

St. Andrews Scots Sr. Sec. School

9th Avenue, I.P. Extension, Patparganj, Delhi – 110092

Session: 2022-2023

Class - VI

Subject - Social Science

Chapter : Motions of Earth

Chapter : 3

Introduction

1. The spinning of Earth on its own axis from west to east is called **rotation**.
 2. The imaginary line that separates the lighted or illuminated part of Earth from the darkened one is called **Circle of illumination**.
 3. The inclination of the earth affects the lengths of day and night.
 4. The rotation of Earth has the following effects:
 - The Sun appears to rise in the east and set in the west.
 - It causes days and night.
 - It causes flattening of Earth at the poles and bulging at the equator.
 - It causes high tides and low tides
 - It causes deflection of winds and ocean currents.
 5. The motion of Earth around the sun along a fixed path from west to east is called a **revolution**.
 6. The fixed path along which Earth revolves around the sun is called the **orbit**.
 7. The revolution of Earth has the following effects :
 - Variation in the length of days and nights.
 - Distribution of heat on Earth's surface.
 - Occurrence of various seasons such as summer , winter etc.
 8. **Seasons** are caused by the revolution of Earth around the sun and the tilt of Earth's axis.
 9. The days when the direct rays of the sun falls on the equator causing equal day and night all over the world is called an **Equinox**.
 10. The days when the sun reaches its highest or lowest point in the sky at noon causing longest or shortest days respectively is called **Solstice**.
 11. There are two kinds of Solstice , Summer Solstice and Winter Solstice.
 12. Important dates are 21March - Spring equinox, 23 September - Autumnal equinox , 21 June - Summer Solstice , 22 December - winter solstice
-

Question and Answers

D. Answer the questions in brief.

Q 1. What causes day and night?

Ans : The rotation of the Earth on its own axis causes day and night.

Q 2. What is the Circle of illumination?

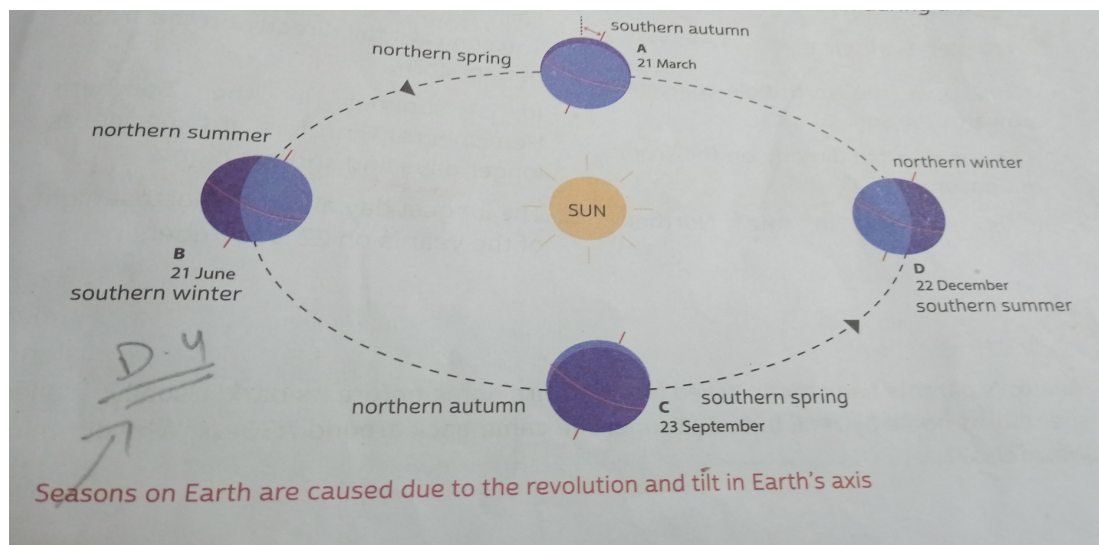
Ans: The imaginary line that separates the lighted part of Earth from the darkened one is called circle of illumination.

Q 3. When are days and nights of equal length?

Ans: On spring and autumnal equinox are days and nights of equal length all over the world.

Q4. Name any two factors that are responsible for the occurrence of seasons.

Ans: Seasons are caused by the revolution of Earth around the sun and the tilt of Earth' axis.



Q 5. Write any two effects caused due to the rotation of Earth.

Ans: The rotation of Earth has the following effects:

- The Sun appears to rise in the east and set in the west.
 - It causes days and night.
-

E. Answer the questions in detail.

Q 1. Differentiate between summer solstice and winter solstice.

Ans :

| Summer Solstice | Winter Solstice |
|--|--|
| 1. On 21 June , the North Pole is inclined towards the sun. | 1. On 22 December , the South Pole is inclined towards the sun. |
| 2. The sun rays fall directly on the Tropic of cancer. | 2. The sun rays fall directly on the Tropic of Capricorn. |
| 3. It is summer in the Northern Hemisphere . Therefore, it experiences longer days and shorter nights. | 3. It is summer in the Southern Hemisphere. Therefore, it experiences longest days and shorter nights. |
| 4. The longest day and the shortest night of the year is on 21 June. | 4. The shortest day and the longest night of the year is on 22 December. |

Q 2. List the effects caused due to the revolution of Earth.

Ans: The revolution of Earth has the following effects :

- i) Variation in the length of days and nights.
- ii) Distribution of heat on Earth's surface.
- iii) Occurrence of various seasons such as summer, winter , autumm and spring.

Q 3. Why the circle of illumination does not coincide with the axis of Earth?

Ans: Since the axis of the Earth is tilted, the circle of illumination does not coincide with the axis.
