

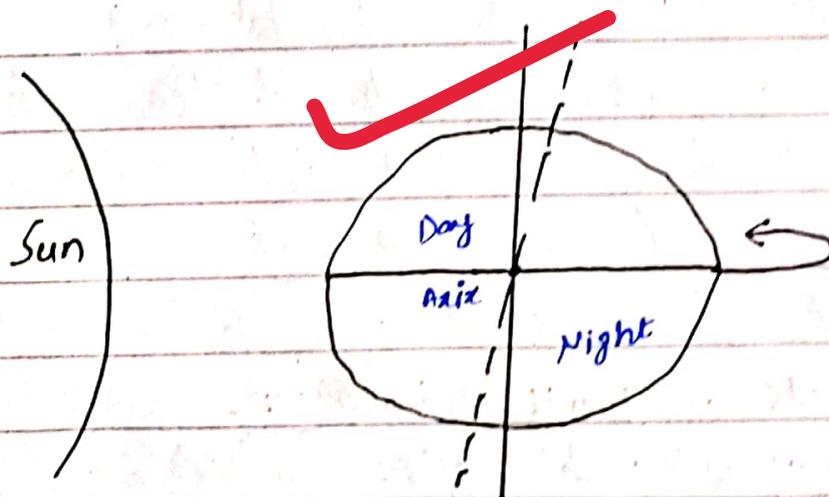
Briefly explain what effects are produced due to the rotation and revolution of Earth.

Introduction:

Rotation and Revolution are phenomena associated with celestial objects, including Earth. Understanding these phenomena is essential to grasp their various effects.

Rotation:

Rotation refers to an object's spinning motion about its own axis. For example, Earth rotates on its own axis, producing the 24-hour day.

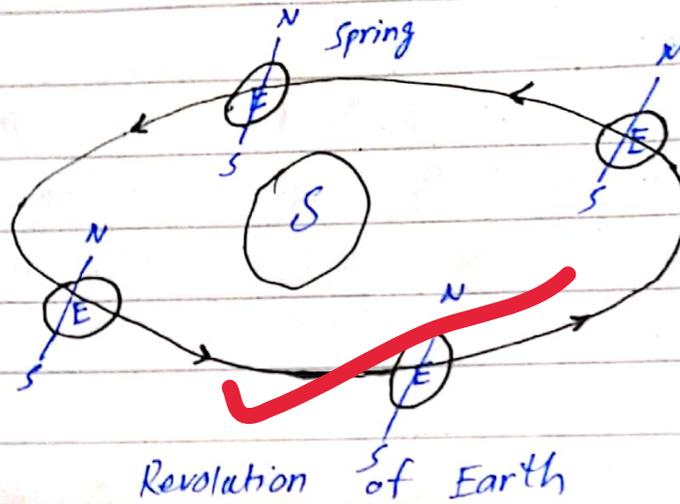


Rotation of Earth

Revolution:

Revolution refers to the object's orbital motion around another object. For example, Earth revolves about the Sun,

producing the 365-day year.



Effects Produced due to the Rotation and Revolution of Earth:

The rotation and revolution of Earth produces several significant effects that influence both natural phenomenon and human activities. Here's a brief explanation of the effects produced by each:

→ Effects of Earth's Rotation:

- i) Day and Night cycle: Earth's rotation causes the alteration of day and night as different regions face towards or away from the Sun.
- ii) Coriolis Effect: Rotation of Earth deflects moving air and water to the right in the Northern Hemisphere and to

the left in the Southern Hemisphere, influencing wind and ocean currents.

iii) Time Zones: Earth's rotation divides the globe into time zones, with each 15-degree segment representing a one-hour time difference.

iv) Tidal Forces: Rotation affects the timing and height of tides caused by the gravitational pull of the Moon and the Sun.

v) Circadian Rhythms: The light-dark cycle from Earth's rotation regulates the biological clocks of living organisms.

→ Effects of Earth's Revolution:

i) Seasons: The tilt of Earth's axis (approximately 23.5 degrees) and its revolution around the sun cause seasonal changes by varying sunlight intensity and duration.

ii) Variation in Day Lengths: Day and night lengths change throughout the year due to Earth's axial tilt and elliptical

orbit.

iii) Solar Declination: Earth's revolution causes the Sun's apparent movement between the Tropic of Cancer and Tropic of Capricorn, affecting climate and weather.

iv) Annual Climate Patterns: Earth's position in its orbit influences long-term weather and climate patterns, such as monsoon seasons.

v) Constellation Visibility: Different constellations become visible at different times of year due to Earth's orbit around the Sun.

Conclusion:

In summary, Earth's rotation primarily affects the daily cycle and atmospheric dynamics while Earth's revolution is responsible for the seasonal changes and long-term climatic patterns.

Good structure and presentation!

But the answer is lengthy and can affect your time management