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Class XIth

Subject Geography

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Ch: **THE ORIGIN AND EVOLUTION OF THE EARTH**

SHORT Answer Type Questions

Question 1.

What is the opinion of present day scientists about the origin of moon?

Answer:

In 1838, Sir George Darwin suggested that initially the earth and the moon formed a single rapidly rotating body. The whole mass became a dumb-bell shaped body and eventually it broke. The material separated from the earth was formed as moon and the place became the Pacific Ocean. It is not accepted now.

The present theory is the “giant impact theory” or “big splat theory”. A large size body of Mars collided with the earth and that portion was separated from the earth. The same portion became as a moon which revolves around the earth. The moon was formed about 4.44 billion years ago.

Question 2.

What are the difference between terrestrial planet and jovian planets?

Answer:

The main differences between the two are summarized below:

- The terrestrial planets were formed in the close vicinity of the planet star where it was too warm for gases to condense solid particles. Jovian planets were formed at a quite distant location.
- The solar wind was most intense nearer the sun, so it blew off lots of gas and dust from the terrestrial planets. The solar winds were not all that intense to cause similar removal of gases from the Jovian planets.
- The terrestrial planets are smaller and their lower gravity could not hold the escaping gases. Jovian planets are bigger and have high gravity.

Question 3.

Inner planets are terrestrial while outer planets are Jovian. Why?

Answer:

Inner planets are terrestrial while outer planets are Jovian because the terrestrial planets are smaller and their lower gravity could not hold the escaping gases. Jovian planets are bigger and have high gravity. Moreover, the solar wind was most intense nearer the sun, so it blew off lots of gas and dust from the terrestrial planets. The solar winds were not all that intense to cause similar removal of gases from the Jovian planets.

Question 4.

How did earth develop its different layers?

Answer:

During the formation of the moon, due to the giant impact, the earth was further heated up. It is through the process of differentiation that the earth forming material got separated into different layers. Starting from the surface to the central parts, we have layers like the crust, mantle, outer core and inner core. From the crust to the core, the density of the material increases.

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