

Air Pressure and Wind Formation

Chapter 6: Pressure, Winds, Storms, and Cyclones · Topic 1

Key Concept

This pressure difference drives global and local wind patterns — for example, uneven heating of the Earth's surface by the Sun creates large-scale wind belts like trade winds. The greater the pressure difference between two regions, the stronger the resulting wind. Barometers are instruments used to measure atmospheric pressure, and rapid pressure drops often signal an approaching storm, which is why barometric readings are important in weather forecasting.

Quick Revision Notes

- Wind results from air moving from high pressure areas to low pressure areas.
- Warm air rises (creating lower pressure); cool air sinks (creating higher pressure).
- Greater pressure differences create stronger winds.
- Barometers measure air pressure; sudden drops can signal an approaching storm.

Practice Questions

- 1 Explain why warm air rising creates wind.
- 2 How can barometric pressure readings help predict weather?
- 3 Why do stronger pressure differences create stronger winds?