

Class-ix

Subject-Geography

**Practice papers of chapter
Insolation and
atmospheric pressure and
winds**

A. Answer the following questions in brief:

1. What is meant by the term 'insolation'?
2. Why does only a small fraction of the total solar radiation reach the surface of the Earth?
3. How does the Sun produce large amount of energy?
4. Name the instrument used for measuring the maximum and minimum temperature of a day.
5. What is the use of the Stevenson's Screen?
6. How are the daily mean temperature and monthly mean temperature calculated?
7. What is meant by daily and annual range of temperature? How are they calculated?
8. Explain the role of latitude in determining the temperature of a place.
9. Why is a seasonal variation in temperature experienced at a place?
10. Which place has a higher range of temperature—Chennai or Allahabad? Give reasons for both.
11. How do ocean currents influence the distribution of temperature on coastal areas?
12. How do winds affect the temperature of any place?
13. How does altitude of a place affect the temperature?

B. Give reason for the following:

1. The south facing glaciers in the Himalayas melt faster than those of north flowing glaciers.
2. Places close to equator have a lower range of temperature.
3. The vertical rays of the Sun give more heat than the slanting rays.
4. There is a great difference in temperature over land and water bodies.
5. The interior parts of the continents have greater annual range of temperature.

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6. Deserts have high diurnal range of temperature.
7. The cold currents have tropical deserts developed in their adjoining coastal areas.
8. Thermometers are kept in Stevenson's Screen in a weather observatory.

C. Define the following:

1. Insolation
2. Solar Radiation
3. Isotherm
4. Normal Lapse Rate
5. Convection
6. Conduction
7. Torrid Zone
8. Frigid Zone

D. Distinguish between the following:

1. Insolation and terrestrial radiation
2. Weather and climate
3. Diurnal and annual range of temperature
4. Maritime climate and continental climate
5. Freezing point and boiling point.

E. Answer the following questions in detail:

1. How does the atmosphere get heated up?
2. What is the effect of latitude and altitude on distribution of insolation at any place?
3. Describe the seasonal change in temperature and daily change in temperature.
4. Lucknow has greater annual range of temperature than Kolkata. Why?

(a) Altitude.

Distinguish between the following:

1. Cyclones and Anticyclones.
2. Permanent and Periodic Winds.
3. Summer and Winter Monsoons.

Structured Questions

1. (a) What is meant by the term 'Atmospheric Pressure'?
- (b) Explain briefly the factors that affect Atmospheric Pressure.
- (c) Give a geographical reason for each of the following:
 - (i) The Westerlies in the Southern Hemisphere blow with greater force than those in the Northern Hemisphere.
 - (ii) There is a seasonal shifting in pressure belts.
 - (iii) As we go higher, the atmospheric pressure decreases.
- (d) Draw well labelled diagram showing the pressure and wind belts of the earth.
2. (a) Briefly explain the three chief types of winds.
- (b) Describe some of the important types of local winds.
- (c) Give a geographical reason for each of the following:
 - (i) The winds are directed to the right of their flow in the Northern Hemisphere.
 - (ii) Temperature and pressure are inversely related to one another.
 - (iii) Humid air is lighter than dry air.
- (d) What is Coriolis Effect? How does it affect the planetary winds?
3. (a) Explain the weather conditions associated with tropical and temperate cyclones.
- (b) What are the Jet Streams? What is the significance of the Jet Streams?
- (c) Give a geographical reason for each of the following:
 - (i) Doldrums is a low pressure belt.
 - (ii) Equatorial regions have low atmospheric pressure throughout the year.
 - (iii) Low atmospheric pressure prevails over the Circum-polar region.
- (d) Draw a well labelled diagram showing a cyclone in the Northern Hemisphere.