

H.W

B.

Physics L-4

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1. When is work said to be done by a force.

A. Work is said to be done when a force moves an object through a distance in its own direction.

2. What is energy?

A. The ability or capacity to do work is called energy.

3. What do you understand by a machine?

A. A machine is a device that allows us to do work with less effort. Machines make our work easier to do. Machines have made our lives comfortable and faster.

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

A. Principle of a Machine: The work output

work done by a machine is equal to the work input

5. State two functions of a machine.

A. Various functions that a machine can perform are:

1. Changing the directions of applied force.  
Example when a flag is hoisted with the help of a pulley.

2. Changing the magnitude of applied force - Example: Bottle opener, multiplies the applied force and much less effort is required to open the cap.

3. Applying force at a convenient point.  
Example In a pair of scissors, the input force is applied at the handle of the scissors which cuts the paper at the other end of the blade.

4. Changing the speed of an object - Example while riding a bicycle force is applied on pedals which multiplies the speed.