

JEE Main Archive	DTS-2
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- 11.(D)** CFC (Chlorofluorocarbons) are causing depletion of ozone in the stratosphere. This occurs because ultra violet light also causes CFC's to decompose, producing atomic chlorine. The chlorine atoms react with ozone molecules, resulting in a net removal of O_3 molecules from the stratosphere.
- 12.(C)** NO , NO_2 , SO_2 and SO_3 are responsible for smog (environmental pollution).
- 13.(C)** Chlorofluorocarbon is used in air conditioning and in domestic refrigerators for cooling purposes. Its main drawback is that, it is responsible for ozone depletion.
- 14.(D)** During the formation of photochemical smog, the level of ozone in the atmosphere goes down.
$$NO + O_3 \xrightarrow{h\nu} NO_2 + O_2$$

In the atmosphere, the organic compounds rapidly react with O_3 , NO_2 to form other noxious photochemical products known as peroxyacyl nitrates (PANs) and acrolein.
Photochemical smog occurs in warm, dry and sunny climate, generally during the day time while classical smog occurs in cool humid climate, generally in the early morning hours of winter months.
- 15.(C)** Photochemical smog can be suppressed by radical traps. When the compounds are sprayed to the atmosphere, they generate free radicals which readily combine with free radical precursors of photochemical smog. Diethyl hydroxylamine has been found to possess smog inhibiting characteristics.
- 16.(D)** Fact
- 17.(D)** Clean water would have BOD value of less than 5ppm whereas highly polluted water would have a BOD value of 17 ppm or more.
- 18.(A)** Concentration of dissolved oxygen in cold water can go upto 10 ppm.
- 19.(C)** Fact
- 20.(A)** Reaction of CH_4 with O_3 is not involved in the ozone layer depletion.