

General instructions for Students: Whatever be the notes provided, everything must be copied in the Physics copy and then do the HOMEWORK in the same copy.

Types of friction :

1. Dry or external or contact friction.
2. Internal or wet friction.

Dry or external or contact friction :

Friction, which comes into play when one solid body moves over the other.

It is of the following types : Static friction and Kinetic friction

Static friction :

Friction, which comes into play before a body begins to move or slide over another body



Kinetic friction :

Friction, which comes into play when there is actual relative motion between two bodies.

For example : A car moving on the road, Rubbing your hands together, etc.

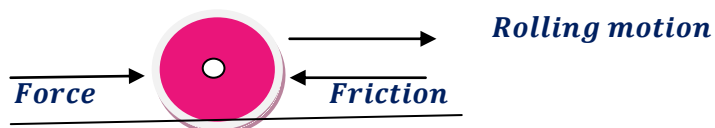
It is further two types : Sliding friction and Rolling friction

Sliding friction : *Friction occurs when there is relative (or sliding) motion at the interface of the surfaces in contact.*



For example : Pushing desk, Rubbing your hands together, etc.

Rolling friction : *Friction occurs when one surface rotates as it moves over another surface but does not slip or slide at the point or area of contact.*



For example : Between a train wheel and a rail, Basket ball, etc.

Undesirable factors : Disadvantages

- * Friction is non – conservative force threrefore energy is always lost in overcoming friction.*
- * It is responsible for wear and tear of various parts of machines.*
- * It decreases the efficiency of machines.*

Desirable factors : Advantages

- * It helps us to walk on the ground.*
- * we can write on a paper due to friction.*
- * It helps in stoping a vehicle on applying the brakes.*
- * It helps in generating heat when we rub our hands together.*

Assignment

- 1. Define the following terms*
 - (a) Static friction*
 - (b) Kinetic friction*
 - (c) Rolling friction*
- 2. Why friction is called a necessary evil ?*