surface temperatures of the eastern parts of the tropical oceans making them unfit for the breeding of cyclonic storms. For example, the presence of Peru Current on eastern margin of South America reduces the temperature of ocean waters.

- The lower pressure area at equator is directly filled by the air from the high-pressure area due to absence of the Coriolis force. Therefore, **tropical cyclones do not occur at the equator.**
- It is known as cyclones in the Indian Ocean, Hurricanes in the Atlantic, Typhoons in the Western Pacific and South China Sea, and Willy-willies in the Western Australia.

8. What are geomorphic processes? Briefly describe different types of geomorphic processes.

Approach:

- Explain what geomorphic processes are.
- Describe different types of geomorphic processes.
- Make use of examples, wherever possible.
- Give a brief conclusion.

Answer:

The forces causing physical stresses and chemical actions on earth materials and bringing about changes in the configuration of the surface of the earth are known as geomorphic processes.

There are various types of geomorphic processes, which can be combined under two major subheadings:

- **Endogenic geomorphic processes**: The energy emanating from within the earth is the main force behind endogenic geomorphic processes.
  - **Diastrophism**: All processes that move, elevate or build up portions of the earth's crust come under diastrophism. It involves mountain building, earthquakes involving relatively minor movements etc.
  - **Volcanism**: Volcanism includes the movement of molten rock (magma) onto or toward the earth's surface and also formation of many intrusive and extrusive volcanic forms.
- **Exogenic geomorphic processes:** The exogenic processes derive their energy from the atmosphere, determined by the ultimate energy from the sun and also the gradients created by tectonic factors.
  - **Weathering:** Weathering is action of elements of weather and climate over earth materials in order to reduce them to fragmental state. Weathering processes are responsible for breaking down the rocks into smaller fragments and preparing the way for formation of not only regolith and soils, but also erosion and mass movements.
  - **Mass movements**: These movements transfer the mass of rock debris down the slopes under the direct influence of gravity. The movements of mass may range from slow to rapid, affecting shallow to deep columns of materials and include creep, flow, slide and fall.
  - **Erosion and Deposition**: Erosion involves acquisition and transportation of rock debris. When massive rocks break into smaller fragments through weathering and any other process, erosional geomorphic agents like running water, groundwater, glaciers, wind and waves remove and transport it to other places. Deposition is a consequence of erosion. The erosional agents lose their velocity and hence energy on gentler slopes and the materials carried by them start to settle themselves.

In general terms, the endogenic forces are mainly land building forces and the exogenic processes are mainly land wearing forces. Earth's crust is subjected to these internal and external forces and various landforms are the result of these forces.

9. With the help of diagram, give an account of various landforms resulting from intrusive and extrusive igneous activities.

Approach:

- Write a brief introduction about igneous activities and resulting landforms.
- Give an account of various landforms resulting from intrusive and extrusive igneous activities.
- Illustrate these landforms in a diagram.