

Question - 4

a) When we rub our hands

→ mechanical energy changes into heat energy.

b) A ball rolling on the ground possesses

→ Kinetic energy

c) The energy stored in an electric cell is

→ chemical energy

d) When a bulb lights up on passing current, the change of energy is

→ from electrical energy to heat and light energy.

e) The correct statement is

→ Both work and energy have the same units.

D) According to law of conservation of energy, energy changes from one form to another form, but the total energy of that system.

→ remains the same

Q-5) What is potential energy? State its unit.

A → The energy of a body at rest is called the potential energy. It is defined as follows: Potential energy of a body possessed by it due to its state of rest or position. Actually, it is the work spent in bringing the body to that state of rest or position.

It is written as P.E. or U.

The S.I. unit of potential energy is joules.

Q7) State two factors on which the potential energy of a body at a certain height above the ground depends.

A → The potential energy of a body in the raised position depends upon the following two factors:

a) The mass of the body: Greater the mass of the body, greater is the potential energy of the body.

b) Its height above the ground: Higher the height of the body, greater is its potential.

Q8) Two bodies A and B of masses 10 Kg and 20 Kg respectively are at the same height above the ground. Which of the two has the greater potential energy?

A \Rightarrow The body B having mass 20 Kg has the greater potential energy. This can be explained as follows:

$$P.E = mgh.$$

For both the body gravity and height are same so the body with greater mass possesses greater potential energy.