TROPICAL CYCLONE - GEOGRAPHY NOTES

1. Introduction

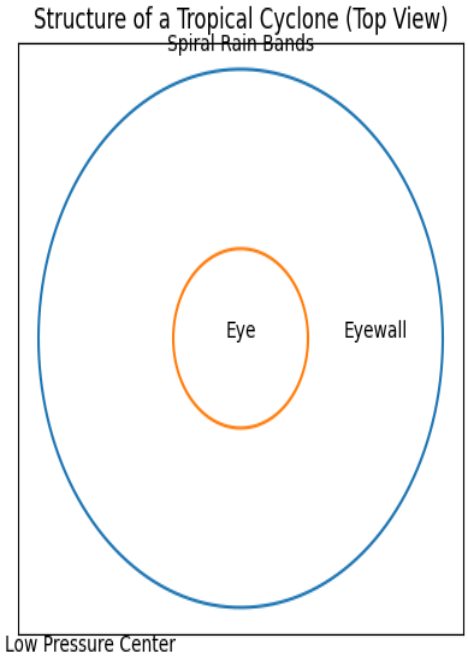
A tropical cyclone is an intense low-pressure system that develops over warm tropical oceans. It is characterized by strong winds, heavy rainfall, and spiral cloud bands. Depending on the region, it is called a Cyclone (Indian Ocean), Hurricane (Atlantic), or Typhoon (Pacific).

2. Conditions for Formation

- Sea surface temperature above 26.5°C
- High humidity in the lower and middle troposphere
- Coriolis force (minimum 5° latitude away from equator)
- Low vertical wind shear
- Pre-existing low-pressure disturbance

3. Structure of Tropical Cyclone

The structure includes a central eye (calm region), surrounding eyewall (strongest winds), and spiral rain bands. The system rotates anticlockwise in the Northern Hemisphere and clockwise in the Southern Hemisphere due to the Coriolis force.



4. Impacts

- Heavy rainfall and flooding
- Storm surge along coastal areas
- Strong winds causing infrastructure damage
- Loss of life and property

5. Disaster Management Measures

Early warning systems, cyclone shelters, coastal embankments, evacuation planning, and community awareness are essential for reducing cyclone-related disasters.