

4) A wound up watch spring has the potential energy because of its wound up state. As the spring unwinds itself, the potential energy changes into the kinetic energy. This kinetic energy does work in moving the arms of the watch.

15) Yes, a body possesses energy even when it is not in motion; Consider a body raised to a certain height say h . If its velocity is zero, kinetic energy will be zero but the body will have.

$$P.E. = Mgh$$

Thus, a body may possess energy even though it is not in motion

- 16)
- 1) Kinetic energy
 - 2) Potential energy
 - 3) Potential energy
 - 4) Kinetic energy
 - 5) Kinetic energy
 - 6) Potential energy
 - 7) Potential energy

17) The example to show the conversion of potential energy to kinetic energy when put in use is :

A stone at a height has the potential energy due to its lifted or raised position. In the figure below when the stone is dropped from

that position, it begins to fall. The falling stone has the kinetic energy. Thus, the potential energy stored in the stone in its raised position changes into the kinetic energy when the stone is falling. This kinetic energy does work on the nail as the stone strikes the nail and makes the nail to move into the wood.