



## Chapter Rotation and Revolution

### Question Bank

#### 1. Why does February have 29 days after every 4 years?

**Answer** The Earth revolves around the Sun in anticlockwise direction and it takes about 365 days and 6 hours to complete one revolution. However, for our convenience, these extra 6 hours are added every year for the next four years to create a total of 24 hours or one more day in February. This extra day in February comes after every four years and the year in which it occurs is known as the leap year; it has 366 days in total.

#### 2. What are the effects of revolution?

**Answer**

1. Variation in the lengths of days and nights
2. Slanting or vertical sun rays
3. Occurrence of various seasons (spring, summer, autumn and winter)
4. Movement of the Sun between the Tropic of Cancer and the Tropic of Capricorn

#### 3. The angle which the earth's axis makes with the plane of the earth's orbit is

- a.  $23\frac{1}{2}^\circ$  b.  $60^\circ$  c.  $66\frac{1}{2}^\circ$  d.  $90^\circ$

**ANSWER:**a

#### 4. The time of the day just before sunrise is known as

- a. Dusk b. Dawn c. twilight d. Morning

**ANSWER:**b

#### 5. During summer the poles have continuous daylight for

- a. 6 months b. 3 months c. 1 months d. 2 months

**ANSWER:**a

#### 6. 22nd December is the shortest day in the

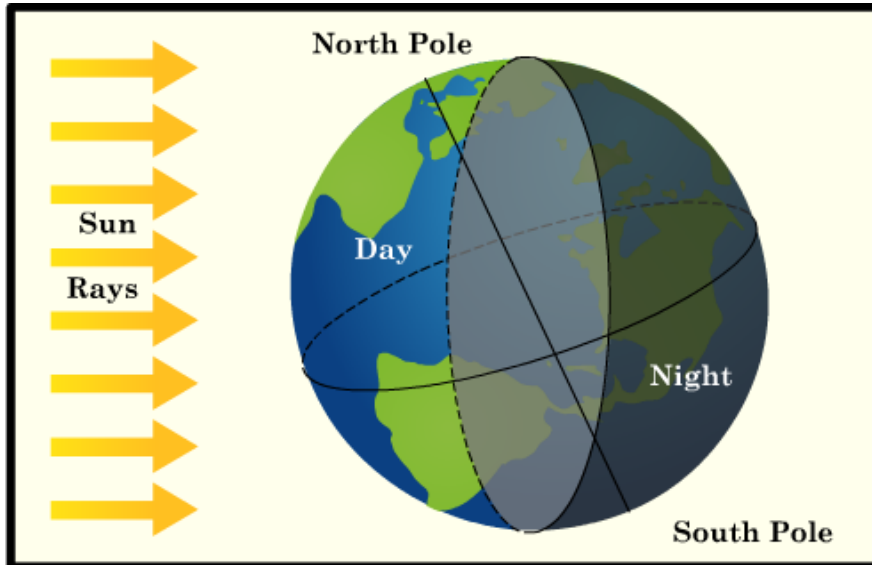
- a. Southern Hemisphere
- b. regions near the poles
- c. regions near the Equator
- d. Northern Hemisphere

**ANSWER:**d

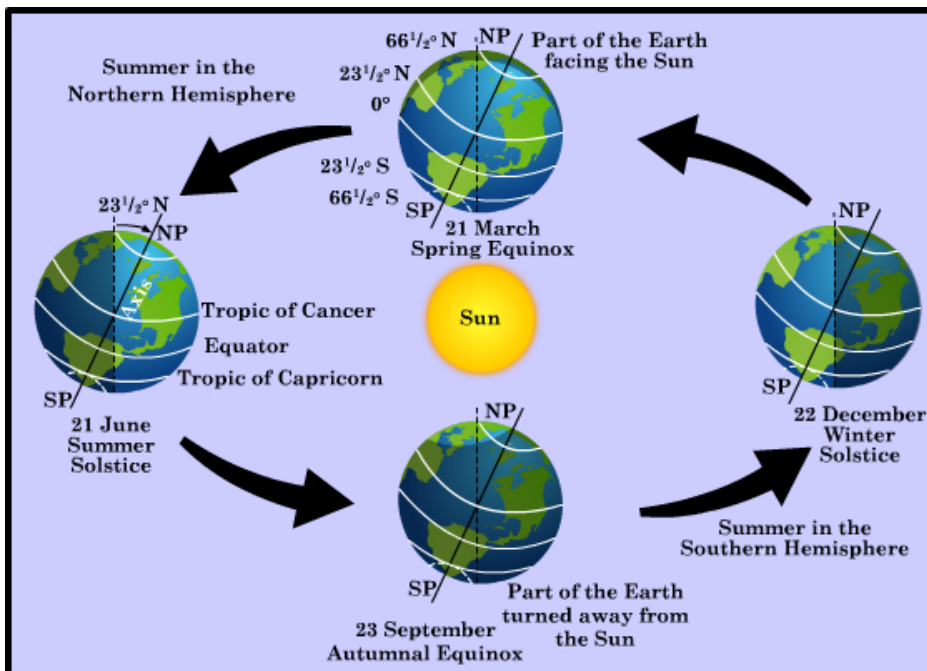
7.Question :

Draw neat and labeled diagrams to show the occurrence of day and night and the occurrence of seasons

Occurrence of Day and Night



Occurrence of Seasons



## 8.Explain Leap Year:

- Six hours saved every year in revolution are added for four years.
- They become 24 hours or one additional day.
- The day is added to the month of February every four years.
- It is because of this that every fourth year February has one more day – 29 days instead of 28 days.
- Such a year of 366 days is called a leap year.

## 9.What are the effects of rotation and revolution?

### **Solution:**

#### Rotation:

- The rotation of the earth causes day and night.
- As the earth is spherical in shape, only one half of it is illuminated by the sun at a time. The other half remains dark.
- The illuminated portion of the earth experiences day and the other part of the earth experiences night.

#### Revolution:

- The movement of the earth around the sun is called revolution.
- The revolution of the earth causes seasons.
- The revolution of the earth gives the impression that the sun is moving north and south of the equator.
- The equator faces the Sun directly on March 21 and September 23.
- During these two days the day and night are equal throughout the earth.
- These two days are called Equinoxes.
- On June 21, the Tropic of Cancer faces the sun. This is known as the summer solstice. It is the longest day in the Northern Hemisphere and longest night in the Southern hemisphere.
- On December 22, the Tropic of Capricorn faces the sun. This is known as the winter solstice. It is the longest day in the Southern Hemisphere and longest night in the Northern hemisphere.

## 10. State the number of motions of the Earth and write their name.

### **Answer**

There are two motions of the Earth. They are rotation and revolution.