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WELCOME TO VIRTUAL CLASS- VII

SUBJECT : (GEOGRAPHY)
CHAPTER NUMBER: 4
CHAPTER NAME : THE ATMOSPHERE

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III: ANSWER THE FOLLOWING QUESTIONS

Q1. Explain how the atmosphere helps sustain life on the Earth?

Ans- The atmosphere is essential for life for the following reasons:

(a) Oxygen which is essential for the survival of all living organisms is present in the atmosphere.

(b) Essential gases that support life on the earth are present in the atmosphere.

(c) Water cycle would not have been possible without the atmosphere.

(d) The atmosphere acts as a protective blanket for the earth by blocking the harmful UV rays from the sun.

(e) The temperature on the earth is maintained because of the presence of the atmosphere.

Q2- How is the balance between oxygen and carbon dioxide maintained? Mention one action that affect this balance.

Ans- The balance between oxygen and carbon dioxide is maintained by:

1.Green plants give out oxygen during photosynthesis. This oxygen is used up when living things (including plants) respire, and carbon dioxide is released.

2.This dual process ensures that the amount of oxygen and carbon dioxide in the atmosphere is always constant.

3.This natural balance is affected when we cut down trees indiscriminately.

Q3: What is global warming? What are its causes?

Ans:- Carbon dioxide absorbs terrestrial radiation and radiates it back to the earth. This trapping of energy by the carbon dioxide in the atmosphere produces what is called the green house effect, and it is therefore called green house gas. If the amount of carbon dioxide in the air increase, more heat gets trapped on the earth's surface and also the layer of atmosphere in contact with it. This warming of the earth is called global warming. Its causes are –

1.Over population
2.Deforestation
3.Use of Chemicals.
4.Burning of fossil fuels like coal and petroleum.

Q4: Explain the main features of the troposphere. Why it is called as weather making zone.

Ans:- i) Troposphere is the lowest layer of the atmosphere. It protects us from the heat of sun during day and keeps the earth warm at night ozone.

ii) This is the densest layer of the atmosphere and its thickness varies from 8 km over the poles to 18 km over the equator.

Almost all the weather phenomena like rainfall, fog and hailstorm occur in this layer.

Q5. Where is the ozone layer found? What is its importance and how it is been destroyed?

- **Ans:** Ozone layer is found in the lower part of the stratosphere between the altitudes of 15 and 30 km. It plays a very important role- it absorbs harmful ultraviolet rays. The ozone layer is being destroyed by the release of chlorofluorocarbons (CFCs) into the atmosphere. CFC is a valuable industrial chemical which is used in refrigerators, home insulation, Plastic foam and throwaway food containers. Jet planes that fly in the stratosphere also release CFCs. Efforts are being made globally to reduce the use of CFCs in the atmosphere.

Q6. Which two layers make up the thermosphere? Describe them in details.

Ans: It is made up of the ionosphere and the exosphere.

The ionosphere is the lower part of the thermosphere.

- It lies above the mesopause.
- It extends from 80 to 640 km.
- Temperatures rise sharply here.
- The ultraviolet radiations from the Sun break the gas molecules in this layer into electrically charged ions.
- Therefore, the ionosphere is full of electrically charged ions, i.e., ions, which enable wireless transmission.
- Radio waves transmitted from the Earth are reflected back to the Earth by these ions.
- The upper limit of the ionosphere is called the ionopause.
- **The exosphere** lies beyond the ionopause and is the uppermost layer of the thermosphere.
- The upper limit of the exosphere is difficult to determine.
- It merges with inter-planetary space.
- The temperature here is estimated to be beyond 5500 degree Celsius.
- The air is very thin here and its density is very low.
- Only lighter gasses like helium and hydrogen are found here.

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