Unit Summary Astronomy

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**Chapter 27**

The 27th chapter of book describes the geology, by covering different relevant topics like natural disasters that bring drastic changes to the surface of the earth. Natural disasters and other events can be dangerous for areas where human population exists. Therefore, it is important to study that which natural disaster can be prevented, and how its impacts can be reduced. Likewise, informing about the different natural disasters, the first topic of the chapter is about earthquakes. It informs that an earthquake occurs when the tectonic plates of earth move. The topic explains the earthquake briefly. It further informs that tectonic plates move to deform the rock (Lasaga, 2014). The chapter also focuses the earthquake measurement that is the main concern of geology. The magnitude of an earthquake is measured by the energy released during an earthquake and Richter scale is the unit that tells the number of shakes. However, the instrument used for the measurement of an earthquake is seismometer. Likewise, Tsunami is another huge natural disaster that can bring a lot of destruction. It is caused by the collision of fast moving waves of ocean with an earthquake. Moreover, Volcanos and Hurricanes are also included in the category of natural disasters. Volcanos are explosive while hurricanes are destructive in the form of storms. Climate change is also an important topic in the geology. It informs about the weather pattern of a region. It fluctuates and there are several reasons for it. The natural climate change depends upon the energy received from the earth. On the other, humans are also causing a change to the climate through various activities. The human contributions to climate change can bring serious consequences like pollution. It plays a leading role in the climate change. For instance, the emission of carbon gases is depleting the ozone layer. Therefore, some measureable solutions are needed to overcome the issue.

**Chapter 28**

The 28th chapter of the book explains the solar system in the universe. Starting with the formation of the solar system, it informs about the Nebular theory. Under the same topic, there are two main focuses; the motion of large bodies in the solar system and the division of the planets into two categories. These categories are terrestrial and jovian. Moreover, the same theory is used to explain the composition of the sun and other planets. Likewise, the chapter also highlights the Sun as a largest star and mentions its mass as 2×1030 kg. In addition, solar energy is produced from the center of the sun (Lang & Gingerich, 1979). It loses its mass in the form of hydrogen nuclei that combines to form helium nuclei. After the sun, the chapter also focuses the inner planets in the solar system. All of the four planets that are nearer to the sun are considered as the inner planets such as Mercury, Venus, Earth and Mars. The inner planets have rocky crust that contains minerals. On the other side, the outer planets in the solar system have different surface structure. These planets have gaseous outer form and liquid inside. Jupiter, Saturn, Uranus and Neptune are included in the category of outer planets. The gravitational forces from the cores of these planets are supposed to sweep the gases from its surface. After individually discussing each planet, it also notifies about the moon of the earth. The core moon is composed of iron and due to the gravitational pull of earth moon is hold back at a same distance from the earth. In addition, the different phases of the moon from earth are due to the sun light. In a complete cycle, the moon changes its phases. One whole cycle of moon completes in 29.5 days.

**References**

Lang, K. R., & Gingerich, O. (1979). A source book in astronomy and astrophysics, 1900-1975. *Cambridge, Mass., Harvard University Press, 1979. 940 p*.

Lasaga, A. C. (2014). *Kinetic theory in the earth sciences*. Princeton university press.