Coefficient of Friction.

When one body is in limiting equilibrium in contact with another body, the constant ratio which the limiting force of friction bears to normal reaction at their point of contact, is called the coefficient of friction and it is generally denoted by μ.

Thus, μ is the ratio of the limiting friction and normal reaction.

Hence, μ = $\tan\lambda = \frac{\text{Maximum force of friction}}{\text{Normal reaction}}$

$\Rightarrow \mu = \frac{F}{R} \Rightarrow F = \mu R,$ Where F is the limiting friction and R is the normal reaction.

Note: The value of μ depends on the substance of which the bodies are made and so it differs from one body to the other. Also, the value of μ always lies between 0 and 1. Its value is zero for a perfectly smooth body.

Cone of friction : A cone whose vertex is at the point of contact of two rough bodies and whose axis lies along the common normal and whose semi-vertical angle is equal to the angle of friction is called cone of friction.