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c) Explain the essential differences between mechanical energy, potential energy and kinetic energy.

Original

In the physical sciences, energy is a way of describing the amount of work that can be outputted after exerting a force on a mass. There are three main types of energy. Let us first define each of three different types of energy that must be discussed. Mechanical energy is the sum of both potential and kinetic energy. Given these two, potential energy is the name given to the amount of energy stored in an object of mass at a relative height from a surface. Kinetic energy is the amount of energy a mass has when it is moving at a certain speed. While each of these energies have formulas to calculate them, it is easy to understand the fundamental differences between them which is an object may or may not have potential energy and at the same kinetic energy and vice versa. However, no matter what, mechanical energy states that the sum of these two energies at a certain time is the total amount of energy in the system. This can also be found when the mass is at its highest point, which is the maximum amount of potential energy or, when let go, at its fastest moving point, which is the maximum amount of kinetic energy.

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