Physics HW

B) Simple Machines

1) When is work said to be done by a force?

Ans- Work is said to be done if the force applied on the body moves it.

2) What is energy?

Ans- The energy of a body is its capacity (or ability) to do work.

3) What do you understand by a machine?

Ans- A machine is a device which helps us to do work more easily by applying less force and spending less energy.

4) What is the principle on which a machine works?

Ans- A machine does not work by itself. When energy is supplied to it (or work is done on it), it does some useful work. To do work on a machine, a force is applied. This applied force is called the effort (symbol E). As a result of this force, the machine lifts or moves an object called the load (symbol L) in order to do work.

5) State two functions of a machine.

Ans - The two functions of a machine are.

(i) It decreases the magnitude of the force required, i.e. the effort is less than the load.

(ii) It increases the distance moved by the load.