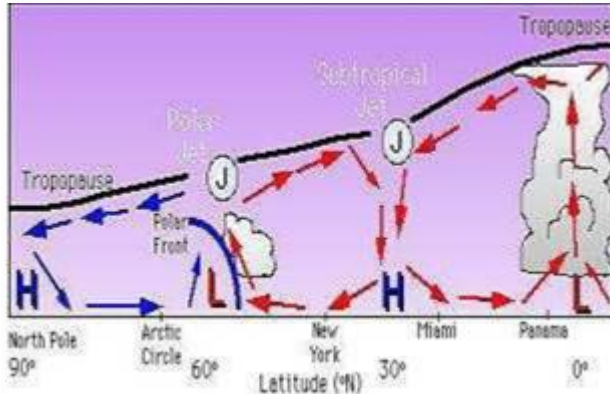


VIDYA BHAWAN BALIKA VIDYPITH SHAKTI UTTAN ASHARAM LAKHISARAI
Class XIth. Subject Geography. Date 5.1.2021.

Ch: CLIMATE (Notes)

Mechanism of Weather in the Winter Season

Surface Pressure and Winds :



Jet Stream and Upper Air Circulation :

1. In winter months, a high pressure centre in the region lying to the north of the Himalayas develops during winter.
2. This centre of high pressure gives rise to the flow of air at the low level from the north towards the Indian subcontinent, south of the mountain range.
3. The surface winds blowing out of the high pressure centre over Central Asia reach Indian the form of a dry continental air mass.
4. The position of this contact zone is not, however, stable. Occasionally, it may shift its position as East as the middle Ganga valley with the result that the whole of the north-western and northern India up to the middle Ganga valley comes under the influence of dry north-western winds.
5. The pattern of air circulation discussed above is witnessed only at the lower level of the atmosphere near the surface of the earth. Higher up in the lower troposphere,



6. About three km above the surface of the earth, a different pattern of air circulation is observed. The variations in the atmospheric pressure closer to the surface of the earth have no role to play in the making of upper air circulation.
7. All of Western and Central Asia remain under the influence of westerly winds along the altitude of 9-13 km from west to east.
8. These winds blow across the Asian continent at latitudes north of the Himalayas roughly parallel to the Tibetan highlands. These are known as jet streams.

9. Tibetan highlands act as a barrier in the path of these jet streams. As a result, jet streams get bifurcated.

Western Cyclonic Disturbance and Tropical Cyclones

1. The western cyclonic disturbances which enter the Indian subcontinent from the west and the northwest during the winter months,
2. Originate over the Mediterranean Sea and are brought into India by the westerly jet stream.
3. Tropical cyclones originate over the Bay of Bengal and the Indian ocean. These tropical cyclones have very high wind velocity and heavy rainfall and hit the Tamil Nadu, Andhra Pradesh and Orissa coast

SUBJECT TEACHER'S MUKESH KUMAR