

**VI SEMESTER HONOURS
PAPER XIV
UNIT II**

Topic: Tropical cyclone

Definition

A tropical cyclone is a rapidly rotating storm system characterized by a low-pressure center, a closed low-level atmospheric circulation, strong winds, and a spiral arrangement of thunderstorms that produce heavy rain

Tropical cyclones are known by various names in different parts of the world:

- 1) North Atlantic ocean and the eastern North Pacific : Hurricans ,
- 2) western North Pacific around Philippines, Japan, and China :typhoons.

Characteristics of tropical cyclone

- it originates in tropical region
- Very low atmosphere pressure
- Strong and heavy rotating winds
- Very steep pressure gradient
- Torrential rainfall

Effects of tropical cyclone

Direct effects on the land are:

- 1) heavy wind: damage or destroy vehicles, buildings and bridges
- 2) heavy rain: flood, landslides
- 3) storm surge: flooding in coastal regions

Secondary effects of Tropical cyclones

- 1)diseases: destruction of sanitation system enhances diseases like cholera typhoid and diarrhoea
- 2)power outages: telephone and electricity poles fall down,
- 3)transportation difficulties

- **Benefits of Tropical Cyclones:** Although Tropical cyclones are known for destruction they cause, when they strike they also bestow certain benefits to the climatic conditions of that area such as
- Relieve drought conditions.
- Carry heat and energy away from the tropics and transport it towards temperate latitudes, thus helps to maintain equilibrium in the Earth's troposphere and
- Maintain a relatively stable and warm temperature worldwide.

Management of Tropical Cyclones:

There are many structural and non-structural measures for effective disaster management of cyclones. The structural measures include construction of cyclone shelters, construction of cyclone resistant buildings, road links, culverts, bridges, canals, drains, saline embankments, surface water tanks, communication and power transmission networks etc. Non-structural measures like early warning dissemination systems, management of coastal zones, awareness generation and disaster risk management and capacity building of all the stakeholders involved. These measures are being adopted and tackled on State to State basis under National Cyclone Risk Mitigation Project (NCRMP) being implemented through World Bank Assistance.

Thank you