

CHAPTER 14 : CHANGE OF CLIMATE**Instructions:**

- ✓ Read the chapter in your book - quickly and thoroughly, preferably more than once.
 - ✓ Contact me in case of any difficulty in understanding.
-

Cognitive Questions (Mark 1)**1. What is weather?**

Ans.: Weather means the condition of atmosphere for a short period in a particular area.

2. What is atmosphere?

Ans.: Gaseous part that encircles the earth is called atmosphere?

3. What is underground water?

Ans.: A portion of rain water goes down the soil and makes a reservoir. It is called underground water.

4. What are the factors of weather?

Ans.: Temperature and pressure of air, speed and direction of wind, humidity of air, cloud, fog and rainfall etc are the factors of weather.

5. In which layer radio signals are reflected?

Ans.: Radio signals are reflected in Thermosphere.

6. What is the main cause of global warming?

Ans.: The main cause of global warming is the increase of carbon dioxide in the atmosphere.

Analytical Question (Mark-2)

1. Explain why concentration of air is more in lowest or nearest layer of atmosphere.

Ans.: Gaseous part that encircles the earth is the atmosphere. We know that, atmosphere is mainly composed of nitrogen and oxygen. Besides, there are moisture, dust particle, argon, carbon dioxide and some other gases. The earth attracts everything towards it. Due to this attraction, gases of the atmosphere remains near the earth surface. That is why concentration of air is more in lowest or nearest layer of atmosphere.

2. Why is troposphere most important?

Ans.: The eleven kilometer long layer of atmosphere beginning from the earth surface is called troposphere. The vital elements of air including oxygen, nitrogen, carbon dioxide and water vapor exists in this layer. That influence human, animal and plants lives. Cloud, rain, fog, storm and flow belong to this layer. All this is why troposphere is the most important layer in the atmosphere.

3. How balance of oxygen and carbon dioxide is established in the atmosphere?

Ans.: We know that organisms take oxygen for the purpose of respiration. After completion of the process, they release carbon dioxide in the environment. The plants take carbon dioxide to manufacture their food and in this process they release oxygen. In this way a balance is maintained between oxygen and carbon dioxide in the atmosphere.

4. What is Green House Effect? How can global warming be explained with its help?

Ans.: In cold countries, during the extreme cold season trees cannot survive. The green vegetables are grown in glass or plastic covered houses. This types of house is known as greenhouse. The heat captured inside the glass house is known as green house effect.

The earth may be compared with a green house. The earth is surrounded by the atmosphere. The atmosphere contains carbon dioxide, methane and water vapor which acts like green house gases. They do not resist heat from the sun from coming to the earth. So heat from the sun make the earth heated. But it resists the heat to radiate out. So the earth may remain heated at night also. These gases are called green house gases. It is a blessing for the human civilization. Because in absence of these gases, heat from the earth would have radiated out and the earth would become too cold.

Now, the question is how can a blessing be a problem? The problem is the increase of the quantity of carbon dioxide in the atmosphere. Carbon dioxide retains increased amount of heat. So the temperature of the earth is increasing. So the main cause of global warming is the increase of carbon dioxide in the atmosphere.

5. Describe why stratosphere is important.

Ans.: From just above the troposphere starts stratosphere. This layer starts from troposphere and extends up to about 39 kilometers from the earth surface. This layer contains a gas named ozone. This ozone gas protects us from sun's harmful rays. That is why stratosphere is important.

6. Why is the atmosphere in March in Bangladesh soothing?

Ans.: Climate of Bangladesh is hot and humid. In Bangladesh average weather is hot but cold condition is less prevalent. Winter is short, December to February we feel cold in Bangladesh. From March climate started to become less cold and gradually becomes hot. For this reason the atmosphere in March in Bangladesh is very soothing.

7. Explain the influence of the climate of Bangladesh.

Ans.: There is laudable influence of monsoon on the climate of Bangladesh. In the beginning of monsoon tornado and cyclone attack the coastal areas. In the rainy season, the wind carries water vapor from the Bay of Bengal. Heavy rainfall also occurs by monsoonal influence.

8. What is the difference between weather and climate?

Ans.: In a particular area, atmospheric condition for a short period is called weather. Whereas average atmospheric condition for long period is called climate.

Weather may change within a short span of time and it can vary nearby places but climate does not change suddenly and climate of certain region remains the same.