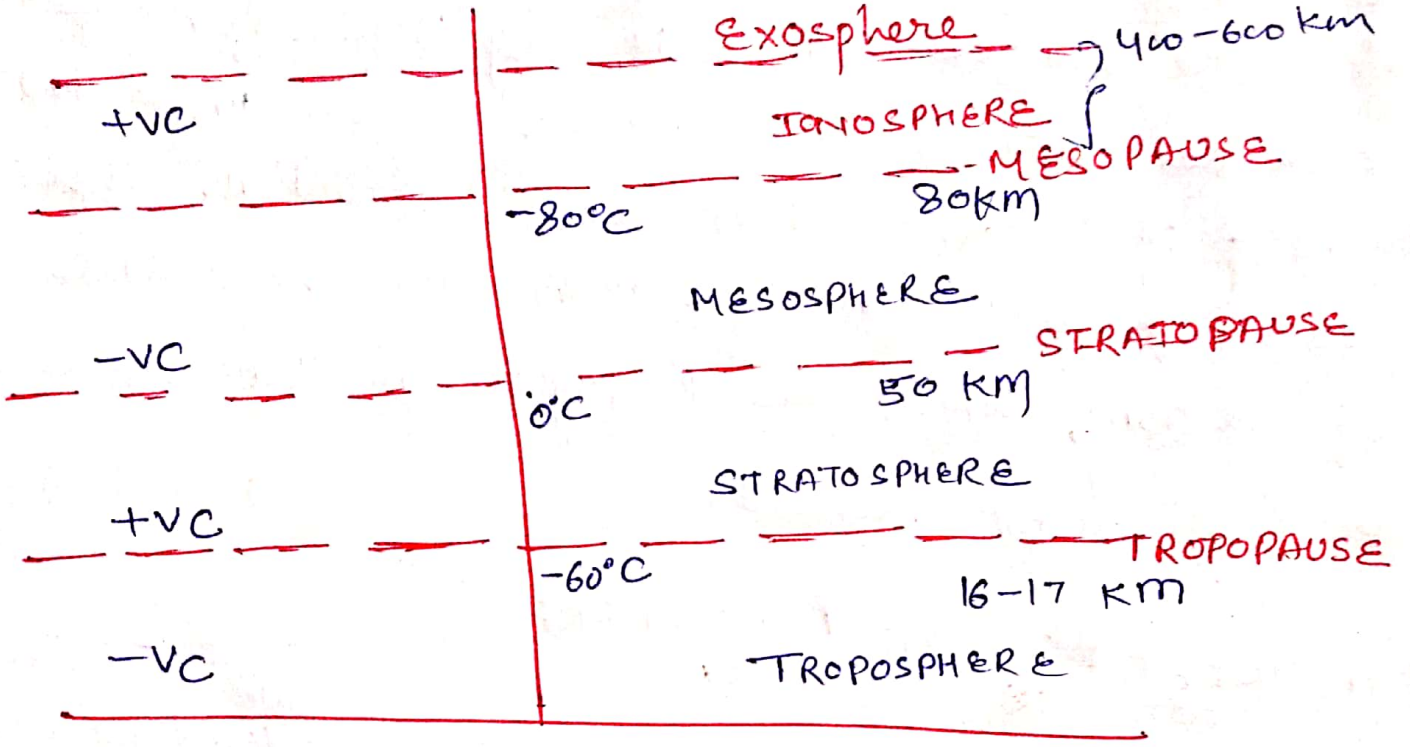
Date
22/08/2020

Geography

Topics – Mechanism of Monsoon



Upper Atmosphere or Hetrosphere

Thermosphere is a prominent layer of upper atmosphere or Hetrosphere the basic atmospheric feature of thermosphere is again increase in temp with elevation however increase in temperature in this layer mainly takes place by less density of gaseous molecules. Molecules of thermosphere are propogating with a very high velocity, requiring very less amount of unit heat to increase their unit volume temperature.

Ionosphere remain the main concentric zone of thermosphere extended approximately upto 400 - 600 km from the surface characterised by Ionization of molecular nitrogen and atomic oxygen under the impact of intense short wave radiation. This process of ionization completes with the release of electron, which also propagate in Ionosphere as free electric current.

PRESSURE BELTS of ATMOSPHERE

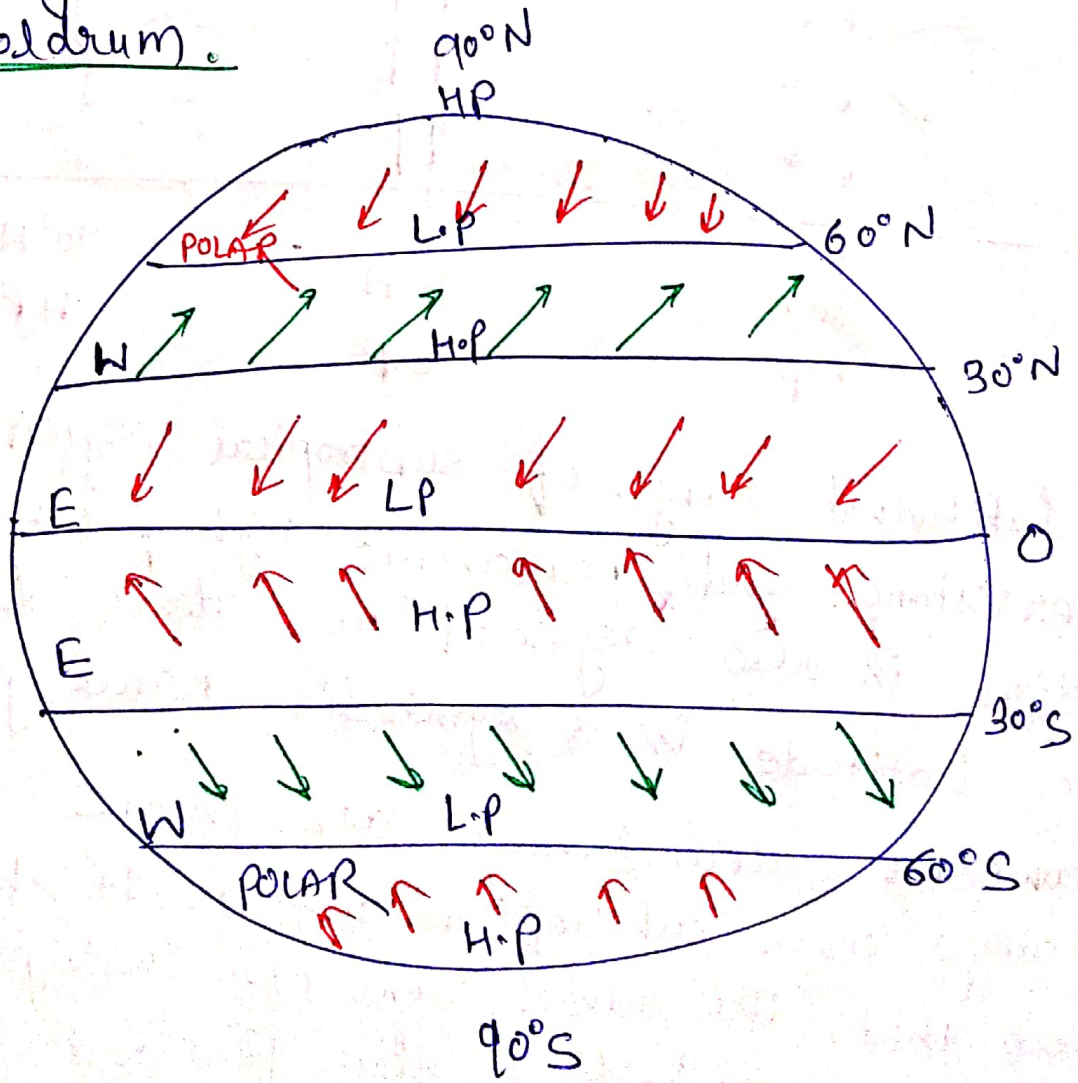
Under climatological study and meteorological research or illustration, based on mass energy exchange mechanism between Earth and Atmosphere several pressure belts could be identified from equator towards poles.

Equatorial low Pressure Belt

It normally lies between the latitudinal extent of 5°N to 5°S latitude where intense thermal condition and high angle of incidence prevails through out the year, subsequently intence convection current originates from the surface to develop a prominent low pressure vaccum called as

equatorial low pressure belt. It is a thermally induced pressure belt created by rapid convection and high impact of insalation heating.

Since the process of convection takes place through out the year, a vaccum type of ~~condition~~ atmospheric Condition also prevails over the surface of equator in which the volume of air parcles remain very low and horizontal movement of air parcles is also absent. this particular atmospheric condition developing over the surface of equator is regarded as doldrum.



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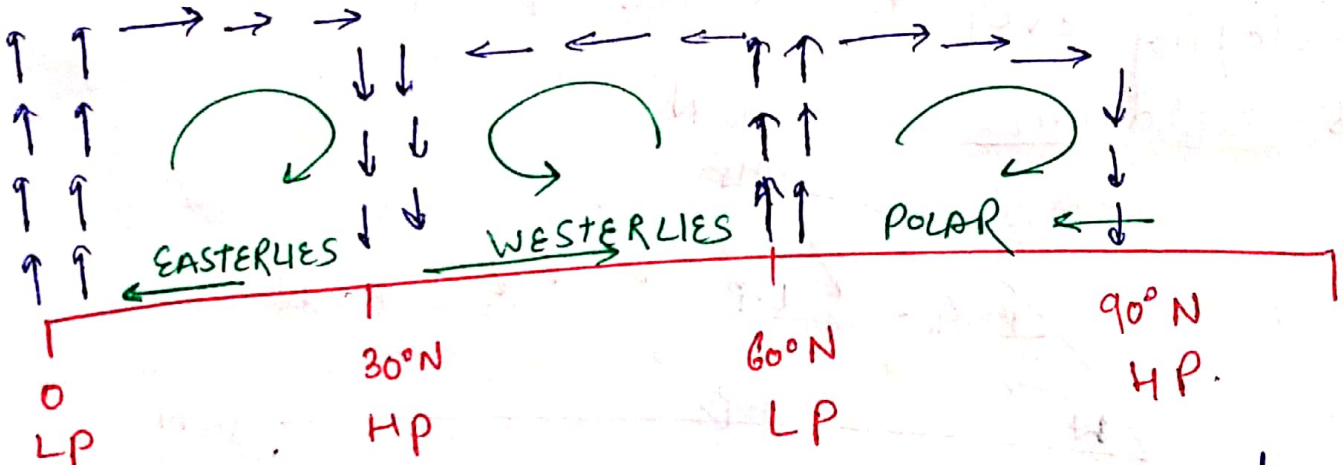
Subtropical High Pressure belt

It physically lies between 55 to 65° Northern and Southern hemisphere where convection current originating from the surface of equatorial latitudes get subsided. It is basically a dynamicaly induced pressure belt acknowledged over the surface of earth by some ~~b~~ non-thermal factors



The latitudnal range of subtropical region characterised by persistance and permanent high pressure condition is also regarded as Horse latitudes. Horse Latitude is a symbolic name given to vaccumineous atmospheric condition prevailing over subtropical surface. It should be noted that the same zone of subtropical high pressure belt is also featured by

the presence of arid and semi-arid climate. all the prominent deserts of tropical and Subtropical origin ~~are physically~~ such as SAHARA, ARABIA, THAR, ARIZONA (N.A), MOJAVE, ATACAMA (in Peru S.A), KALAHARI (in Africa), NAMIB and Western Australian Deserts are physically located in the same zone of Subtropical High Pressure Belt.

SUBPOLAR LOW PRESSURE BELTS

It physically lies between the Latitudinal extent of 55 to 65° Southern and Northern hemisphere where a dynamic low pressure condition prevails under the influence of 4 atmospheric factors.

1. Subpolar Latitudes are physically located between two prominent High pressure system ie; Polar High pressure belt and Subtropical High pressure belt. Subsequently a relative low pressure condition develop or prevail over subpolar latitudes.

2. Atmospheric conditions prevailing over the surface of subpolar Latitude always remain warmer as compare to polar areas. Subsequently or consequently ~~warm or~~ relatively warmer

condition of sub-polar origin creates less pressure over the surface to develop a low pressure belt.

3. Winds originating from polar - High pressure belt and approaching towards sub polar low pressure belt have to cover more surface area. in the concerned latitude consequently the net pressure applied by the air mass would be low over the surface.