

Science

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(Chapter – 14) (Natural Resources)

(Class – IX)

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Question 1:

How is our atmosphere different from the atmospheres on Venus and Mars?

Answer 1:

Earth's atmosphere is different from those of Venus and Mars. This difference lies essentially in their compositions. Earth's atmosphere is a mixture of nitrogen (79%), oxygen (20%), and a small fraction of carbon dioxide, water vapours and other gases. This makes the existence of life possible on Earth. However, the atmospheres on Venus and Mars mainly consist of carbon dioxide. The amount of carbon dioxide on these planets can range from 95% to 97%.

Question 2:

How does the atmosphere act as a blanket?

Answer 2:

The atmosphere acts as a blanket by performing the following functions:

- (a) It keeps the average temperature of the Earth fairly constant during day time and even during the course of whole year.
- (b) It prevents a sudden increase in the temperature during day time.
- (c) It slows down the escape of heat from the surface of the Earth into outer space during night time.

Question 3:

What causes winds?

Answer 3:

An uneven heating of the Earth's surface causes winds. On being heated, air becomes lighter and rises up. As a result, a region of low pressure is created. Then, air from a high pressure region moves to a low pressure region, causing wind.

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Question 4:

How are clouds formed?

Answer 4:

During day time, on being heated, a large amount of water evaporates from various water bodies and goes into the air. A part of this water vapour also reaches the atmosphere through biological activities such as transpiration and respiration. This causes the air in the atmosphere to heat up.

When this heated air rises, it expands and cools, which results in the condensation of water vapour forming water droplets. The presence of dust and other suspended particles in air also facilitates the process of condensation. The formation of water droplets leads to the formation of clouds.

Question 5:

List any three human activities that you think would lead to air pollution.

Answer 5:

The following three human activities would lead to air pollution:

- (i) Burning of fossil fuels such as coal and petroleum
- (ii) Industrialization
- (iii) Deforestation