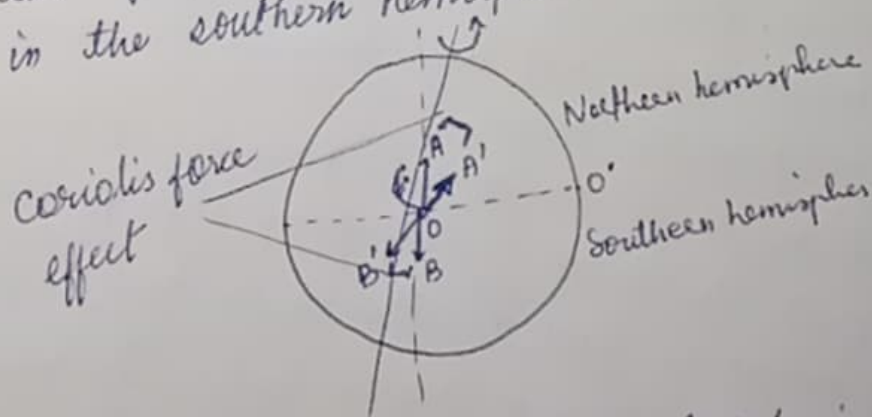


Q

The Coriolis force plays a fundamental role in determining not just the formation but also the behaviour and characteristics of tropical cyclones. (Discuss 250 words).

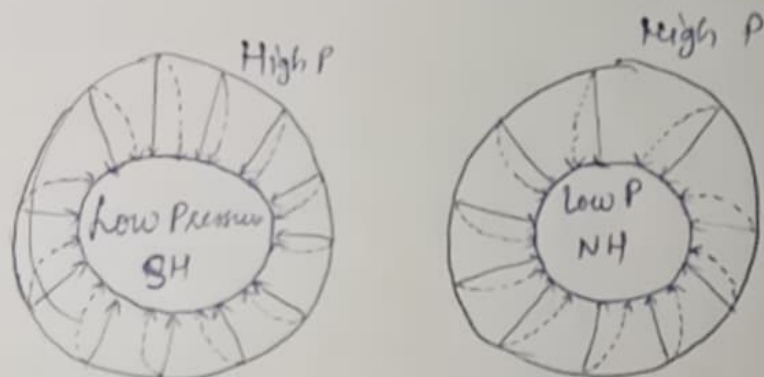
The rotation of earth influences the direction of wind and this force is called Coriolis force. It plays fundamental role in influencing weather pattern. Coriolis force is minimum at equator and maximum at poles. It influences the wind direction by deflecting the wind to the right in the Northern hemisphere and left in the southern hemisphere.



Also, Coriolis force plays fundamental role in formation of Cyclones, whether tropical or temperate. Deflection of wind in the left and right direction in Southern and Northern hemisphere around low pressure paves the way for the formation of cyclone.

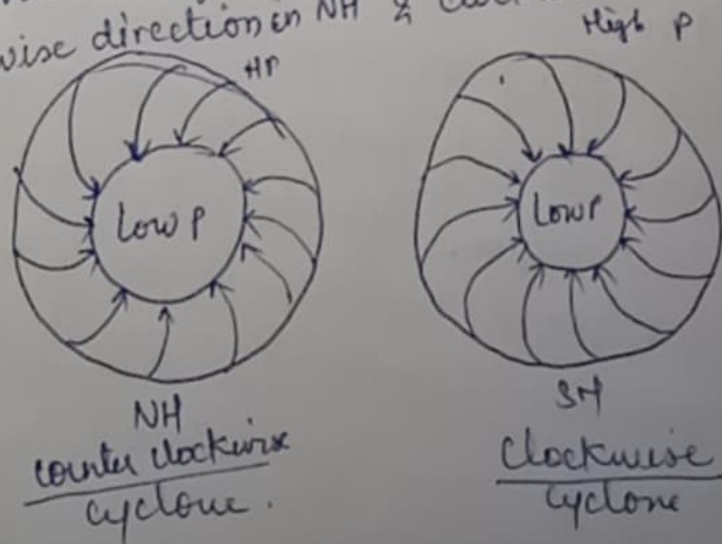
Tropical Cyclone is phenomenon associated with low pressure system that form over warm water in tropical and subtropical regions.

~~Coriolis~~
Coriolis effect →



As wind moves High pressure to low pressure, there can be no possibility of cyclone if the wind is not deflecting as in case of absence of Coriolis force.

But as there is Coriolis force effect in wind, it deflect the wind moving from high pressure to low pressure in right ^{2 left} direction in northern ^{2 southern} hemisphere, forming condition of tropical cyclone in anti clockwise direction in NH & clockwise in SH.



① Coriolis force is also very important for the intensification of storm or tropical cyclone.

② Tropical cyclone are phenomenon ^{related to} of warm water and swirling wind gaining energy from the precipitation of clouds forming through rising air.

③ Due to intensification they can travel large distances.

④ Tropical cyclone dissipates as soon as they reach land. due to absence of

It reflects that Cyclones are possible only due to presence of Coriolis effect. ~~for~~ It leads to formation as well as intensification to the cyclone providing energy and causing changes in weather patterns. Due to its effect in right and left direction it paves the way for both counterclockwise as well as clockwise direction cycle.

In India, counterclockwise cyclone is witnessed from time to time causing high rainfall, devastating effect and unstable weather causing extreme conditions for the people living in coastal lands.

Recently India witnessing Cyclone Fengal originating in Indian ocean.

- Q The Eastern and Western Ghats are two major mountain ranges in India, yet their influence on climate and agriculture differs significantly. Discuss. (150 words.)
- ② Eastern and Western ghats are two ranges lying in South India and considered two major mountain ranges with highest peak 'Anaimudi' lying in Kerala's western ghat.
- ③ Western Ghat ~~lies~~ are the broad and continuous ranges lying in the direction of Southwest monsoon causing varying or different climate and agricultural than eastern ghat which are non-continuous provided with broad plains suitable for agriculture.

Climate -

- As western ghat lies in western side of
- ① Western ghat lies in the western coast of peninsular causing high rainfall ~~orogea~~ due to orographic cloud formation. It leads to high diversity and pleasant weather most of the year around.
- It also ~~ex~~ experience heavy monsoon due to Southwest monsoon brings heavy rainfall.

Whereas, Eastern range is non-continuous range and have low elevation.

It also experience less rainfall than Western.

~~due~~
~~to~~

Agriculture

Western Ghats have narrow plains for the agriculture, which make it not so suitable for cultivation and also high rainfall which and elevation make it suitable for mostly plantation crop like Coffee.

Whereas, Eastern Ghat have wider plains for agriculture, which gives it quite an opportunity to cultivate mixed crops and drought-resistant crop like pulses etc.

Though they differ in continuity, shelf and climate, ^{but} they both ~~meet~~ ~~are~~ ~~rich~~ play important role in ecological and climate pattern of South India. These both ranges meet at Nilgiri hills forming rich source of diversity of species. ~~am~~