

WORKSHEET 1

CHAPTER 8 – ATMOSPHERIC POLLUTION

A. Tick (✓) the correct option.

- Which of the following is an air pollutant?
a. Nitrogen b. Oxygen c. Carbon dioxide d. Chlorine
- The gas mainly responsible for acid rain is
a. sulphur dioxide. b. chlorine. c. carbon dioxide. d. ozone.
- Greenhouse effect is mainly due to the increase in concentration of
a. carbon monoxide. b. carbon dioxide. c. nitrogen dioxide. d. ozone.
- Ozone is found in
a. mesosphere. b. ionosphere. c. stratosphere. d. exosphere.
- Ozone depletion is caused by
a. nitrous oxide. b. carbon dioxide. c. chlorofluorocarbons. d. methane.

B. Fill in the blanks from the choices given within the brackets.

- Fossil fuels on burning mainly releases _____ (sulphur dioxide/nitrogen dioxide)
- _____ (Ozone/Radon) is an invisible, odourless, colourless and tasteless radioactive gas that contributes to air pollution.
- Acid rain mainly contains _____ and _____ (hydrochloric/sulphuric/carbonic/nitric) acid.
- _____ and _____ (methane/nitrous oxide/sulphur dioxide/carbon monoxide) are greenhouse gases.
- The primary cause of global warming is the increase in the levels of _____ (carbon monoxide/methane/carbon dioxide)

C. State whether the following statements are correct or incorrect. If incorrect, rewrite those statements.

- Carbon monoxide is produced by incomplete combustion of fuels.
- Nitrogen oxides causes smog as well as greenhouse effect.
- Ultraviolet radiation causes lung cancer.
- Acid rain erode the monuments made of marble.
- Acid rain has a pH value more than 7.

Name:

Teacher's signature:

Class: IX

Date:

D. Match the following.

- | | |
|--------------------|---------------------------|
| 1. Sulphur dioxide | Smog formation |
| 2. Hydrocarbons | Melting of polar ice caps |
| 3. Radon | Kidney damage |
| 4. Global warming | Respiratory problems |
| 5. Lead | Lung cancer |

E. Answer the following.

1. Name any two sources which cause air pollution due to suspended particulate matter.
2. What is meant by the term 'acid rain'? Give any two impacts of acid rain.
3. What is greenhouse effect? How is it caused?
4. What do CFCs stand for? Name some devices where CFC's are used. Why are CFC's considered as pollutants?
5. a. "CO₂ contributes to global warming". Explain.
b. Write any four harmful effects of global warming.

ANSWERS

WORKSHEET 1

A. Tick (✓) the correct option.

1. c 2. a 3. b 4. c 5. c

B. Fill in the blanks from the choices given within the brackets.

1. sulphur dioxide 2. Radon 3. sulphuric, nitric
4. methane, nitrous oxide 5. carbon dioxide

C. State whether the following statements are correct or incorrect. If incorrect, rewrite those statements.

1. Correct
2. Correct
3. Incorrect
 Ultraviolet radiation causes skin cancer.
4. Correct
5. Incorrect
 Acid rain has a pH value less than 7.

D. Match the following.

- | | |
|--------------------|---------------------------|
| 1. Sulphur dioxide | Respiratory problems |
| 2. Hydrocarbons | Smog formation |
| 3. Radon | Lung cancer |
| 4. Global warming | Melting of polar ice caps |
| 5. Lead | Kidney damage |

E. Answer the following.

1. Petroleum and ore refineries.
2. When rainfall contains very high amounts of nitric and sulphuric acids, it is called acid rain.
 Acid rain has the following impacts:
 a. Acid rain causes damage to trees, forests and soil.
 b. Surface water in lakes and rivers becomes acidic which causes threat to aquatic life.
3. The heating up of the earth's surface and the atmosphere by the gases like carbon dioxide, methane, water vapour is called greenhouse effect. Gases in the atmosphere includes carbon dioxide, methane, oxides of nitrogen and water vapour which do not allow the long wave infrared radiations radiating from the earth's surface to escape from the atmosphere. Therefore, the heat of the earth is trapped in the atmosphere, causing a rise in the atmospheric temperature.
4. CFCs stand for chlorofluorocarbons. CFCs are used in aerosol cans, refrigerators and air conditioners. CFCs damage the protective ozone layer in the atmosphere and as a result, more harmful ultraviolet rays from the

sun reach the earth's surface. These ultraviolet radiations cause skin cancer, affect the human immune system and destroy terrestrial and aquatic life. Hence, these are considered as pollutants.

5. a. The primary cause of global warming is the increased level of carbon dioxide in the atmosphere. An average level of carbon dioxide in the atmosphere is necessary to maintain the global temperature of the earth so as to maintain the life on earth. However, due to human activities, the level of carbon dioxide has increased in the atmosphere which results a rise in global temperature by 0.4 °C to 0.8 °C per decade. This has led to global warming.
- b.
 - i. Global warming causes melting of polar ice caps. Therefore, leading to a rise in sea level, causing low lying areas to be submerged.
 - ii. Global warming is leading to ecological and climatic changes. Quantity and pattern of rainfall has changed due to which floods, famines, heat waves and hurricane occurs.
 - iii. Global warming causes a large scale destruction of ecosystem and extinction of species.
 - iv. Global warming affects the agriculture and plant life.