**3. CLIMATE CHANGE AND GLOBAL WARMING**

**Answer the Following**

**Q-1) Explain Green House Effect and consequences of climate change.**

**OR**

**Explain Global Warming and Climate Change through Green House Effect.**

**Ans-**  Global warming potential (GWP) is the ratio of the warming caused by substance compared to the warming caused by a similar mass of C02. The GWP of C02 is 10.

Global warming means increase in any temperature of the earth due to greenhouse gases.



1. Carbon dioxide (C02): Carbon dioxide contribute about 55-60% to global warming from greenhouse gases produced by human activity. Industrial countries account for about 76% of annual emissions. The main sources are fossil fuel burning (67%) and deforestation, other forms of land clearing and burning (33%).

The level of C02 in atmosphere has increased from the pre-industrial level Of 280 ppm to 368 ppm in 2000.

1. Chloro-fluoro Carbon (CFC): CFCs are synthetic gaseous compounds of carbon and halogens. CFC contributes about 14-20% Of the human contribution to greenhouse gases.

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The main sources Of CFCs in the atmosphere are leaking air conditioners and refrigeration units, evaporation Of industrial solvents, production of plastic foams and propellants in aerosol spray cans CFC generally trap 1500 to 7000 times more heat per molecule than C02. Atmosphere concentration Of CFC is 0.00225 ppm that is increasing at a rate Of 0.5% annually.

1. Methane (CH4): It contributes about 18-20% to global warming from greenhouse gases produced by human activities.



Why is climate change such a concern? What has caused it and what are the risks we face? We take a look at the causes of the greenhouse effect that are the result of human activity, the commitments made to invert the trend, and the push for electrification.

Life on Earth exists thanks to a combination Of three factors: our distance from the Sun, the chemical composition Of our atmosphere and the presence Of the water cycle. The atmosphere, in particular, ensures our planet has a climate that is suitable for sustaininq life thanks to the natural greenhouse effect. When the Sun's rays reach the surface Of the Earth, they are only partly absorbed, while the rest are reflected outwards. Without the presence Of the atmosphere, they would be dispersed into space; instead, most Of them are trapped and redirected back towards the Earth by gases present in the atmosphere (mainly carbon dioxide and methane, but also water vapour, etc.) called greenhouse gases because of the effect they produce.

This captured heat is added to the heat absorbed directly from the Sun's rays. It's important to add that without the natural greenhouse effect, the average temperature on the planet would be around (-180°C) instead of the current average of about WC.