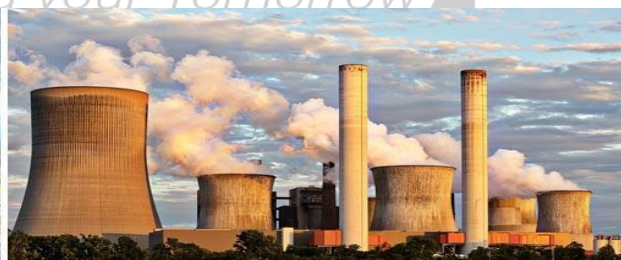
A Clean World

STUDY NOTES

- ❖ Environment can be defined as a total of all the living and non-living elements that affect human life.
- ❖ The living components comprise all flora and fauna (plants and animals), and non-living components include water, sunlight, air, climate, etc.
- ❖ Nowadays the environment is changing due to various reasons like increasing population, and industrialization that is setting up of factories, using several vehicles and so on.
- ❖ Due to this the amount of smoke is increasing and the purity of air, water, and land is getting affected and polluted.

POLLUTION:

- ❖ Pollution is the introduction of harmful materials into the environment.
- ❖ The presence of harmful substances in the air, water, and land that can cause harm to human beings and other living organisms.
- ❖ These harmful materials are called pollutants.
- ❖ Pollutants can be natural, such as volcanic ash. They can also be created by human activity, such as trash or runoff produced by factories.



AIR POLLUTION:

- ❖ Air pollution is the contamination of air due to the presence of harmful substances in the atmosphere that is harmful to the health of humans and other living beings, or causes damage to the climate or materials.
- ❖ Reasons behind air pollution are the increasing number of vehicles and industrial units, burning of fuels like coal, petrol or diesel, nuclear weapons etc.
- ❖ The smoke is released into the air making it dirty and unfit for breathing.
- ❖ Gases like carbon dioxide, carbon monoxide, and methane from factories mix with the air and pollute it.
- ❖ Polluted air causes asthma, lung diseases, leukaemia, cancer etc.

**WATER POLLUTION:**

- ❖ Water pollution is the contamination of water bodies (like oceans, seas, lakes, rivers, and groundwater) usually caused due to human activities.
- ❖ Causes behind water pollution are washing clothes and utensils in rivers, dirty water mixed with soap, detergent, and chemicals released into rivers, lakes, and seas from towns and cities by drains, fertilizers, chemicals used in farming and so on.
- ❖ Many harmful microorganisms grow in polluted water and cause diseases such as diarrhoea and typhoid.
- ❖ When fertilizers and chemicals reach the water bodies they harm aquatic life like plants and fishes, corals.



LAND POLLUTION:

- ❖ The degradation of the earth's land surfaces, both above and below ground level, is referred to as land pollution.
- ❖ It is caused by domestic, industrial, and agricultural waste like chemicals and fertilizers used to destroy weeds and pests.
- ❖ Animal waste pollutes the land.



BIODEGRADABLE AND NON- BIODEGRADABLE WASTE:

- ❖ Biodegradable waste can be defined as a material that can be decomposed easily by bacteria or any other natural organisms and get mixed with soil such as vegetable peels, dead plants, and animals.
- ❖ Waste that cannot be decomposed or degraded by micro-organisms is known as non-biodegradable waste like plastic, metal, glass, and rubber.
- ❖ It never rots but remains in the soil for a very long time and pollutes it.

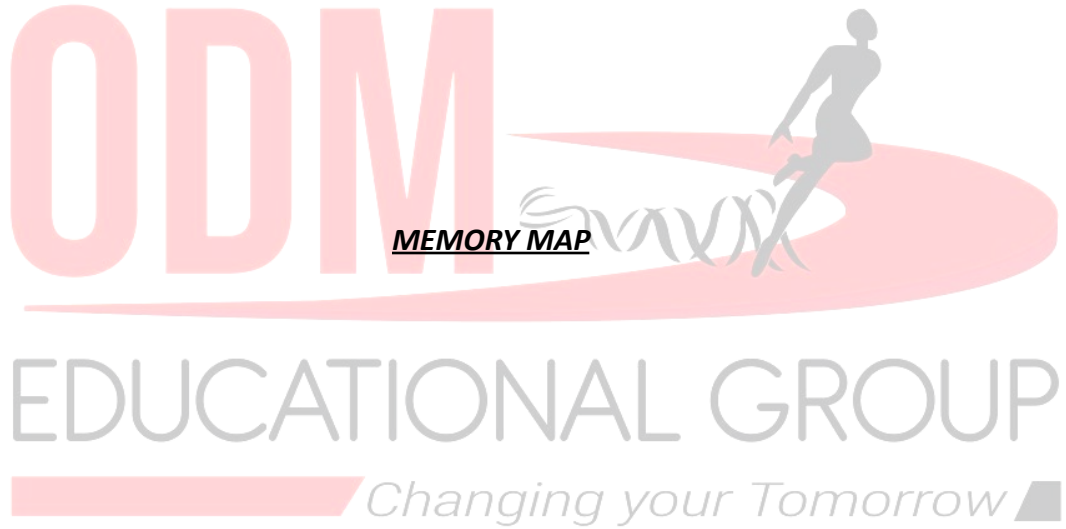


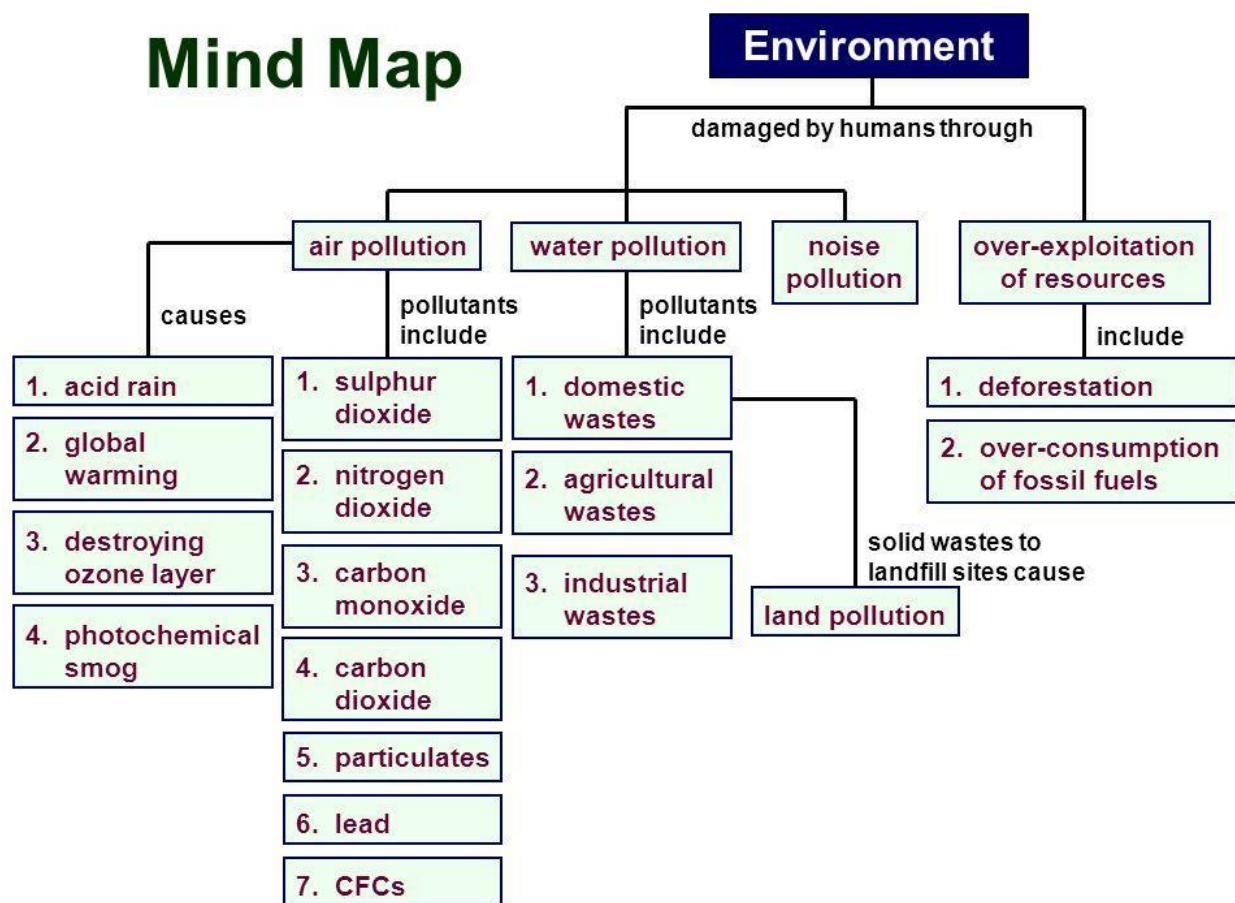
PREVENTING POLLUTION

- ❖ Wet waste and dry waste must be disposed of separately. It must be taken to decomposing units and dry waste for recycling or burning.
- ❖ The authorities must dump the decomposable waste in its where it can be changed into manure.
- ❖ We must avoid the use of plastics because they can not be degraded and block drains and stop the flow of dirty water and lead to water stagnating and the breeding of mosquitoes.
- ❖ Before letting dirty water into seas, rivers or lakes, it must be treated with chemicals to make it less harmful.
- ❖ To check air pollution, we must get our vehicles fitted with CNG and LPG are non-polluting fuels.
- ❖ Regular pollution checks of vehicles help prevent air pollution.
- ❖ Tall chimneys with filters must be fitted in factories to release smoke and gases very high away from the populated places.

REUSE OR RECYCLE:

- ❖ Plastic is a very commonly used thing in our today's life.
- ❖ We use it to make a lot of useful, colourful and lightweight things for daily use.
- ❖ Plastic waste is not easy to dispose of off so landfills or dumping places are there to dispose of plastic objects.
- ❖ We must say 'No' to plastic bags and carry paper or jute bags for shopping.
- ❖ Plastics can be recycled and used for making things like flower pots, tubs, and park furniture.





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- ❖ Heat causes less oxygen absorption in water thereby reducing its amount. This is the major reason it is referred to as a water pollutant.
- ❖ We celebrate World Environment Day on 5 June every year.
- ❖ World Environment Day is the United Nations day for encouraging worldwide awareness and action to protect our environment.

TEACHER'S NOTE

- ❖ Discuss the causes of pollution on land, water and water. Make children understand how different kinds of pollution affect human beings.
- ❖ Stress the importance of preventing pollution.

LET US ANSWER

A. TICK THE CORRECT ANSWER.

- Pollution causes
 - recreation.
 - comfort.
 - pleasure.
 - diseases.
- This fuel causes pollution.
 - coal
 - LPG
 - biogas
 - CNG
- Waste consisting of this material cannot be decomposed.
 - plastic
 - vegetables
 - paper
 - fruits
- For proper waste management we should cooperate with
 - cows.
 - neighbours
 - municipalities
 - teachers
- We must stop using these bags to prevent environmental pollution.
 - paper
 - plastic
 - cloth
 - eco-friendly

B. FILL IN THE BLANKS.

- _____, _____ and _____ are getting polluted because of increasing population.
- Coal, petrol and diesel release _____ on burning.
- _____ waste and _____ waste should be disposed off separately.
- _____ bags stop the flow of water in the drains.
- Aquatic animals and plants are adversely affected by _____ and _____ that reach the water.

C. WRITE SHORT ANSWERS*Changing your Tomorrow* 

- How is a land made available for making more houses and factories?
- What does agricultural waste include?
- Name two diseases that are caused due to polluted water.
- Name two things that can be recycled.

D. ANSWER THESE QUESTIONS

- How do people living near rivers pollute water?
- Write two ill-effects of water pollution.
- What is biodegradable waste?
- Write two ways by which air pollution can be controlled.
- What do you understand by landfills?

ANSWER KEY**A. TICK THE CORRECT ANSWER.**

1. Diseases.
2. coal
3. plastic
4. municipalities.
5. plastic

B. FILL IN THE BLANKS.

1. Air, water and land
2. smoke
3. Biodegradable waste and non-biodegradable waste
4. Plastic
5. fertilizers and chemicals

C. WRITE SHORT ANSWERS

Changing your Tomorrow ▲

1. Trees are cut down to make land available for making more houses and factories.
2. Agricultural waste includes parts of plants and chemicals used to destroy weeds and pests.
3. Two diseases that are caused due to polluted water are diarrhoea and typhoid.
4. Two things that can be recycled are plastic and metal.

D. ANSWER THESE QUESTIONS.

1.
 - I. People who live near rivers and lakes throw all kinds of waste into the water.
 - II. They wash clothes and utensils in river water and pollute it.

- III. Drains from towns and cities carry dirty water mixed with soap and detergent and chemicals and release all these into rivers, lakes and seas.
- IV. Some amount of fertilizers and chemicals from agricultural fields also pollute the water. In this way, people living near rivers pollute water.

2. Following are two ill effects of water pollution:

- I. Many harmful microorganisms grow in polluted water causing diseases like diarrhoea and typhoid.
- II. When fertilizers and chemicals reach the water they harm aquatic life and kill fishes and other water animals.

3. Biodegradable waste can be defined as a material that can be decomposed easily by bacteria or any other natural organisms and get mixed with soil.

4. Two ways by which air pollution can be controlled are

- I. Tall chimneys with filters must be fitted in factories to release smoke and gases high away from the populated places.
- II. Regular pollution checks of vehicles help prevent air pollution.

5. Landfills are dumping places filled with plastic objects, especially plastic bags. Waste is usually buried in landfills, but it may first be sorted to remove any recyclable materials.

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