

## L-11 Force and Energy

### I. Technical words:

#### 1. Buoyant force:

The upward push of water on a floating object is called buoyant force.

#### 2. Lever:

A simple machine in the form of a rod that can turn around a fixed point.

### II Short answers:

#### 1. What are Simple Machines?

Ans 1) Simple machines are tools which make our work easier and faster.

ii) They help us to work by applying force at a convenient point which either changes the direction of force or increase the force applied.

#### 2. What does the law of conservation of energy state?

Ans 1) Energy can neither be created nor destroyed.

ii) Energy just changes from one form to another.

iii) The total energy of an object never decreases or increases.

### III Long Answers

1. What is an inclined plane? How is it useful for us?

Ans i) An inclined plane is a slope which makes work easier.

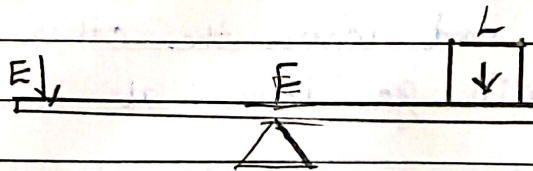
ii) It is useful to us because walking up a slope is easier than climbing a ladder to the same height.

iii) We can use a plank of wood as an inclined plane when we have to load or unload a truck.

2. Explain the three classes of lever with examples.

Ans According to the position of the effort, load and fulcrum, there are three classes of levers.

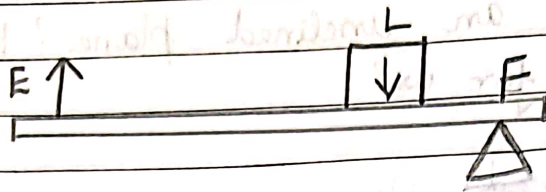
i) First class lever:



\* In first class lever, the fulcrum is placed between the load and effort.

\* Examples: Scissors, Pliers, hammer.

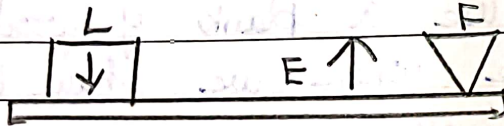
ii) Second class lever:



\* In second class lever, the load is placed between the fulcrum and effort

\* Examples: Bottle opener, Nutcracker, Wheel Barrow

iii) Third class lever



\* In third class lever, the effort is placed between the fulcrum and the load

\* Examples: Fishing rod, Tweezers, Ice Tongs

#### IV HOTS

1. What will happen if on a see-saw, one child gets up suddenly? why?

Ans i) The other end where the other child is sitting will go down at a high speed.

ii) This may result in hurting the child sitting there.

Signature  
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