

:37

Explain the phenomenon of Solar Eclipses.
(CSS-RUR3 Special)

Solar Eclipses:

The ~~arr~~ alignment of the sun, moon and then earth on a single line, such arrangement is known as solar eclipses.

Explanation of the phenomenon of solar eclipses:

In such a case, moon blocks the sunlight that is falling on earth. because moon comes in between the sun and ~~Earth~~ Earth. Earth revolves around the sun on an elliptical path, and, similarly, moon is revolving around the earth in a tilted cycle with the angle 5° . During their continuous revolutionary motion, moon comes to such a point where both the circular paths cross each other, nodes, so it blocks the light of sun that is

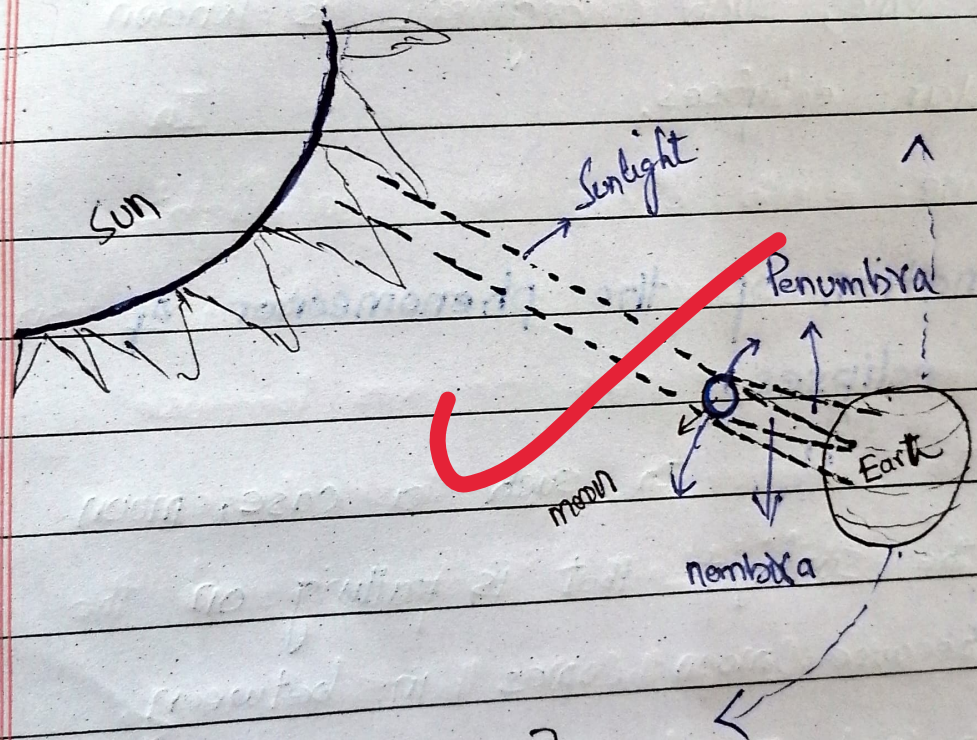
falling on the earth.

⇒ This phenomenon occurs once in 18 months.

⇒ It covers some specific area of the earth at same time.

⇒

Diagrammatical illustration:



[Solar Eclipses]

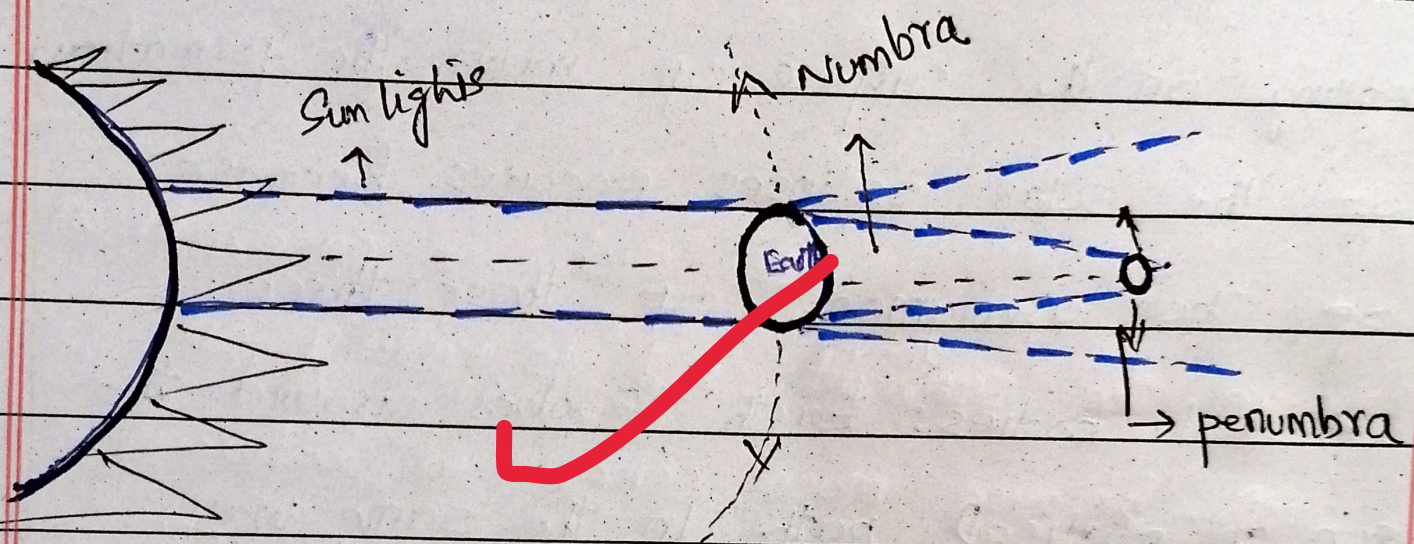
Lunar Eclipses:

The alignment of the sun, earth and then moon on a single line such arrangement is known as lunar eclipses.

Formation of the Lunar Eclipses:

In this case, earth blocks the sun light falling on the surface of moon. The formation of the solar eclipses occurs because of the arrangement of these three celestial bodies: Earth revolves around the sun in elliptical path. In the same way, moon revolves around the earth whose path is tilted with 5° . Therefore, on the points of nodes (where these two paths cross each other) ~~lunar eclipses occur~~ moon comes under the shadow of earth & that is called lunar eclipses.

Diagram:



[Lunar Eclipses]

- ★ Lunar eclipses occurs in full moon and Night time
- ★ The ~~full~~ moon appears full redish because the high wavelength [red light] fall on it. that are scattered from the earth surface.

Briefly Explain what Effects are produced due to Rotation and Revolution of Earth? (CSS-2017)

Ans:

a) Rotation of the Earth:

"The spinning of the earth from its own axes, it is called rotation of the earth."

about the Rotational motion of the earth

- The axes of the rotation is tilted with the angle 23.5° .
- This rotation occur from west to East
- The speed of the earth rotation is about 1675 km/s
- One complete rotation takes 24 hours

→ The effects that are produced with the earth rotation:

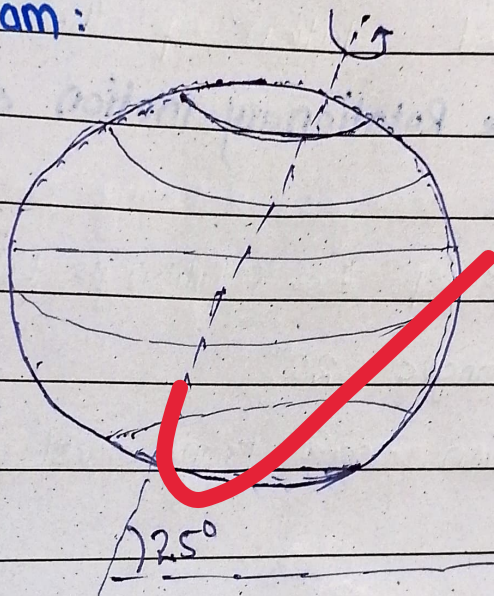
(I) The occurrence of day and nights within 24 hours

(I) The Bulging shape of the earth is due to such a rotation

(II) The Coriolis effects of is also produce due to earth rotatory motion

(III) It's cause the creation of the gravitational potential

Diagram:



b) The Revolution of the earth:

The earth is revolving around the sun on an elliptical path, this motion of the earth is

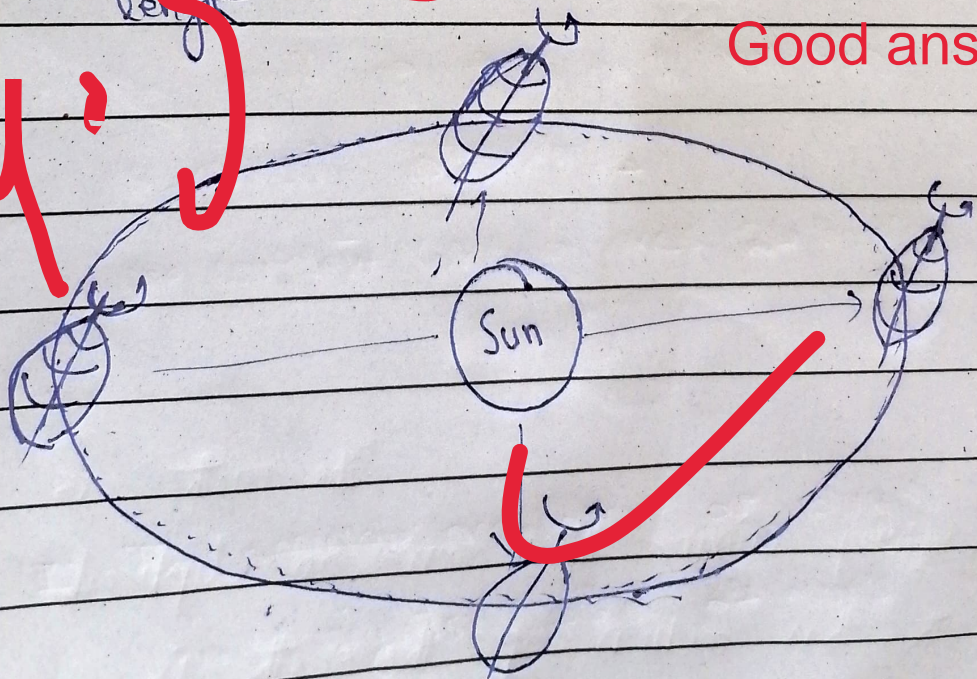
known as revolutionary motion.

about the revolutionary motion:

- (I) it takes 365 365 days to complete one complete revolution.
- (II) The path is an elliptical
- (III) This is anti-clockwise motion
- (IV) This is because of sun gravitational pull.

The effects that are produced with this types motion of the earth.

- (I) Seasonal changes including pressure, temperature and humidity of a region
- (II) The variation between day and night's length



Good answers!!!