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ATMOSPHERE

Atmosphere is a colour less and odourless mixture at gases that surround the earth. It extend UP to a height of about 1600 km. however 99% at total mass of the atmosphere is within 40 km. from the earth. This gases envelop in invisible film of air surrounding the earth is called atmosphere. There is no definite upper boundary layer but fades is away gradually in to interplanetary Space. It peters out more and more slowly with increasing altitude and become less and less dense until there is no longer any detectable amount of air left. Most of livening organisms are present at the bottom of the atmosphere. The mechanical mixture of gases in the atmosphere. Do not react with each other. It does have weight, exerts pressure and is compressible.

COMPOSITION AT ATMOSPHERE

Gases	Volume %	Weight %
Nitrogen	78.088	75.527
Oxygen	20.948	23.143

Argon	0.93	1.282
Carbon dioxide	0.033	0.045
Other gases	Traces	Traces

A sample of pure air on an average consists at 78% Nitrogen, 21% Oxygen, 0.9% Argon and 0.03% CO_2 by volume, very minor amount at neon, helium, mithan, krypton, nitrous oxide , Helium, ozone xenon etc. through the CO_2 contents less, it is imp constituent with a considerable influence on the of life on earth. It is vital intergradient in photosynthesis.

The lower part at the atmosphere contains water vapour ranging from 0 to 4% by volume most of the water vapour content of the atmosphere. Is derived from evaporation from water bodies. The lower atmosphere also contains in purities like dust particle salt crystals bacteria pollen etc.

STRECTURE OF ATMOSPHERE

Basel on vertical temperature differences, atmosphere is no to**na**lly divided in to four major layers or strata but the boundaries between then are never sharp, more or less unclear with gases mixture up word and down word across boundaries.

TROPOSPHERE –Troposphere is the lower layer of the atmosphere extending up to a height 8-18 km from earth depending on latitude. It is th**icke**r at the equator than at poles. Troposphere is the densest at the atmosphere and contains 85% of the atmosphere mass. All weather phenomena a like clouds, fog, dew, mist, rain etc. occur in the layer. The outstanding characteristic of troposphere is that the tem decries with increasing of altitude. The tem at the boundary troposphere is roughly- 60^0C.

Tropopause is a thin layer of transition that separates the troposphere from the above layer stratosphere. It is a zone of transition from one set at physical phenomenon to the other. There is no fall in temperature with height in this transition zone.

STRATOSPHERE:-Stratosphere is a layer at atmosphere which lies above the tropopause. It lies beyond the height at 8 to 18 km extending up to 50 km depending on latitude. It is dust free, cloudless and warmest layer. It is the set of most at the photo chemical reactions in air. Tem increases with increase in attitude up to about 50 km in this layer at this height above the ground, the air, although very thin is nearly as warm as the air at sea level. The stratosphere contain virtually 15 % of atmospheric mass. Thus the mass of the air up to40 km. attitude is more than 99% at total mass at atmosphere. The air in the stratosphere is thin, highly rarefied compared with at ground level.

The stratosphere absorbs heat from sun in the form of ultraviolet radiation. It does so since O_2 seeping up from the atmosphere below absorbs energy from the sun.

The term ozone layer or ozonosphere is synonymous with stratosphere. Thus in the process of formation of ozone layer the harmful ultraviolet radiation is filtered which other wise life is impossible on the earth.

Because the stratosphere is warmer at higher latitude, hot air no longer rises there since the air above is hotter than air below and convection cannot occur. The stratosphere acts as a lid on the troposphere keeping convection and weather, below the tropopause .

MESOSPHERE:-

Mesophere lies above stratosphere the stratosphere and mesosphere separated by narrow transitional layer called stratopause. Mesosphere is identified by a stronger decrees in tem, with increase in altitude up to about 80 km, then warms up again in thermosphere.

THERMOSPHERE:-Thermosphere is separated by mesopause it is out most layer extending from the top of the mesosphere. It is characterized by a steadily increasing tem with altitude. The lower layer of thermosphere is called Ionosphere; long distance radio communication is made possible through this ionized layer.

Atmosphere has tremendous influence on climate actually the changes that take place in the lower layer of the atmosphere are the climatic change.

References-Principal of Agronomy by S R REDDY

Principal of Agronomy-By_ Y Reddy & S R Reddy

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