



1. Answer the following questions briefly:

- (a) What is the true shape of the earth?
- (b) What is a globe?
- (c) What is the latitudinal value of the Tropic of Cancer?
- (d) What are the three heat zones of the Earth?
- (e) What are parallels of latitude and meridians of longitude?
- (f) Why does the Torrid Zone receive maximum amount of heat?
- (g) Why is it 5.30 p.m in India when it is 12.00 noon in London?

Answer:

- (a) The true shape of the earth is a sphere flattened at the poles. Such a shape is called a geoid.
- (b) A globe is an exact miniature model of the earth. It shows the earth in its actual shape, with all continents, oceans, etc marked at their proper places.
- (c) The latitudinal value of the Tropic of Cancer is  $23\frac{1}{2}^{\circ}$  N.
- (d) The heat zones of the Earth are: the Torrid Zone, the Temperate Zones and the Frigid Zones.
- (e) Parallels of latitudes: All of the imaginary circles parallel to the Equator are called parallels of latitudes. These circles have varying centres and all these central points lie on the same line: the axis of the earth.  
Meridians of longitudes: All of the imaginary circles perpendicular to the Equator are called meridians of longitudes. These circles have the same centre, which is also the centre of the earth.
- (f) The mid-day sun directly faces the area between the Tropics of Cancer and Capricorn. So the heat received is maximum at these latitudes. These latitudes fall under the Torrid Zone.
- (g) India and the United Kingdom lie on different longitudes. Each degree of longitudes corresponds to a difference of four minutes. This is because the earth rotates  $360^{\circ}$  in 24 hours,  $1^{\circ}$  in 4 minutes. The standard meridian of India is  $82^{\circ} 30' \text{ E}$ , and that of London is  $0^{\circ}$ . This means a difference of  $4 \text{ minutes} \times 82.5 = 330 \text{ minutes} = 5.5 \text{ hours}$ . So when it is 12 noon in London, it is 5.30 p.m. in India.

2. Tick the correct answer:

- (a) The value of the prime meridian is
  - (i)  $90^{\circ}$
  - (ii)  $0^{\circ}$
  - (iii)  $60^{\circ}$
- (b) The frigid zone lies near
  - (i) the Poles
  - (ii) the Equator
  - (iii) the Tropic of Cancer
- (c) The total number of longitudes are
  - (i) 360
  - (ii) 180
  - (iii) 90
- (d) The Antarctic Circle is located in
  - (i) the Northern Hemisphere
  - (ii) the Southern Hemisphere
  - (iii) the Eastern Hemisphere
- (e) Grid is a network of
  - (i) parallels of latitudes and meridians of longitudes
  - (ii) the Tropic of Cancer and the Tropic of Capricorn
  - (iii) the North Pole and the South Pole

Answer: (a)-(ii), (b)-(i), (c)-(i), (d)-(ii), (e)-(i).

- Remark: Actually the number of longitudes is infinite. We can draw longitudes of any degree value. We show in diagrams distinct longitudes just for our convenience, e.g. the number of longitudes can be 360 (shown at gap of 1 degree), 180 (shown at every 2 degrees), and so on—as we wish.

3. Fill in the blanks.

- (a) The Tropic of Capricorn is located at.....  
(b) The Standard Meridian of India is.....  
(c) The 0° Meridian is also known as.....  
(d) The distance between the longitudes decreases towards .....  
(e) The Arctic Circle is located in the.....

Answer:

- (a)  $23\frac{1}{2}^{\circ}$  S  
(b)  $82\frac{1}{2}^{\circ}$  E  
(c) Prime Meridian  
(d) Prime Meridian  
(e) Northern.

I. Multiple Choice Questions

Choose the correct option to complete the statements given below:

- (i) The globe and the earth are different in .....  
(a) shape  
(b) size  
(c) continents and oceans  
(d) none of these.
- (ii) The axis is parallel to the .....  
(a) equator  
(b) Prime Meridian  
(c) latitudes  
(d) all of these.
- (iii) The Tropic of Cancer is located at .....  
(a)  $23\frac{1}{2}^{\circ}$  N  
(b)  $66\frac{1}{2}^{\circ}$  N  
(c)  $23\frac{1}{2}^{\circ}$  S  
(d)  $66\frac{1}{2}^{\circ}$  S
- (iv) The heat zone with the coldest climate is the .....  
(a) Torrid Zone  
(b) Northern Temperate Zone  
(c) The Frigid Zones  
(d) either of the Temperate Zones.
- (v) From the westernmost point to the easternmost point, the local times of India extend over a time difference of.....  
(a) no difference  
(b) 30 minutes  
(c) 1 hour  
(d) over 1 hour.
- (vi) The time difference between Greenwich and India is .....  
(a) no difference  
(b) 3 hours  
(c) 5 hours 30 minutes  
(d) 12 hours 30 minutes.

Answer:

- (i)–(b)  
(ii)–(b)  
(iii)–(a)  
(iv)–(c)  
(v)–(d)  
(vi)–(c)

