Introduction to Module 3A - Assignment

Intellectual Revolutions

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1. Differentiate Scientific Revolution from Industrial Revolution

* ***The Differentiate Scientific Revolution from Industrial Revolution. from the heliocentric to the geocentric paradigm of astronomy was only one aspect of the medieval scientific revolution. It was more of a transition from a subjective to an objective awareness of the physical universe. Darwin's theory of evolution is highly groundbreaking in the field of biology. It has the capacity to alter society perspectives as well. Agriculture and handicrafts-based economies were replaced by economies based on large-scale industry, automated manufacturing, and the factory system during the Industrial Revolution.***

1. Who is Thomas Kuhn? What were his contributions to Science and Technology?

* ***Science philosopher Thomas Kuhn was an American who lived from 1922 to 1996. His scientific philosophies made a significant contribution to the growth of STS. According to him, science advances quickly from one paradigm to another. He made the following case for how scientific revolutions work. First, there is an established paradigm within which the typical scientific operations are conducted. The conventional science was that. The anomalous stage is what follows. This is the point at which the prevailing paradigm can no longer account for the facts, observations, and calculations. The crisis stage that follows sees novel ideas or methodologies sought to explain the abnormality.***

1. Differentiate Laws from Theories. Give an example for each.

* ***According to the kinetic molecular theory, gas particles are always in motion and undergo elastic collision.***

1. ***Boyle's Law - A gas's volume at constant temperature changes inversely when pressure is applied to it.***
2. ***Charles Law - claim that, assuming the pressure is constant, a certain amount of gas will always occupy a volume that is directly proportional to its absolute temperature.***
3. ***Law of Partial Pressure – The overall pressure exerted by a mixture of gases is equal to the sum of the partial pressures of each of the constituent gases, according to Dalton's law of partial pressures.***

1. Discuss briefly the Darwinian Revolution.

* ***One of the major contributions of current biological research may be attributed to Darwin's idea of evolution by natural selection. The idea of evolution was developed as a result of Charles Darwin's (1809–1882; finch researcher) study of the Galapagos finches.  Darwin's book provided proof of evolution and offered a theory as to how it operates. He emphasized that the most adaptive species survived natural selection, which is how species come into being. Given that it was introduced at a time when the majority of people still believed in the biblical account of creation, Darwin's theory of evolution was divisive.***